Opening Night at Upson Hall

A. Non Ymous

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Holiday Shows at Upson Hall

by variouses and sundries

Abstract

Every holiday season comes the time when the thoughts of graduate students at Cornell turn to the fast-approaching A-exams. More precisely, they think, "We'd better get them before they get us.". Hence these attempts at theatrical productions. Although they are based on the quirks and idiosyncracies of faculty members, they should not be taken as criticism. The authors would prefer to think that everyone is laughing together, rather than at anyone in particular. And with this word of caution, we present ....

The 1977 Computer Science Holiday Show

The Inferno

Intro:

Our story begins with Al Gaulle, the newly hired director of programmer training for the Cornell Data Institute, wandering around trying to find 415 Upson Downs.

Al: I'm exhausted. Trying to find a building around here is impossible. Half the buildings around here have the same name, and all roads in Ithaca lead uphill. If I don't find this Upson Downs soon, I'll just go to my second choice, Stanford. Or, as a last resort, there's always Harvard. Say, maybe this guy can help me. Excuse me!

Guy: Yeah?

Al: Do you know where Upson Downs is?

Guy: Upson? It's right over there.

Al: Thanks. (Enters Upson) Hmmm. 415 must be on the fourth floor. I guess I'll take the elevator. Argle Bargle! This is the slowest elevator I have ever seen! . . . I wonder what these buttons do: U and D. There's one easy way to find out -- I'll just press one.

Elevator door opens to reveal Jim.

Jim: Hello! Welcome to the Inferno! There are probably better places to go after you die, but, well, you're here, so you might as well make the best of it. A fellow will be around soon to show you to your own special place.

Al: What are you talking about? I'm not dead!

Jim: There, there. Lots of people take it that way. It's not so bad once you've spent a couple of years getting used to it. It's sort of like JCL.

Al: I've always heard that the people at the Cornell Data Institute are pretty wierd, but you take the cake! Can you tell me where 415 Upson Downs is?

Jim: Did you say Cornell? Upson?

Al: Yes

Jim: Oh no! Did you press the "D" button in the elevator?

Al: I wanted to see what it did.

Jim: We're really going to have to get that thing fixed. Congratulations. You have just won an all-expense paid tour of Dante's Inferno, number 426.

Al: Dante's Inferno? What's that?

Jim: These illiterate engineers! Well, back in Dante's time, there was only one inferno. It was sort of a cone-shaped hole in the ground, made up of concentric rings. Each ring was filled with a special group of sinners undergoing there own special form of punishment. But since then, there's been quite a population explosion going on. These days, there's just no way we could fit all the sinners into just one inferno -- we're up to number 723. You are standing in the outermost ring of inferno number 426 -- especially reserved for computer people.

Al: Er, this is all very interesting, but I really must be going now. Can you direct me to 415 Upson Downs?

Jim: Hah! Do you think you can just get up and walk out of Hell? If you could, everyone would!

Al: But I really don't belong here!

Jim: Perhaps not, but the only way out of this baby if through the middle! To get out, you are going to have to descend through every level, and you don't want to make a trip like that alone! You're going to have to find the Old Man.

Al: I see. Well, thank you very much. By the way, are you a -- well -- permanent resident?

Jim: 'fraid so. For my punishment, I am the gate-keeper. It's my job to console the newcomers. I'm sort of a salesman. I have to convince the new arrivals that being in Hell isn't the End of the World. It can be really depressing.

Al: Really! You must be a man of unusual abilities. Could I ask what your sin was?

Jim: Sure! I'm Jim Watson, the founder of IBM! You'd better find the Old Man. It's not good to be alone here, especially for a visitor.

Exit Jim, enter Guide.

Al: Uh, my name is Al Gaulle. I work for CDI. I really don't belong here; a faulty elevator brought me. I'm not even dead -- I don't think. The gate-keeper said I should find somebody called the Old Man. Is that you?

Guide:
I am known by many names. I am the seer of the unseen, the knower of the unknown. I shall be your guide and guardian in your journey through these smouldering caverns. I have carved my niche in these walls of lime; here have I resided for a thousand lifetimes. Others may arrive and depart, but I eternally linger on. I AM THE ALBATROSS! THE SEAGULL! (Dramatic pause) But my friends call me Morrie.

Al: Can you get me out of here?

Guide:
Let us begin our descent. (They begin walking "down".) Here is one of the more interesting circles. This is where we put TA's who were late for consulting.

TA1: Arghh, it seems like we've been here forever. Oh well, I think I've finally graded the last problem two. I can't believe Tim made them program the supermarket simulator on a test! Does anyone have any books that need problem two graded?

TA2: What about this stack here? Oh no, it doesn't have any problems graded at all!

TA1: Wait a minute, I'm positive I graded those!

TA2: Look for yourself.

TA1: Ohhh Noooo! Are we ever going to finish? Is there any beer left?

TA2: Nope.

Al: Oh, come on, how long could it take them? There can't be more than a hundred and fifty books there.

Guide:

What you fail to understand is that their pens contain a slowly fading ink. As they grade one stack, the other stacks automatically ungrade themselves. Those fellows are in for quite a long night!

Al: You people are really fiendish, aren't you?

Guide:

You ain't seen nothin' yet, to coin a phrase....

They wander on.

Guide:

Here is one of my favourite circles. This is where we put Ph.D.'s whose dissertations exceed one hundred pages. We call it "The Hall of the Eternal Colloquia".

Al: Ugh! The people here are all bruised and bloody. Do you beat them?

Guide:

Certainly not! Such treatment would be totally lacking in aesthetics! They were simply trampled in the rush for doughnuts. But mere physical abuse shrinks in significance compared with the mental anguish we inflict upon these people. Just listen to the sort of thing we put them through.

Complete deadpan. The only thing in his face that moves is his mouth. No inflection in voice whatsoever.

Speaker1:

The next subroutine is MIXCAK. Please note that the name MIXCAK ends in a K, not a C. Its arguments are ETA, THETA, and N. ETA and THETA are double precision real. N is an integer. We thought a while about using Q instead of N. This is because N, the first letter of numerical, sounds very much like M, the first letter of motherhood. However, since N, the first letter of numerical, occurs so frequently in mathematical literature, we yielded to historical pressure, and used N, the first letter of numerical. We had similar trepidations about the rhyming pair ETA and THETA. However, ...

Al: How long has he been going on that way?

Guide:

Weeks on end, without a break.

Al: How can they stand to listen to it?

Guide:

Not all of them do. They are free to leave if they desire it.

Al: Then why don't they?

Guide:

Because if they do, they have to listen to this fellow, instead ....

Speaker2:

(In a heavy French accent.) It's basically a Herbrand interpretation over a bipartite semifinite domain, only at a much higher plane of complexity. I call it a megma. It's difficult to explain the concept in natural languages such as French or English. Does anyone in the audience speak Dutch? No matter. To really understand the subtleties of megmas, you must have a thorough understanding of (how you say in English?) ... category theory.

Al: That? That is their alternative?

Guide:
Actually, it's not so terrible. If you want to see some real agony, you ought to come back on "Truth or Consequences" day.

Al: What happens then?

Guide:
Well, we make them sit through three of these seminars, back to back.

Al: That's inhuman!

Guide:
My dear Mr. Gaulle, the best is yet to come. You see, only one of the seminars is legitimate. In the other two, completely bogus results are presented. We make everyone present attempt to identify the legitimate seminar, and those who guess incorrectly are cast into the flaming tar pits.

Al: How gruesome! But on the average, don't about a third of them guess right?

Guide:
Actually, on the average, less than two percent of them escape the flaming tar pits. It is somewhat counter-intuitive. But it is a trivial consequence of Lottke's Law. but enough questions. Come along. There is still a long way to go.... This is the circle of boredom. Did you know that in just Ithaca alone, one thousand three hundred and forty-two boring Harvard jokes were told?

Al: Really? If everyone who ever told one of those jokes is down there, it must be pretty crowded.

Guide:
We just don't have enough space to keep everyone who ever told a boring Harvard joke, but we do have the next best thing: the gentleman who inspired all those jokes.

Gerry:
Come on, boy. (Whistle) Here Smartie! Good dog! Okay, Smartie, today I'm going to teach you how to retrieve. I'm going to throw away this stick, and I want you to fetch it. If you learn how to do this trick, I'm going to give you one of your favourite treats, a nice big peanut cluster! Okay boy, fetch the stick!

Dog runs away and returns.

: No, Smartie, that's not a stick, that's a brick! I want you to fetch the stick! What's that?

Dog points to fur.

: You have the stick in your fur? No, Smartie, that's a tick! I don't want a tick, I want a stick! Hmmmm. Maybe you need more keywords. A stick is long and thin, and it burns. Go boy, fetch the stick!

Dog runs away and comes back.

: No smartie, that's a wick, not a stick! Look, I want you to fetch me a stick. I don't care what you have to do, I want you to bring me a stick!

Dog runs away and returns, dragging an unconcious person.

: Smartie, what have you done? You;ve injured that man! (Feels pulse.) Why, you've killed him! Oh no! Smartie, you've brought me a stiff! I said stick! STICK! STICK!

Al: Does he ever teach his dog to fetch a stick?

Guide:
Oh certainly, but then he gets drowned in an avalanche of twigs! .... This circle is reserved for just one gentleman.

Al: Really? He must have been quite a character. Who is he?

Guide:
Well, we generally don't divulge that kind of information, but I can tell you that he taught one of the operating systems courses at one of the finest universities in Ithaca, New York.

Al: I see. What was his sin?

Guide:
You never took his course, did you?

Al: No. How did you know?

Guide:
You had to ask what his sin was.

Al: I don't know. He looks pretty ferocious. Can we skip this circle?

Guide:
Don't worry, I can keep him in line.

Count:
Good evening! I am Count Modula. I want to handle your peripheral devices!

Al: Easy, fella! I'm just a visitor here.

Count:
No one is safe from Count Modula! In the deep of the night, I seek out my victims, enter their critical regions, and suck their blood! What kind of blood do you have?

Al: Er me?

Count:
Yes, YOU!

Al: Gulp! A negative, sir ...

Count:
Excellent! I can't stand B positive blood. Before I select a victim, I must perform rigorous type checking! But now I have another victim. Every time I bite someone, I put another notch on my fang. Just one more bite, and I'll be up to fifteen K! (Starts to move toward Al.) Ha-ha-ha!

Al: Yipes! He's talking about me! Do something!

Guide:
As you wish. (Turns to count.) QUEUEING THEORY!

Count:
(Holds his hands over his face, as if he'd seen a cross.) Arghhh! Anything but that!

Guide:
Mean arrival times! Poisson distributions!

Count:
No! Please! I can't stand it! (Exits hurriedly.)

Al: Whew! I thought I was a goner! Thank you.

Guide:
Think nothing of it .... Excuse me, Mr Gaulle, but could you walk a bit faster?

Al: I suppose, but why?

Guide:
This is where we keep the computer nerds. I want to spend as little time in this circle as possible.

Al: I see what you mean. What is their punishment?

Guide:
That there is more than one of them down there is punishment enough!

Nerd:
Hi there, my name is Bob Blockhead. I'm a computer wizard. There ain't nothing about computers I don't know. Why, in high school, I could crash BASIC five different ways! I can spend five, ten, sometimes even twenty hours at a terminal and not even notice. Especially when I'm playing Star Trek. And I frequently speak in computer jargon. But I'm starting to worry. There's this new bald guy around, and I think he's trying to take over my spot as number one computer wizard. He's supposed to be some kind of bigwig in the CompSci department, but I dunno ... He doesn't even know how to use the break key to get you from EDIT mode to CP mode -- and he expects to be able to write programs? These days, it seems like whenever I'm at the terminal, there he is, pounding away. I think he's working on wome kind of medical program -- connect eye vee, or something like that. He sure does have some funny ideas. Always muttering about proving his programs correct. But I set him straight. "Look, Bub," I told him, "when you go out into the real world, you won't be able to waste your tim writing these silly proofs. It takes long enough just to get the programs to work!" But he's starting to come to his senses. Just the other day, I showed him how to fix his program by going in and diddling with the bits, instead of wasting time re-compiling. He sure liked that! He's got a long way to go, but he tries hard enough. I think I better keep an eye in this guy!

Al: Can we leave now?

Guide:
Certainly.

Al: The people in this ring are all chained to television sets! What were their sins?

Guide:
This is the ring of the snobs, people who, quote, "only watch PBS", unquote. We force them to watch a string of uninterrupte commercials. Why don't we sample a few of them?

Comm#1:
Are you Christmas Shopping for those problem people on your list? For the hardware hackers on your list, you go to Radio Shack. For the audiophiles in your life, you go to Stereo Shack. But what do you do about those budding semanticists? Until now, you had to buy them a painted tie. But now, just in time for Christmas, Jim Donahue proudly presents the grand opening of Symbol

Shack. Symbol Shack has everything those "meaning mongers" need. As part of its grand opening, Symbol Shack is having a special sale on its collections of best-loved brackets: square, angle, curly, and of course, the ever popular parentheses. All sets are guaranteed to have matching open and close brackets. You won't believe your eyes when you see the incredible collection of lambdas at Symbol Shack. Capital, small, underlined, italic, bolface, even the new German lambda. During it grand opening celebration, Symbol Shack is giving away, with every purchase of ten dollars or more, a battery-operated bottom pusher. The bottom pusher makes mincemeat out of those complicated meaning equations, and it makes french fries three different ways. That's Symbol Shack, 711 The Elmira Road, right across from Arthur Treacher's.

Comm#2:

Looking for a result in automata theory, complexity theory, or formal languages, but you don't want to wade through pages and pages of dense mathematical notation? Go see Crazy Juris for the succinctest proofs around! Shop around! Go see Tarjan, Stearns, Hopcroft, Ullman; get their shortest proofs, then go see Crazy Juris. Crazy Juris will do better. Crazy Juris can prove the Recursion Theorem in just twenty-three words, the Halting Problem in twelve. And two of those words are proof and qed! Crazy Juris! His proofs are IN-SANE!

Comm#3:

The Conway book company, publishers of last uear's highly successful "Structured BASIC: A fruitless approach", with a special introduction by Anita Bryant, now proudly presents the Book of the Week Club. If you join the Book of the Week Club, once a week, every week, a new endeavor by Richard Conway will appear in your mailbox. Future titles include:

Structured COBOL: An Agressive Approach
Structured FORTRAN: A Cautious Approach
Structured LISP: A Kinky Approach
Structured RPG: A Ridiculous Approach
Structured SMART: An Old Approach
Structured ASAP: A Bankrupt Approach
Structured Mark IV: An Envious Approach

with Juris Hartmanis:

Structured Turing Machine Quituples: A Handwaving Approach

with Alan Demers:

Structured Russell: A Last-Ditch Approach

with Glenn Skinner:

Structured Typo: An Alternate Approach

with CBM Associates:

Structured COURSEWRITER: A Distracting Approach

with Julia Child:

Structured Cooking: A Half-Baked Approach

with Gerard Salton:

Structured Sailing: A Windward Approach

with Charles Van Loan:

Programming for Poets

with John Williams

Poetry for Programmers

and the light-hearted among you should look forward to:

A Humorous Introduction to PL/I,
and PL/C's Party Jokes

Also, soon to be released by the Conway Book Company, is the Journal of Strange Bedfellows, containing such fine articles as:

Conway and Hartmanis: Complete problems for IT
under after-Christmas reductions,
and
Andrews and Dennis: Partial Differential Semaphores

Look for the Journal of Strange Bedfellows, wherever fine paperbacks are sold.

Comm#4:

Make it smaller,
Make it faster,
Any problem we can master.
All we ask is that you let us
Solve it our way.

No matter where you are, you can get asymptotically fast algorithms to go at the sign of the HJ: HopJohn's fast algorithm stands. At HopJohn's, the algorithms are one hundred per cent beefed-up. No expensive padding is used. Try their Divide and Conquer. Or how about a really fast depth-first search? Remember, you deserve a break today, at HopJohns.

Comm#5:
Today's Sesame Street is brought to you by the letters gamma and epsilon, and the number aleph null: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 ....

Al: Er, thank you, but I think I've had enough.

Guide:
Yes, it is time to move on.

Al: Whew! I don't want to end up in that ring! The first thing I'm going to do when I get home is to watch an episode of Charley's Angels!

Guide:
Here is an amusing little scenario. This is where we put programmers who use "flag" as a variable name.

Student:
Uh, could you help me? I have a bug in my program.

CC: A bug, eh? How do you know?

Student:
Well, I ran it and it didn't work.

CC: But how do you <u>know</u> it didn't work? Do you have a formal mathematical statement of what the program is supposed to do?

Student:
Not really, but ...

CC: Well then, how can you be sure it doesn't work? Do you expect me to simply _look_ at your program, and see that it's wrong, without a _proof_ of incorrectness?

Student:
Wait a minute! I came in here to get my program fixed. I didn't expect a lecture on program verification!

VG: (Bursts in.) Noooooobody expects a lecture on program verification! Our chief weapon is surprise; surprise and pre-conditions. No -- two. Our two chief weapone are surprise, pre-conditions, and loop invariants. No -- three. Our three chief weapons are surprise, pre-conditions, loop invariants, and an almost fanatical dedication to Edsgar Dijkstra. No -- four. Among our weaponry are such diverse elements as -- oh, never mind. Cardinal Constable!

CC: Yes, Verifier Gries!

VG: Read the Articles of Verification!

CC: It is hereby declared that the existence of an integer x within the range specified by the declaration of the variable such that upon entry to the subroutine, allowing of course for the computability and decidability of the predicates involved, x has the same value as the third argument of the subroutine, as determined by the elimination of the connective in the third predicate in the second line, and the introduction of ...

VG: Cardinal Constable!

CC: Yes, Verifier Gries!

VG: That's enough. At this rate, we'll be here all day. Sterner measures are called for. Bring in the predicate transformer!

All: (Horrified.) THE PREDICATE TRANSFORMER?

VG: Yes, the predicate transformer.

Student:
No, no, not that! Anything but that!
(Student and CC scurry off stage.)

VG: You cowards! Come back here! (Follows them.)
Enter CS611 and Cor Kee.

CS611:
Now, that's quite enough our of you. I still say it's your fault that we're in this mess.

Cor Chirp! Whistle!

Al: Who are you two?

CS611:
I am CS611, android second class, specialist in intergalactic diplomacy and linguistics. My small companion here is Cor Kee Dee Too, a maintenance 'droid.

Al: What are a couple of 'droids doing in the Inferno?

CS611:
Sir! We weren't always 'droids. In our former lives, we were respected college

professors. However, we were proponents of foul languages, and as punishment for our sins, we have been doomed to this sad existance.

Cor Bleep! Cackle!

CS611:
Poor Cor Kee! These days, all he does is chatter about Stanford, First Order Theories, his arch enemy Donahue Vader, and his secret mission. I fear he must have a loose circuit card, or something. Though, he wasn't much different in his former life, rambling on to anyone who yould listen about that foul language of his, TL.

Al: TL? What's that?

CS611:
You've heard of Pidgin Algol? Well, TL is Turkey Lisp! Get it? Foul language -- Turkey Lisp? Ha-ha-ha!

Al: Oof! You really should be ashamed of yourself!

CS611:
Really? Anyway, Cor Kee was punished for his somewhat evangelistic manner by giving him this restricted form of expression.

Cor Whirr! Click! Squeek!

Al: I see. And what is your punishment, 611?

CS611:
I, sadly enough, am the only one who can understand Cor Kee.

Al: Not to mention turning you into a seven-foot automaton!

CS611:
Oh, they didn't change me all that much. Although the process of raising my voice three octaves was somewhat unpleasant.

Al: But as I understand it, androids are essentially beings programmed to perform the same task over and over again, with no variation. That must be horribly monotonous!

CS611:
No, I was used to that sort of thing.

Al: 611, you said your sin also involved a foul language. Did you use Turkey Lisp?

CS611:
Heavens, no! My language, if not more complex, was certainly more colorful! Uh, red to be specific. My associates and I tried for years to get it implemented, but we couldn't get anyone to back us. Get it? Backus -- as in John Backus? Ha-ha-ha!

Cor Yechhhhhhhh!

Al: I'm afraid I have to agree with Cor Kee. You really don't have a very good sense of humor, 611.

CS611:
Yes, I suppose you're right. Perhaps someday I can have a Teitelbrain installed.

Al: A Teitelbrain? Will that give you a better sense of humor?

CS611:
Oh, yes. It's constructed almost entirely of linoleum! It does have disadvantages, though. For example, it is very slow.

Al: Why is that?

CS611:
The algorithms it uses involve lots of copying. Come along, Cor Kee. Cor Kee? Oh dear. Attention! Attention! Break! Break!

Cor Bleep!

CS611:
You'll have to excuse him. Cor Kee is programmed with all sorts of exponential algorithms. Efficient in practise, so he says, but I'm the one who always has to intervene! I don't know what you'd do without me, you worthless pile of wire-wrapping! Come, come; don't dawdle!

CS611 and Cor Kee exit.

Al: They're quite a pair! But I thought we were promised there would be no linoleum or sheep jokes this year?

Guide:
The moratorium was on Teitelbaum sheep jokes, and Hopcroft linoleum jokes. What you just witnessed was a Teitelbaum linoleum joke. You really whould expect that sort of thing, considering where you are. Mr Gaulle, your journey has been a long and perilous one, but it is almost completed. You have but one circle left to traverse: the innermost circle. From hence forth, you are on your own; I can accompany you no longer. So be on your guard. The inner circle is populated with beings too foul and vile for description. There will be much wailing and gnashing of teeth -- take no heed of these. Your goal is at the very center. There you will find the portal you may use to escape from this fiery realm, and fortunate are you, if you never return! (Takes a few steps out toward the audience, and points to them.) Behold! Lake Bantakaya!

Al: (Walks out into the audience.) This? This is the dreaded innermost circle of the inferno? It's just a bunch of people having a Christmas party!

Guide:
Well, it's supposed to be a frozen lake, with all the sinners frozen waist deep in ice. But our water cooling system broke down. All the water in the lake melted and drained out -- we still haven't figured out where it went. So maybe the inferno is going to be down a while. Since there's no estimated up-time, let's go out and join the party!

HOLIDAY SHOW SCRIPT
December 1978

A N I M A L   H O U S E

MC: We would really like to thank Greg Andrews for his witty suggestion, the following parody of the movie, Animal House.

Freshie#1:
Wow we're never going to get pledged at the Gamma house.

Freshie#2:
Look, here is the Delta house, maybe we can get pledged here.

Freshie#1:
I dunno, I hear these guys are really a bunch of animals!

Freshie#2:
Well, it couldn't hurt to check them out. Hello? Anybody home?

<Hood Chicken> <Wyllie hog> <Johnson cow> <etc>

MC: Thanks again, Greg. Be sure to start working real soon on next year's show.

P O E M S

MC: As most of you know, we are fortunate to have with us a true man of letters: OCS, ASAP, and PL/CS, just to name a few. Dick Conway has asked us to read selected works from his latest book-of-the-week release, Poetry for Programmers. Barry?

BB: The first selection was originally published under the pen name Alfred, Lord Tennis Anyone?

"Grief", by Richard Conway.

A gaffe a week, a laugh a week,
How could he speak onward,
There in the valley of breath
    Known as 600?

To learn safe procedure calls,
They rush through hallowed halls.
They rush from volleyball   -throw volleyball
    Into 600.

In charge of the trite crusade,
Gries, and his students, prayed,   -hands pray
Confessing goto's they made
    When they had blundered.

Endlessly Gries would tell

Of programs parallel.
"Why came we to Cornell?" -scratch head
    Some of them wondered.

Gries to the right of them; -point right
Gries to the left of them; -point left
Supper in front of them,
    Their stomachs thundered.

But on talked Professor Gries,
Giving them little peace. -make peace sign
To think it might never cease
    Made everyone dread.

The guarded commands were swell,
But one thing they all knew well: -emphasize "one"
There should have been a bell -ring bell
    To end 600.

Now that the game's been played,
Many are much afraid
They have not made the grade.
    Yet, everyone said:

Ours not to make reply; -speak slowly
Ours not to reason why; -speak slowly
But we'll only do od if fi, -emphasize "if"
    After 600.

Next is "I Can Say 'Clearly' Now", by Richard Conway.

If you're forced to take theory from Juris,
You will find you will have to endure his
    Fake accent, his goofs,
    His handwaving proofs, -wave hands
For with details he's never a purist.

The next is "I Hear You", by Richard Conway.

Two programmers, Alan and Anne,
Are hotly debating the plan -raise fist on "hotly"
    That poor Anne prefers,
    But Alan demurs,
And now life is hard for that man.

Next we have "Nantucket", by Richard Conway.

621 students have Luk'ked it,
Because Van Loan didn't instruct it.
    In past years that Charlie
    Had acted bizaarly,
...

MC: <rushes up, pushes speaker away> Well, thanks a lot, Dick, those were just great!

H E N N Y   Y O U N G M A N

MC: We were most surprised by the material that Gerry Salton gave us. After tonight he will be known as the Henny Youngman of Computer Science.

Henny:

Take my course, please.

That computer salesman from DEC told Demers their machine could do half his work, so Alan said, "Fine, I'll take 2."

Did you hear that Anita Bryant was picketing Juris Hartmanis for using homomorphisms in class?

Well, she won't get Frank Luk's support. Just yesterday I overheard him saying, "Anita Wong."

What do Steve Baumel, Mike Ingber, and Fred Schneider have in common? --Wrong, they all went to Stony Brook.

The other day I went to my doctor and said, "Doc, I'm always getting goose pimples". So he says to me, "Stop feeding your goose so much chocolate".

Boy, you give Alan Demers a computer and he thinks he's president! He got up in systems seminar the other day, and delivered the state of the system address: "One, zero, one, one, zero, ..."

What is it with Teitelbaum? Every time I go by his office, there's a coed sitting on the floor waiting to see him. The other day I asked him if he likes bathing beauties. He said, "I dunno, I never bathed one."

Ever try finding a motel with Hartmanis? He thinks those signs saying "TV" mean "Tourists Velcome."

The sales returns from Conway's last twelve books just came in. He really has the midas touch. Everything he touches turns into a muffler.

[GONG!!!]

MC: Sorry, Gerry, but you got gonged. I don't know why, I liked it, but then again, I like Information Retrieval.

N . A .   S O N G

MC: Of all the skits provided, it was the committee's decision that Charlie's was the most unusual, for two reasons: The first was his casual approach to NA. The second was his casual approach to humor.

all:

I'm being baffled in the morning,
Sparse matrices are not my line.
    I can't handle numbers,
    But wake me from my slumbers,
And get me to NA on time.

    Do me a favor,
        Tell me no more.

When I am drowsing,
Push me out the door. Oh...

I'm being baffled in the morning,
I can't interpolate a spline.
This is a disaster,
I hope he'll talk faster.
And let us out of class on time.

I N G B E R   G E T S   A N D R E W S

MC: Fred Schneider didn't quite understand the spirit of our show. He proposed that some student be chosen at random to give a two minute testamonial to his chairman. It's not very funny, but we thought we should be polite to him because it's his first year. Besides, we'll try anything once.

In order to select a student, we have put the names of all the graduate students in a hat. The hat please. And the lucky winner is ... CARL EICHENLAUB! Would you send up Carl Eichenlaub? Carl? Oh, he's not here, we'll have to pick another name.

MIKE INGBER! Would Mike come up to the podium? I believe Mike's chairman is Greg Andrews. <he resists, struggles, doesn't want to come up>

[insert ingber material]
(Unfortunatly, Mike took his speech with him.
Mike, if you're listening out there, the editors would appreciate a copy for inclusion in this spot -- it was good.)

C A R N A C

announcer:
While many of the junior faculty seem to spend many of the late night hours in Upson, at least one spends it at home in front of the TV. Jim Donahue must have copied most of this, but we will do it anyway.

E: We are honored to have with us tonight a mysterious visitor from the East. Seer, soothsayer, and former charm instructor for Steve Baumel, CARNAC, the magnificent.

C: <comes in, trips>

E: Good evening, O great one.

C: Good evening. <makes sign>

E: I hold here the questions, which were put in envelopes and hermetically sealed in a mayonnaise jar and placed on Funk & Wagnall's porch at noon today. NO ONE knows the contents of these envelopes, but YOU in your infinite wisdom will divine the answers, having never before having seen the questions. Is that correct?

C: You got it, bozo.

E: <gives Carnac an envelope>

C: <holds envelope to forehead and concentrates> Tip O'Neill, Frankenstein, and Juris Hartmanis

E: <repeat>

C: <after ripping open envelope, reads> Name a speaker, a spooker, and a spiker.

C: The Beatles, the green slime, and a buffalo chip throwing contest.

E: <repeat>

C: Do you hear an echo? <pause> Name a singing group, a clinging goop, and flinging poop.

C: Moe, Larry, and Curly.

E: <do not repeat>

C: Whose pen names are Aho, Hopcroft, and Ullman?

C: John, Paul, George, and Ringo.

E: <repeat>

C: <repeat again>

E: <repeat yet again>

C: Name a pope and two Beatles.

C: Huey, Duey, and Louie.

E: <do not repeat>

C: Who was on Freddie Schneider's committee at Stonybrook?

C: Platek, Constable, and Hartmanis.

E: <repeat>

C: Name two logicians and a magician.

C: A plotting program, O. J. Simpson, and Jack Holm.

E: <repeat>

C: Name a graph pack, a half back, and a laugh track.

E: I hold in my hand the last envelope!

C: <insult>. Sodomy!

E: <repeat>

C: What did the wire say to Al Demers?

E: Thank-you, Carnac!

INSULTS:

1: May the fleas of a thousand camel tails infest your private parts.

2: May you be forced to take CS 635 -- twice.

3: Jack Holm liked it.

4: May Al Demers tie himself in a knot on your car's antenna.

5: May Seth Breitbart become interested in your research and talk to you about it every day.

6: May your daughter take CS 100 from Tim Teitelbaum -- and get extra credit.

THE NULL SCRIPT

MC: We got some entertaining ideas from Tim Teitelbaum. Unfortunately, Diane Duke refused to do the nude scene. Sorry, Tim.

WEEKEND UPDATE

mc: By strange coincidence, John Hopcroft and Juris Hartmanis both contributed news shows. We took the liberty of combining them into one big sketch. We think that it's their funniest collaboration since the little blue book.

ann1:

Tonight's version of the news is brought to you by Gries Relief and 612 -- the bug repellent for infested compilers.

The arrival of the new ATARI-11 computer has made several research projects as easy as child's play. Service engineer Thumbs Vollmer, of the Close Cover Before Striking School of Computer Repair, has been keeping the machine in top shape. Thumbs' motto has always been "Don't force it, use a hammer."

ann2:

Frank Luk has joined us, taking the place of his clone, Shih-Ping Han, who recently fell 300 feet from Cornell's suspension bridge, resulting in the world's first long distance clone fall.

ann1:

The department was stymied earlier this week when the Reverend Dr. Billy Gries received a letter from the new Pope. No one, including Sandor Halaasz, was able to decypher it however until the use of a mirror was suggested. It turns out the letter was written in reverse Polish.

More after this...

Charlie:

Look, I've just put my 4-th grade report card on my office door -- I got all A's! Maybe now students will take my course.

voice:

Sorry, Charlie, students don't want turkeys with good grades, students wants turkeys that grade good.

ann2:

We live in an era that has been described as the Age of Television. While most people have berated TV for its lack of imagination, typified by the plethora of spinoffs; this department has decided to emulate the great minds of the times. Most of you know of the more common spinoffs from PL/I such as: PL/C, PL/CT, PL/CV, PL/CS, and PL/CRT. However, just as the networks keep pilot shows for mid-season replacements, this department has a list of last minute compilers, just in case. Here are but a few:

PL/SC	a major research effort lately
PL/See Me	a self referential language
PL/Ski	Hartmanis' snowy version for Turing machines
PL/See next page	

<turn page>

PL/Si Si	Corky Cartright's <pause> Spanish version and finally
PL/Sea Weed	which has been kelp secret all year

ann1:

We were all relieved to hear that the assassination attempt on former chairman Gerard Salton was thwarted, when the bullet, destined for his heart, was deflected by his belt buckle.

ann2:

On the society page, many of us were pleasantly surprised to learn that grad students Rick Schlichting and John Thalhamer had gotten married this summer. Most of us didn't even realize that they had been going together.

ann1:

Well, the results of Dick Conway's computer science survey are in, and Cornell didn't rate any higher on that one than it did on Bitner's. Since hiring new systems faculty would be too expensive, Conway will instead takeg another survey. His new one will rate computer science departments in the fields of Theory of Computation, volleyball, ping pong and juggling.

We'll be back with more after these words...

voice:

They began their five year mission full of hope. Little did they expect that they would soon land on THE PLANET OF THE A'S.

See second year students struggle with questions from unrequired courses.

Watch as they learn that an A+ in a course does not imply passing the A's.

Coming SOON to a student near you: PLANET OF THE A'S.

And, on the same bill:

He was tough, but cool. See Sylvester Van Loan as "Rocky".

ann2:

The transportation world today was shocked when Professor Dick Conrail announced his intended takeover of the rail line owned by fellow Cornell professor Greg Amtrak. The proposed merger would give Professor Conrail control of the second largest freight line in Upson Hall. (The largest is, of course, is the set of wooden trucks that constitute Charlie's Van Line.) Our resident expert on railroads, Professor Eurail Hartmanis, said that

Conrail's move was not unexpected. In an uncharacteristic move, Professor Greg Amtrak declined comment on the merger attempt.

The takeover announcement came on the heels of a press conference yesterday at which three computer science professors announced their intention of forming their own rail company. Involved in the new venture will be Cornell professor Bob "Wabash" Constaball, Princeton professor and author Jeff Pullman, and last but not least Cornell professor Corky Caboose. Electing to go it alone, however, is first year professor Frank Lukamotive. <Runge-Kutta, Runge-Kutta, Runge-Kutta, woo-wooooo!!>

Professor Conrail got his start in railroading when he took three defunct lines and joined them together forming the Atcheson, Topeka and the PL/C. His more recent efforts include: PLCS, a steam powered version of PL/C, and a guide for railroaders entitled "Engineering for Poets--A Derailed Approach."

Professor Conrail has been accused by his competitors of having a one-track mind because he is one of the last proponents of the giant monolithic steam engine. His critics, on the other hand, favor many newer small electric models, which they say, are more versatile and do not leak. Professor Gerry Salton, of the Smart Line, is one of Conrail's few supporters. It should be noted, however, that the Smart Line uses more tracks than any other railroad.

We'll be back with a weather report after this message...

student#1:

My advisor wants me to take four courses and O.R. as a minor. What does your advisor say?

student#2:

My advisor is R.L.Constable and R.L.Constable says...

<everyone perks ears and leans toward speaker>

ann1:

It hasn't been very clear lately but our resident experts expect less snow this year than last. In fact, they said, we will have less snow this year than any other year in recent memory except perhaps for the last time Professor Hartmanis took a sabbatical.

Now with the sports report, here's announcer #2...

ann2:

Four year all-Ivy shortstop Wildman Reitman recently signed with Syracuse University after failing to come to terms with the Cornell management. Cornell player-coach Babe Van Loan said, "Rich's departure is a real loss to everyone on the team except Greg Andrews. Andrews has wanted to play shortstop all along. Well we gotta let him play it now, because we don't have anyone else. I hope he's figured out how to put on his glove." Andrews, if you remember, was last year's Golden Thumb award winner. Rounding out the infield will be David Gries on first base, Dick Conway on data base, and Neil Armstrong on Tranquility Base. Once again the success of the team will depend on the ol' dependable, Charlie "the Dependable" Van

Loan.

annl:
And that's the way it is????

THE CRITICAL REGION

MC: David Gries suggested the following parody of "The Twilight Zone." Scott Johnson plays Rod Serling; Bob Hood plays Greg Andrews, sorry about that Greg; and Gary Levin is playing Fred Schneider, sorry about that, Gary.

<Fred and Greg enter from opposite sides, approach door, notice each other; both reach to door and FREEZE>

Rod: Submitted for your approval. Greg Andrews: a man called reckless by some, foolish by others. A man in a setting that is unfamilar to him, yet somehow comforting. Enter Fred Schneider: a young man, a violent man. A man who seldom gets his wishes, but often gets his way. Two men, each uniquely different but sharing a single common goal. Both reaching out, trying to use the same doorway. But this is no ordinary door. It is the exit from the edge of conciousness, the gateway to the deeper recesses of the mind. One single portal, separating the essence of reality from the deftly intertwined threads of THE CRITICAL REGION.

<STING, both back up>

Greg:
Say, stranger, there's only room for one of us in there.

Fred:
I tell you what, I'll go first and you can have it when I'm done.

Greg:
Who gave you priority? I was here first. Step aside.

Fred:
I've got an idea. We'll race for it. First one to the door goes through. That will solve everything.

Greg:
Seems too simple for my tastes. Can you prove it'll work? Maybe what we need is a bounded buffer.

Fred:
The best way to find out is to test it. Ready. Set. GO!

<both hit door at same time, get stuck, struggle>

ROD: A tragic example of man's inhumanity to man. Neither will backup, and neither can advance. Deadlocked for all eternity. Perhaps it could have been avoided, perhaps not. It's a chance you have to take when you attempt to enter ... THE CRITICAL REGION.

THE FACULTY LUNCH

MC: Students have long wondered what goes on at those mysterious faculty lunches. Thanks to first year faculty member Frank Luk, we now get a glimpse. I hope we haven't gotten you in trouble with your colleagues, Frank. heh-heh.

corky:

Juris, why did you give up the chairmanship to Conway? Is it true that you just couldn't stand the pressure of the chairmanship and volleyball anymore?

juris:

<Latvian accent> No, that's not it. Conway was feeling left out so I thought I would let him try the seat of power -- make him feel good. <Conway walks up with tray, sits down> Oh, hi, Dick. I see you're eating a turkey sandwich today -- oops, sorry Charlie!

conway:

So what's new?

brickbat:

We were just talking about the chairmanship and how Juris here let...

juris:

Shut up, Seth!!! Let's change the subject. Constable tells me that he doesn't let first year students take 481 anymore -- he says it's unfair to the undergrads in the course. Instead of taking 481 they're supposed to read Hopcroft & Ullman some weekend.

corky:

481?! What about 611? There are more undergrads in there than in 481.

juris:

But 611 is a graduate course.

corky:

Since when? Besides, the grad students could learn the material by memorizing the MTS LISP source and the ALGOL 68 report.

demers:

The unrevised or revised report?

corky:

Both! They should comment on the differences.

demers:

I hear you.

corky:

Life is hard.

juris:

Why have 782? The students could just read Kleene's Metamathematics in some spare moments.

demers:

<contorting> Wow! Grad students shouldn't take 612 either. After spending all that time not taking 611 they should at least use what they learned to write an ALGOL 68 compiler.

corky:

Make sure that they follow the flowcharts in Gries's book.

conway:

For 632 it would suffice to help OCS maintain the university data base for a semester.

corky:
Isn't it written in COBOL?

conway:
Life is hard.

demers:
I hear you.

freddy:
Instead of 613, let them read the source for OS and then re-write it in Dynamic Modula.

juris:
Shut up, Freddy!!!

conway:
If they aren't going to be taking many courses then we can keep 621--maybe even require 622!

all: Life is hard.

conway:
Instead of 635, how about reading the listings in the SMART office...

demers:
Instead of 681 they could prove P = NP.

juris:
And prove zem not equal for 682!

A B S T R A C T   B U Z Z W O R D S

MC: In previous years, we have often heard parodies of NA colloquia. This year, John Dennis has provided us with his impression of a system talk, which all sound the same to him -- and most of the rest of us, for that matter.

Conway:
It is my pleasure to introduce Mr. R. C. Abalone from SUNY Trumansburg, who is going to speak to us on the subject of "Abstract Buzzwords in Computer Science". Mr Abalone?

Abalone:
In the study of abstract non-representational order semantics for uniformly derived parametric algebras, a complete understanding of orthometric dichotimizations of polymorphic encapsulation mechanisms is required. We formalize these intuitive concepts by isolating the semantological aspects of an interdenominational subset of the langugae PASCAL. In the intermediate level, the binding of abstract operations to entire hierarchies of characteristic objects is realized through selective exportation of shared names. After all, two access rights do not make a wrong. The specification of user-maligned data types partitioned into classes, which in turn induce varities, which are a subconcept of the general notion of ilk. These concepts are extended in the usual fashion to include metatypes, metaclasses, and metacarpals. In conclusion, unbounded constructive rewriting rules can be used to generate languages with a high degree of dependability, readability, modifibility, disability, and datability. Are there any questons?

Gerry:
I don't know very much about your field, but my friends use lots of buzz-words, and they tell me that every word you've just used has been out of fashion since 1951. How do you respond to such criticisms?

Abalone:
<Rasberry>

W H Y A D U C K ?

MC: Corky Cartwright pointed out that in all of the past shows, we have never taken advantage of the fact that two of our faculty members bear a striking resemblance to two of the Marx Brothers. He suggested that we re-enact the classic "Why A Duck?" scene from Monkey Business. Not very original, but you know Corky.

Tim: Now here is a little peninsula, and here is a viaduct leading over to the mainland.

Juris:
Vie a duck?

Tim: I'm all right, how are you? I say here is a peninsula, and here is a viaduct leading over to the mainland.

Juris:
Clearly, but vie a duck?

Tim: I'm not playing "Ask me another", I say that's a viaduct!

Juris:
Allright, vie a duck? Vie not a chicken?

Tim: I don't know why not a chicken, I'm a stranger here myself. All I know is that it's a viaduct. You try to cross over there in a chicken, and you'll find out viaduct!

Juris:
I no go someplace, I just . . .

Tim: It's deep water, that's viaduct. It's DEEP WATER.

Juris:
Zat's vie a duck?

Tim: Look. Look, Juris, suppose you were going out horseback riding, and you came to that stream, and you wanted to ford over. You couldn't make it, it's too deep.

Juris:
Well, vie do you vant a Ford, if you gotta horse?

Tim: Well, I'm sorry the matter ever came up. All I know is that it's a viaduct.

Juris:
Vell look, allright. I catch on to why a horse, why a chicken, why a zis, why a zat, but I don't catch on to vie a duck.

Tim: Well, I was only fooling. They're going to build a tunnel there in the morning. Now is that clear to you?

Juris:
Yes, everysing except for vie a duck.

Tim: Well that's fine. Now we can go ahead with this thing. Now look, I'm going to take you down and show you our cemetery. I've got a waiting list of fifty people at that cemetery just dieing to get in, but I like you. I like you, and I'm going to shove you ahead of all of them. I'm going to see you get a steady position. And if I can arrange it, it'll be horizontal. Now do you know how to get down there?

Juris:
No you didn't explain it.

Tim: Now look, now look Juris. You go down there, down that narrow path, there, until you come to that little jungle there, you see it? And then there's a little clearing there, a little clearing with a wire fence around it. You see that wire fence there?

Juris:
Allright... Vie a fence?

Tim: Oh No! We're not going to go through all of that again!

S O N G S

mc: Bob Constable didn't want to be outdone by Charlie, so he also contributed some songs, these based on some well-known Christmas songs. I think you'll be surprised at his musical ability.

Frosty the Snowman

I'm Corky from Stanford,
I'm a Harvard man, you know.
I wear cowboy boots,
But never suits,
And there's nothing I don't know.

I'm Corky, the LISP man,
No other language could be good-er.
And I would like
To trade my bike
For a sports-car or sports-cdr.

A good interpreter for LISP
Has not yet been designed.
I hope that I can find one soon,
Before I lose my mind.

I'm Corky, the LISP man,
I love lambdas lots, it's true.
And I can write with ease
More parentheses
Than e-ven Don-a-hue.

O Come All Ye Faithful

O come all ye hungry,
To the Upson Lounge,
Where do-nuts
And ci-i-der
And coffee abound.
Swarm to the window,
Fill your face with do-o-nuts.
<softly, then progressively louder>
O come let us devour them,
O come let us devour them,
O come let us devour th-em,
Then skip the talk.

Auld Lang's Syne

Should A exam-ams be forgot,
    And never brought to mind?
The passing and the failing grades
    Have already been assigned.

N A M E   T H A T   A L G O R I T H M

MC: Since Alan Demers has just concluded his course on algorithms, it is not surprising that he wrote a skit about them. I'm sure sure you will all find this skit as educational as his course was funny.

Announcer:
Hello, ladies and gentlemen, and welcome to NAME THAT ALGORITHM! We have two contestants with us competing for some wonderful prizes.

Our champion tonight is John Hopcroft. John was born in a log log cabin, and at the age of 9 he caused quite a stir when, for no apparent reason, he would transform fouriers faster than any other kid on the block.

Our challenger is Juris Hartmanis, born in Bloomington, Indiana. At the age of 8 Juris caused quite a stir when for no apparent reason, he began speaking with a Latvian accent.

We're almost ready to begin, but first this word from our sponsor.

#1: My advisor wants me to take four courses and OR as a minor. What does your advisor say?

#2: My advisor is J. E. Donahue, and J. E. Donahue says ...

<every one covers ears and leans away>

Announcer:
And now, let's hear tonight's problem.

Voice:
PARTITIONING BIMORPHIC WAFFLES!!!

Announcer:
All right contestants, NAME THAT ALGORITHM!!!

Hopcroft:
I can name that algorithm in exponential time.

Hartmanis:
I can name that algorithm in polynomial time!

Hopcroft:
I can name it in Eastern Standard Time!!!

Hartmanis:
NAME THAT ALGORITHM!!!

Hopcroft:
Uh, it's the Four Russians Algorithm.

Announcer:
YOU'RE RIGHT!!!

Hartmanis:
I can name that algorithm with THREE Russians!

Hopcroft:
I can name that algorithm with TWO Russians!!!

Hartmanis:
NAME THOSE RUSSIANS!!!

Hopcroft:
Uh, Uh, LENIN! And, uh, uh, uh, McCARTNEY!!!

Announcer:
YOU'RE RIGHT AGAIN, and you're our GRAND PRIZE WINNER!!! Your prize is a one week all expense paid trip to the UNIVERSITY OF MINNESOTA!

And Juris, we have no losers on Name That Algorithm. Your consolation prize is a two week trip to the University of Minnesota.

Well, we're out of time, so good night for NAME THAT ALGORITHM!!!

MC: Well, that's all for this year's show. We originally planned to rent an applause meter, and have you rate the skits, but Conway tells me this is not very scientific. Survey forms will be in your mail boxes in the morning. Thank you, and good night.

Holiday Show 1979

M Y   F A I R   G R A D U A T E   S T U D E N T

MC: Welcome to the Nth Annual Christmas Party and Extravaganza. I'd like to start out by thanking everyone who helped organize this affair. This preface is neccessary because there is no way the entertainment which follows can live up to the high standards of the dinner which preceded it. I wanted to make sure no one felt it was being done in retaliation.

Let me tell you about tonight's show. When it was still a gleam in the eye of it's writers, some basic research went into scripts from previous shows. Apparently, and I quote, "the best response was for the musical skits, despite the limited ability of the performers", unquote. Since the first year class has shown promise of even more limited abilities, the writers felt that a complete musical production was in order.

However misguided this idea was, it has been carried out with a vengence. Therefore we would like to present to you our production of Lerner and Loewe's My Fair Graduate Student.

Our story begins in the basement of Upson Hall ... {MC walks off stage and takes a seat nearby.}

Scene 1

{In the basement outside of B-17 after a lecture. Four CS100 students enter carrying printouts, cards etc. They are in the engineering, hotel, and BPA schools. The fourth is Elijah. They sit and lean against the wall as they talk.}

CS100 STUDENTS:
{Ad lib comments e.g. "it used to work", "It keeps giving me an error", "stupid computer".}

{Concroft and Saltable enter discussing the lecture. The hotel student sees them and approches Saltable.}

HOTEL STUDENT:
Excuse me sir. Professor Teitelbaum gave us another impossible assignment. Could you answer a few short questions?

SALTABLE:
Well I don't know, {coughs nervously}, let me see what you've got there. {takes printout from the student}

CONCROFT:
What are you doing Saltable. Since when do you give free advice to students from the hotel school?

HOTEL STUDENT:
{amazed} How did you know I was from the hotel school?

CONCROFT:
A single glance at your program was sufficent.

SALTABLE:

What do you mean old boy?

CONCROFT:

It's a simple matter of coding style and structure. Why, the pattern of loops and branches is as distinctive as a finger print. Take that fellow over there, {points at engineer} he has hardly progressed from the BASIC he started with in fifth grade!!

ENGINEERING STUDENT:

Fourth grade!

SALTABLE:

Simply remarkable.

CONCROFT:

It follows directly from the fact that a student's coding style is strongly influenced by the style of their teachers.

Look at him, working through the nights
Condemned by every program that he writes
By right he should be taken out and hung
For the cold blooded murder of PL/1

This is what the American Population
Calls a programming education

SALTABLE:

Come sir, I think you picked a poor example.

CONCROFT:

Did I?

See them sitting here and there
Tracing programs everywhere
Changing code whichever way they like
You sir, {addressing BPA student} what's the next the you will do?

BPA STUDENT:

Obviously, add a go to.

CONCROFT:

A Graduate of the "Don't think, code" school of programming.

Why can't Americans teach their children how to code
This semantic piece of rubbish, has me completely snowed
If you wrote as he does sir,
Instead of the way you do --
Why you'd be taking CS100 too!

SALTABLE:

I beg your pardon!

CONCROFT:

An American's way of coding absolutely classifies him
The moment he writes he makes some other American despise him
One common language I'm afraid we'll never get

Oh why can't Americans learn -- to --

Set a good example, using structured programming techniques
Why FORTRAN IV and BASIC leave me quivering for weeks
There are even cases where it completely disappears
Like in APL where they haven't used it for years

Why can't Americans teach their children how to code
In SNOBOL they use labels 'till it's quite a frightful mode
LISP only has recursion, which isn't very bright
Unless you're J. McCarthy or even C. Cartwright

But use a little structure, you're regarded as a toad
Why can't Americans,
Why can't Americans, learn -- to -- code.

You see this creature {points at Elijah} with his spagetti programming, a style that will keep him debugging till the end of his days? Well sir, at the end of six months I could pass him off as a PhD candidate at the A-exams. In fact he could even pass for an employee of CDI, which is a much more demanding task.

ELIJAH:
Say what?

CONCROFT:
Yes you perennial hacker, I could make you into a chief programmer!!

BRUCE THE OPERATOR:
{Bursts in and interrupts} The whole system is going down momentarily. If you want to get in some more runs you had better do it now.

STUDENTS:
{Ad lib comments e.g. "we better hurry up","I need one more run", "do you have any more cards". They start to move off stage busily}

SALTABLE:
I suggest we beat a hasty retreat. {Concroft nods and they leave the stage in the other direction}

{Before the students get all the way off stage...}

BRUCE THE OPERATOR:
Too late. Try again tommorow at nine.

STUDENTS:
{Ad lib comments e.g. groans,"there goes my GPA","I'll never get it done"}

HOTEL STUDENT:
{in affected tone} I think I'll strut up to my office now James. How about you?

BPA STUDENT:
I've got to go play squash with Frank Rhodes today. I wish I didn't have to, it's so tedious trying not to beat him. How about you Elijah, what do you want?

ELIJAH:
{dreamily leaning against the wall}

All I want is a PhD
One more problem that's in NP

A chair at MIT
Oh, wouldn't it be loverly?

Lots of papers in ACM
Lots of students who would write them
To scoff at IBM
Oh, wouldn't it be loverly?

Oh so loverly marching out to lunch with faculty
I would never let a mere --
Student eat lunch with me

Have an office that's all my own
With a desk and a telephone
Designed by Charles Van Loan
Oh, wouldn't it be loverly?
Loverly Loverly
Loverly Loverly

HOTEL STUDENT:
Well let's go get some lunch at the Straight.

STUDENTS:
{Ad lib comments e.g. "meatloaf again","spam spam spam spam". They walk off stage}

1 ENECS

MC: The next scene takes place several hours later in the office of Juris Concroft. You will notice that it looks remarkably like the hallway of the previous scene. That's because we put all our money into a writing staff rather then a prop department. This seemed to be a good idea in theory. Unfortunately, it's ideas like these that show that no one in the department can do anything practical.

SCENE 2

{In Concroft's office. Concroft is up at the blackboard writing
/* GCD algorithm */
do
od
He finishes and sits down.}

SALTABLE:
Just let me write down my assertions.

CONCROFT:
Come now Saltable, this dependance on mechanical aids is most unbecoming. If you feel that you must write them down they're too complicated. You must simplify, always simplify.

ELIJAH:
{off stage} Knock knock

CONCROFT:
Who's there?

ELIJAH:
Betty.

CONCROFT:
Betty who?

ELIJAH:
Bet he can't do it without writing down his assertions!

MC: {gets up and speaks from partially on stage} All right, stop the knock-knock jokes. This is a semi-serious production here. I want no frivolity leaking in.Take it again from "you must simplify".

CONCROFT:
You must simplify, always simplify.

{The sound of ELIJAH knocking at the door is heard}

CONCROFT:
Who's there?

ELIJAH:
{still off stage} Land shark.

MC:: {gets up and speaks from partially on stage} Now cut that out. Take it from the knocking and do it right or we'll call the whole thing off.

CONCROFT:
Is that a promise?

MC: If I only had the power!! {looks toward heaven and sits down dejectedly}

{The sound of ELIJAH knocking at the door is heard}

CONCROFT:
Come in.

{ELIJAH enters the room}

ELIJAH:
I've come to take you up on your offer to teach me how to program proper like.

CONCROFT:
My god, even his english is abominable.

SALTABLE:
Don't be so hard on the boy. I think it would be a good project for you to undertake. Show the world you have the courage of your convictions.

ELIJAH:
I'm not asking for charity ya know. I'll work for it: I'll TA CS100, I'll work on the verifier or the synthesizer, I'll even program for OCS.

SALTABLE:
Now now, I'm sure we won't have to do anything that drastic. Concroft, you're a sporting chap, how about a little wager. I'll put the boy on my NSF grant until January. If you can pull off your little stunt the expenses are mine. If you don't, you buy me a few Teraks from your DOD grant.

CONCROFT:

{considers for a bit} Well all right. But I'm afraid my DOD funds are a little low. I'll have to get a loan from the coke fund.

SALTABLE:

Splendid. Let's start immediately.

2 ENECS

MC: The following months involved much hard work for Elijah and Concroft. The next somewhat incoherant scene is an attempt at a montage of this time. If you feel that you don't understand what's going on, don't worry. You will not be responsible for this material on the final.

SCENE 3

{The famous teaching sequences. Four people act as professors and take turns at the blackboard. Three stand behind the blackboard as the fourth is lecturing to the audience and Elijah. As a lecture segment ends, the next professor switches places with the one who just finished. They all use one common diagram and add to it each time around.}

PROF1:

{in a Latvian accent or as close as possible} Last time we finished looking at the standard automata and Turing Machines. In the book they do the two-pebble and two-stack machines. These constructions are really long and tedious, just the way Hopcroft likes them. {smiles} Look at them, understand them, but I won't cover them in class. I'd like to consider some other variants of these machines and prove some properties of equivalence. First I'd like to look at the red light PDA's.{draws and writes on blackboard as he talks}. These little beauties have the standard finite control, one way infinite tape, and pushdown stack. The new feature is a large red light bulb attached to the side of the finite control. If the tape head falls off the end of the tape the light starts blinking on and off rapidly. This signals a little man who lives in the stack to come out and reposition it on the first tape cell. To see that these machines are equivalent {waves hands} note that we can build a finite automata to model the little man and run it in parallel with the PDA.

Hopcroft:

Good afternoon. This is Computer Science 681 and I'm Professor Hopcroft. I hope you all have your books, as I expect you to have read them completely by Wednesday. This is a course on computer algorithms, and we'll be covering a lot of them, as well as a good many theorems. Now, I don't like details, so I'll only be covering the high points and letting you fill in the minor stuff. In fact, I'm not going to be proving any of the theorems we'll be covering, and I usually won't even state the entire theorem. I'm sure you can all fill in the parts I leave out. All right. Theorems 1.1, 1.3, 1.5, 2.4, and 9.1 through 12.7. Any questions? Good. Some of you may be wondering about homework. It's all been photocopied, and a forklift will be delivering it shortly. We'll supply each of you with a wheelbarrow to transport your copy. If you tried to push it along the floor, you'd probably scuff the linoleum (hysterical laughter.) Excuse me. Actually, we don't have QUITE that much, and it should all fit in a knapsack. So that you can work at a graduated pace, we've arranged the problems into three sections by order of increasing difficulty. The first section is all of the double-starred problems from the book. The second section consists of unproved conjectures, and the third section is made up of problems which are true but not provable in our axiom systems. See you at the midterm.

PROF2:

Do you remember the insurance data base from last class or should I put it on the board again? No, it was a real estate data base, that's right. Well I better put it on the board again because I'll forget it. Let's see {draws and writes on blackboard as he talks} we had the persord, the itord, the conit, I wish I had some colored chalk here, the priquan, and the brokoff relations. Mr. Fox has suggested that you try to optimize the following query for next class.

Print the names and addresses of all the suppliers who supply more than one item to all the agents who have more clients than Sam Slick and who have bought more than fifty dollars worth of granola from the Tasty Supply Company within the last two months without ordering any raisin bran flakes from the Sunshine Supply Company during that period.

PROF1:

The next machine is one of my personal favorites. It's one of the most luxurious Touring Machines ever written. The style, comfort and smooth running make it the most elegant model in America or anywhere else. {breaks into song} Vo-lar-ay whoa-oh-oh-oh, Vo-lar-ay Touring Machine. Equipped with a V-8 finite control padded with rich corinthean leather, automatic transitions and a fixed head disk break system to ensure proper halting. Three speed, eight track tape is optional.

PROF2:

I'd like to discuss the IBM implementation of this database. The DBA initially sets the PCB to correspond to the PCP and the PT. To prevent the AU's from gaining unrestricted access to the PCB, the segment RN's are significantly reduced. This often causes the LMNOP's to become quite sullen and intractable. The PDQ's usually retaliate when this happens by following the XYZ pointers until they're exhausted and irritable.

PROF1:

From Romco we have the amazing new k-dimensional vego-matic PDA with five interchangable blades and a Church-Rosser attachment. It slices, it dices, it even makes julienne potatoes. No mathematician's kitchen should be without one. This machine is yours for the amazing low, low price of only four eighty one. That's right four eighty one. To order yours call 256-1000, that's 256-1000. Dyadic operators are standing by. Call by midnight tonight and Romco will send you free of charge every ambiguous context free language ever enumerated. Also available at K-mart stores, for K less then twenty.

PROF1-4:

8 input symbols
7 dimensional tape
6 bells and whistles
5 READ WRITE HEADS
4 final states

3 coun - ters
2 pushdown stacks
and a peartridge in a parse tree

{They leave the stage as Concroft and Saltable walk on. Elijah positions himself sitting on stage, Concroft stands over him and Saltable stands off to the side. Corky approaches}

ELIJAH:
You've taught me a little about languages now, but the only one I know well is PL/C. I'm sure there must be a lot more to learn.

CONCROFT:
And so there is. Fortunately, we can pick up what you'll need here at Corky's 611 Language Cafeteria

CONCROFT:
(to Corky): Morning.

Corky:
Morning.

CONCROFT:
Well, what ya got?

Corky:
Well, there's Bliss and Algol; Bliss, Snobol and Algol; Bliss and LISP; Bliss, Algol and LISP; Bliss, Algol, Snobol and LISP; LISP, Algol, Snobol and LISP; LISP, Bliss, LISP, LISP, Algol and LISP; LISP, Snobol, LISP, LISP, LISP, Algol, LISP, APL and LISP; LISP, LISP, LISP, Bliss and LISP; LISP, LISP, LISP, LISP, LISP, LISP, Russell, LISP, LISP, LISP and LISP; (pause) Or Algol68, fully implemented with true parallelism, automatic proof checking, complete runtime support, enhanced with message passing and multiprocessor synchronization and error repair, written in LISP.

ELIJAH:
Have you got anything without LISP?

Corky:
Well, there's the LISP, Bliss, Snobol and LISP -- that's not got much LISP in it.

ELIJAH:
I don't want any LISP.

CONCROFT:
Why can't he have Bliss, Algol, LISP and Snobol?

ELIJAH:
THAT'S got LISP in it.

CONCROFT:
Hasn't got as much LISP in it as LISP, Bliss, Snobol and LISP, has it?

ELIJAH:
Could you do me Bliss, Algol, LISP and Snobol without the LISP, then?

Corky:
(disgusted): Eccch!

ELIJAH:
Whaddaya mean, eccch?! I don't like LISP!!

Corky:
You can't have Bliss, Algol, LISP and Snobol without the LISP!

ELIJAH:
I DON'T LIKE LISP!!!

CONCROFT:
Hush now, don't cause a fuss! I'll have your LISP -- I love it! I'm having LISP, LISP, LISP, LISP, LISP, LISP, LISP, Russell, LISP, LISP, LISP and LISP.

Corky:
Hold it -- Russell is off.

CONCROFT:
Well, could I have his LISP instead of the Russell, then?

Corky:
You mean LISP, LISP, LISP, LISP, LISP, LISP, LISP, LISP, LISP, LISP and LISP? {absentmindedly wanders of stage muttering LISP under his breath.}

CONCROFT:
Elijah, I know you're tired. I know your head aches. I know your nerves are as raw as meat in a butchers window. But think what you are trying to accomplish. Think what you're dealing with. The majesty and grandeur of correct digital processing. It's the greatest possession we have. The noblest ideas that ever flowed through the hearts and minds of humans are contained in its extraordinary and imaginative constructs. That's what you've set yourself to conquer, Elijah. And conquor it you will! Consider this loop. {put do-od on the board} The main idea is that what ever is true here, is true here. {points to top and bottom of loop.} Let's see, how can you remember this? Ah, yes! Repeat after me: {very slowly, as to a child. writing as you speak.} The claim's in vain unless it stays the same.

ELIJAH:
The gain in claims is plainly down the drain.

CONCROFT:
No, no!! Try it again.

ELIJAH:
The rain of claims is to blame if it's in vain.

CONCROFT:
No, no, no!! Saltable the child's an idiot, totally unfit to be human! {He seats himself dejectedly, and holds his head in his hands}

ELIJAH:
The claim's inane unless the pain's the same. {He pauses, thinks hard and says slowly...} The claim's in vain unless it stays the same.

{Concroft and Saltable look up amazed}

CONCROFT:
What was that?

ELIJAH:
The claim's in vain unless it stays the same.

CONCROFT:
{unbelievably} Again.

ELIJAH:
The claim's in vain unless it stays the same.

CONCROFT:
{to Saltable} I think he's got it.

ELIJAH:
The claim's in vain unless it stays the same.

CONCROFT:
{triumphantly}

By George, he's got it
By George, he's got it
Now once again, what's in vain?

ELIJAH:
The claim! The claim!

CONCROFT:
And how must that claim remain?

ELIJAH:
The same! The same!

{Saltable jumps in and they all sing together} {They dance and frolic about cheering "OLE!!"}

THE THREE:

The claim's in vain unless it stays the same.
The claim's in vain unless it stays the same.

{They collapse exhausted on the chairs}

CONCROFT:
By jove Saltable, we're making fine progress. I think the time has come to try him out in public. {He thinks for a minute}. I know! Let's take him to the cookie seminar.

SALTABLE:
The cookie seminar!?

CONCROFT:
{Excited by the idea}Yes. Donald Duckstra is giving a lecture tomorrow. It's on one of his usual esoteric topics.

SALTABLE:
Don't you think that's a little over his head?

CONCROFT:
Nonsense. It's over everyone's head, including Duckstra's.

SALTABLE:
I suppose so. I suggest we let the boy get some rest tonight so he stands a chance of following it.

{They leave the stage together}

3 ENECS

MC: Without further introduction I give you, The Cookie Seminar.

SCENE 4

{The partipitants come out on stage in a stately fashion and face the audience. They sing in a stilted snobbish manner}

Ev'ry gra-du-ate stu-dent is here
Ev'ry pro-fes-sor and guest is here
What a smashing, positively dashing
Spectacle: the cookie seminar

Do-Do-Do-...-Do
{They sing and dance in pairs}

Time to leave the fourth floor as the
First floor lounge door has been left ajar
For a gripping absolutely ripping
Spectacle: the cookie seminar

Ci-der pour-ing
I-deas soar-ing
It's so bor-ing
I would rather be in Cleveland

Any minute now
They will bring the treats
Any second now
We will get free eats!!

{All freeze until some one with a tray appears and yells...}
D O N U T S !!!!!!!!
{All madly attack person with tray. After all is eaten...}

What a frenzied moment that was
Shouldn't I go out and get the car
So we'll miss the sleeping and the snoaring
At the weekly cookie seminar

{All sit down for seminar.}

RANDOM PROFESSOR:
Today's lecturer is a man who likes to think he needs no introduction. I'd like to prove him wrong. Ladies and Gentlemen, Donald Duckstra.

DUCKSTRA:
Today I wish to speak on the question, "Is terminating sometimes ever better than ... not terminating?" The origin of this title is quite interesting. Last summer I was lying in bed with the Sunday Times, working on the crossword puzzle. 37 down was a three letter word meaning affirmative. It seemed

obvious that the answer was "YES". {write "YES" on board in large letters.} This dependence on intuition, however, was distasteful to me and I decided to be more rigorous about the matter. Attempting to prove my answer correct, I took the weakest precondition. {add wp() around YES on board} Imagine my surprise when I discovered a much more general, a much more interesting question with this same answer. Yes, I am sure some of you have anticipated my result by now. Indeed a few of you may have worked it out rigorously for yourselves. The weakest precondition of YES is... "Is terminating sometimes ever better than ... not terminating?"

ELIJAH:

{Interrupts} But why worry about not terminating? PL/C only gives you one second and then terminates for you.

{general horror at gaff. gasps all around.}

CONCROFT:

{pops up} Excuse me but I just remembered that my student has to catch the last plane out of Ithaca tonight and has no more time for questions. Come along Elijah. {exit C and E. exit all}

4 ENECS

MC: Such embarrassment would have made most people give up. Unfortunately, this was not the case here. The remaining months before the A-exams were as busy as ever, not only with studying but with friendly interaction with the other graduate students in room 415, a place known affectionately as the zoo. Oh, yes. If any of the faces look disturbingly like the undergraduates and professors you've already seen in the play, don't worry... all computer scientists look alike.

SCENE 5

{Four graduate students and Elijah walk on stage and assume working or relaxed positions.}

GS1: I am really getting bored in that class. We get theorem after theorem and never prove so much as a corollary. Are they afraid we can't handle rigorous mathematics?

GS2: Why don't you complain?! The new faculty members haven't gotten used to the high calibre of students here at the department. They don't realize how brilliant, creative, perceptive, kind, thoughtful, witty, helpful, and above all interested in rigorous mathematics we are.

GS1: Great! I'll just walk up after class and say "Don't you realize how brilliant, creative, perceptive, kind, thoughtful, witty, helpful, and interested in rigorous mathematics we are?"

GS2: There are much better things to say.

GS1: Like what for example?

GS2:

Words! Words! Words!
I'm so sick of words!
I get words all day through;
First from him, now from you!
Is that all you blighters can do?

Don't wave your hands
Don't be aloof
If there's a proof
Show me

Counter example
Suits me just fine
Don't make me whine
Show me

First you tell me that induction is the way to go
Do you induct? Good heavens no!
You just tell me if I ever really hope to pass
I must write it up for next class

Please don't be cruel
Don't let off steam
If there's a scheme
Show me

I won't complain
If you make goofs
If there's some proofs
Show me

Don't wait until
I've failed the course
If it can be done as you vow
Show me now!!

GS1: That's not a bad idea. I just hope they're not offended.

GS2: I wouldn't worry about that. I just hope they can manage a formal proof.

{GS3 and GS4 walk on stage.}

GS2: {Addressing GS3} Hey, how did your prelim go?

GS3:

Work! Work! I should have done more work
From my desk I never should have strayed
Beer! Beer! I should have had less beer
Then I might have earned a passing grade

I should have worked all night
I should have worked all night
Prepared for my exam

If I had worked all night
I might have got some right
Oh why did I not cram?

I couldn't prove a single theorem
Although I tried with all my might

I should have known that beer
Would not make theory clear
I should have worked, worked, worked
All night

{Addressing GS4} And where were you last night? We waited at The Gazebo for an hour and you never showed up.

GS4: I would have danced all night Had fun and pranced all night But I had work to do This stuff is really hard What is this thing -- Funarg? It makes me cry, boo-hoo

They tell me Ithaca is lovely How would I know if they are right?

I never go outside For to my desk I'm tied I have to work, work, work All night

{Elijah joins them on stage}

ELIJAH:
Excuse me, I'm kind of new at this. Between the four of you, you've been here twenty years. {aside} And some of them are second year students. {edisa} Are there some helpful hints you could give me? Is there something which will help me get through it all?

GS1: Certainly Elijah. There is one simple thing which will allow you to pass all your exams and get good grades on all your homeworks. It will allow you to impress all your professors and TAs. You just need one important thing on your side: A little bit of luck.

The Lord above made lots of algorithms
To make us learn the fast ones and the slow
The Lord above made lots of algorithms, but
With a little bit of luck
With a little bit of luck
You will find one Hopcroft doesn't know

GS1-4:

With a little bit
With a little bit
With a little bit of luck
He will not know

GS2:

The language LISP was made for Corky Cartwright
He's used it since he was in Stanford Cal-
ifornia, LISP was made for Corky Cartwright, but
With a little bit of luck

With a little bit of luck
You will never have to change Eval

GS1-4:

{boisterously}
With a little bit
With a little bit
With a little bit of luck
To change Eval

GS3:

The Lord above made N.A. for exactness
And you may say that you don't give a damn
The Lord above made N.A. for exactness, but
With a little bit of Luk
With a little of Frank Luk
You can waltz right through the A-exam

GS1-4:

{loudly and boisterously}
With a little bit
With a little bit
With a little bit of luck
The A-exam

MC: Will you please try to keep it down, there are other people in the building.

GS4:

{softly}
The Lord above gave theory to Hartmanis
So he could prove lemmas and never shirk
The Lord above gave theory to Hartmanis, but
With a little bit of luck
With a little bit of luck
Someone else will do some useful work

GS1-4:

{at the top of their lungs}
With a little bit
With a little bit
With a little bit of luck
They'll do some work

With a little bit
With a little bit
With a little bit of bloomin' luck

{MC runs on stage and chases them all off}

5 ENECS

MC: Fortunately, the days before the A-exams drew quickly to a close.

SCENE 6

ELIJAH:

Good grief! The A's are in the morning!
My future isn't worth a dime,
Don't know my theory
Of NA I'm leery
But get me to the A's on time

I've got to be there in the morning
With so many buzzwords it's a crime
Stearns, Church, and Turing
Are not too alluring,
But get me to the A's on time.

If I am nervous,
Won't show it then.
For any hard ones,
I'll guess n log n.

I've spent six hours
On CSPs;
And one more proof will
Bring me to my knees.

Good grief! The A's are in the morning!
Heaps, merges, sorts and union-find.
NP-completeness
Is my biggest weakness
But get me to the A's
Get me to the A's
For God's sake get me to the A's on time.

ENECS 6

MC: After this solemn bit of introspection the big moment came and went in a flurry of excitment. Our last scene takes place in the office of Juris Concroft, where the outcome of the exam is discussed.

SCENE 7

{Saltable and Concroft walk in and Concroft sits down.}

SALTABLE:
{Jubilant} Concroft , it was an immense achievemant.

CONCROFT:
{Yawning} A silly notion. If I hadn't backed myself to do it, I should have chucked the whole thing up months ago.

SALTABLE:
Absolutely fantastic.

CONCROFT:
A lot of tomfoolery.

SALTABLE:
Concroft, I salute you.

CONCROFT:
Nonsense, the silly people don't know their own silly business.

SALTABLE:

Tonight, old man, you did it
You did it! You did it!
You said that you would do it
And indeed you did
I thought that you would rue it;
I doubted you'd do it
But now I must admit it
That succeed you did.
You should get a medal
Or be even made a knight

CONCROFT:
It was nothing, really nothing.

SALTABLE:

All alone you hurdled
Ev'ry obstacle in sight

CONCROFT:

Now, wait! Now, wait!
Give credit where it's due
A lot of the glory goes to you.

SALTABLE:

But you're the one who did it
Who did it, who did it!
As sturdy as Gibralter
Not a second did you falter.
There's no doubt about it,
You did it.

CONCROFT:
Thank heavens for Sebastian Karpathy. If it weren't for him I would have died of boredom. He was up to his old tricks again.

SALTABLE:

Sebastian Karpathy? Who is he?

CONCROFT:

An old student of mine. Tried to graduate with an extremely marginal thesis. I made him stay around for seven years until he finally cleaned it up.

SALTABLE:

That's not so unusual.

CONCROFT:

True, but Sebastian has a very high image of himself. He never forgave me. After graduating, he got a position with a Canadian university and spent his spare time working in industry and trying to show me up.

SALTABLE:

And he was invited to sit in at the orals?

CONCROFT:

Yes!

That blackguard who uses computer science
To embezzle funds from innocent clients
He made it the devilish business of his
"To find out who Elijah is"

Every time I looked around
There he was that hairy hound
From Waterloo

Never keeping his mouth shut
I was really not sure what
I oughter do

Finally I decided it was foolish
Not to let him ask a question
So I said "Please take a turn Sebastian!"

Hoping that he'd make a goof
He gave Elijah proof after proof
Every trick that he could play
He used to strip the mask away
And when at last the man was done
He glowed as if he knew he'd won

And with a voice too eager
And with a smile too broad
He announced to the committee
"This man is a fraud!"

His theory is too good, he said
That clearly indicates that he's no grad
While others may be experts in this subject we know
Students are quite bad

I see right through your silly trick

You cannot fool me. I don't care if you confess - or
Not. I know that he is a full professor!

SALTABLE:
{Roaring with laughter} Splendid, splendid.

CONCROFT:
Not only a full professor, but a graduate from Stanford. All I can say is, thank God it's all over. Now I can go to bed at last without dreading tomorrow.

{Elijah walks in}

SALTABLE:
Congratulations dear boy, a fantastic job, well done!

ELIJAH:
Thank you very much.

SALTABLE:
Now that it's over what do you plan to do?

ELIJAH:
Well, I've been thinking about that a lot. Let me tell you what I've decided.

{The whole cast comes out. They hum in unison behind Elijah's overvoice. Concroft stands before them and conducts.}

CAST:
Hummmmmmmmmmmmmmm

ELIJAH:

{In a dramatic spoken voice}
The Lord above created universities.

CAST:
Hummmmmmmmmmmmmmm

ELIJAH:
So we could teach our students and in turn be taught by them.

CAST:
Hummmmmmmmmmmmmmm

ELIJAH:
The Lord above created universities. But...

{Cast is quiet}

ELIJAH:

{Sung lightly}
With a little bit of luck
With a little bit of luck
I will get a job with I-B-M

CAST:

{Loud enough to wake the dead}
With a little bit
With a little bit

With a little bit of luck he'll get a job

With a little bit
With a little bit
With a little bit of bloomin' luck!!!!!!

7 ENECS

MC: {From among the singers} Thank you and good night.

THE END
==============

Holiday Show 1980

East Hill Story
==== ==== =====

{Scene 1}

Announcer:
Ladies & Gentlemen, good evening and welcome to the 1980 Holiday Party and Musical Tragedy.

Offstage:
That's Musical COMEDY!

Announcer:
Have you read the script?

Tonight's story is about a certain place. It used to be a nice place, where one could take a leisurely stroll after the theatre, or walk one's dog late at night. Nowadays, a person forced to go there rushes hurriedly to their destination, all the while looking over their shoulder in fear.
The Place?... Upson Hall
The Reason?... Roving gangs of delinquent graduate students.
There are four gangs in Upson, the two principal ones being:
Juris's Eccentric Theory Students (the Jets), and
Systems Hackers and Reluctant Computer Scientists (The Sharcs).

The other two gangs, of little importance to most minds, are the Numerical Analysts Society of Terrorist Youth (NASTY) and the Information Retrievers Requiring Initiative, Talent, and Thesis Extensions (IRRITATE).

These four gangs have terrorized Upson Hall for many years. In addition to fighting among themselves, they have been known to seize innocent people and force them to listen to utterly meaningless jargon until both drop from exhaustion.

What you are about to see is not pretty...

Offstage:
That goes without saying!

Announcer (glaring):
But the truth seldom is. However, it must be told nonetheless.

Offstage:
Why? I wanna go home!

Announcer:
By all means. Therefore, we present for your edification, the way-off-Broadway production of "East Hill Story". We had intended to acknowledge Leonard Bernstein at this point, but somehow doubt that he would want the recognition. So we offer apologies instead.

{exit}
{Jets enter snapping fingers}

Jets:
When you're a Jet, you're a Jet all the way
From your first sigma star to your last PDA.
When you're a Jet, you get money to spend
From the NSF grants that pour in without end.

You're never exact, you only show existence;
You're far too abstract to be of much assistance
To those in systems.

When you're a Jet, you can work on NP
You can whip up a graph, you can be context-free.
Pick your own field and ignore all the rest
If it's no earthly use that's the kind we like best.

You don't use machines, except the ones by Turing,
And though it's not clear to what you are referring
It sounds alluring.

When you're a Jet, you stay a Jet!

{Jets move to side of stage as...}

{Sharcs enter, also snapping fingers. Jets watch in disgust.}

Sharcs:
When you're a Sharc, you're a hack all the way
From your first Test and Set to your last SRA.
When you're a hack you're the top cat in town,
You can bring systems up and then send them back down.

Security holes you find by intuition
Cause all of the trolls in operating systems
Are theoreticians!

Here come the Sharcs, bringing years of technique
To solve problems the theorists found much too oblique.
When we write code we don't care about goofs
Since debugging is faster than writing out proofs.

The programs we write cause everybody tension
Because the code's quite beyond their comprehension.
That's our intention!

When you're a Sharc you stay a Sharc!

{Jets come challengingly back on stage. Sharcs notice them, also look challenging. One Sharc steps forward}

Sharc:

Well, if it isn't the group that can never make up its mind.

Jet:
Whaddaya mean by that?

Sharc:
We hear you're all undecidable!

{After this and each succeeding gag, the group that has just scored yuks it up, elbows each other, etc.}

Jet:
These guys talk a lot for a group that thinks a Turing Machine is a foreign sports car. And that a total function is something done by a breakfast cereal!

Other Jet:
Hey watch it, here comes Diane!

{Diane enters.}

Diane:
Quiet down in here! The faculty are showing President Rhodes around!

{Diane exits.}

Sharc:
Shouldn't you turkeys be carrying clubs and wearing leopard skins? We hear you're fighting with primitive recursive functions.

Jet:
They think Post's Correspondence Problem has to do with sending mail.

Sharc:
And THEY think that the Dining Philosophers problem is trying to find a good restaurant!

{Diane enters.}

Diane:
I mean it! Quiet! The NSF Review Committee is passing through.

{Diane exits.}

Sharc:
Nothing you guys do is good for anything!

Jet:
YOUR stuff is totally worthless if you can't prove it works!

Sharc:
THAT does it!!

{Members of both sides slowly, deliberately draw ballpoint pens and slowly click them out. They start to pull out notepads and scribble when Diane again enters.}

Diane:
This is your last warning. If things don't quiet down in here I'm going to tell my secretaries not to serve you any donuts!

{Diane exits.}

{Jets and Sharcs look panic stricken and move offstage hurriedly with appropriate comments like "I think I left my terminal on" or "I hear Juris calling me" or "Isn't it time for colloquium?" }

{1 enecS}

{Scene 2}

Announcer:
Every Thursday in the hallowed precincts of Upson, great minds meet in a gathering known as the Cookie Seminar, where donuts and cider are served. The name of the seminar results not from some gastronomical confusion, but from the endowment which supports it. This fund was established by Charles "Chip" Cookie, class of 1871. Chip, an aspiring computer scientist, left Cornell in 1870 to become a ditchdigger...

Offstage:
Wise move!

Announcer:
77 years. At any rate, the first seminar of the year is also the first chance for new gang members to meet members of other gangs on neutral turf. Meanwhile, faculty members circulate and realize that, nametags or no nametags, there is no way that they'll be able to remember who these people are.

{Announcer moves offstage}

{People are standing around in attitudes of already having eaten. Pre-seminar conversation abounds, i.e. "Hope this lecture's a lot better than last year's" or "Love to eat them donuts, Donuts what I love to eat, bite they little heads off, nibble on they tiny feet".
Tony and Maria converge on donut tray...}

Maria:
All they have left are the straggly powdered sugar donuts.

Tony:
Yeah--you can't eat them unless you're wearing white. Are you a first year student?

Maria:
Of course. Didn't you hear me ask Fred Schneider if HE was a first year

student? Which reminds me--is it possible to graduate without taking 613?

Tony:
Not if you want to pass the sarcasm portion of the A-exams. By the way, my name is Tony.

Maria:
I'm Maria.

Tony:
What areas are you interested in?

Offstage:
That sounds like a song cue to me!

Maria:
I do theory, only theory,
Never Cobol or Snobol or C;
And I'm cheery
Cause my life is quite compiler-free.

Alternation
Cures frustration
Change your model and see how it feels!
I'm so abstract that I hardly can belive I'm real!

See the pretty proof on the blackboard there!

Tony:
What blackboard where?

Maria:
What can that attractive proof be?
Such a pretty claim
Such inductive steps
Such good use of i
Such a Q.E.D!

I love theory, only theory,
I write papers with lemmas and proofs
Which I steal from the second volume of Knuth's.

Tony:
Well, I'm not quite sure how to tell you this, but I'm in systems.

Maria:
Systems?! What can you possibly see in that?

Offstage:
Gee, that sounds like another song cue!

Tony:
I like to work on 3-70's

Okay by me on 3-70's
We've got CP on 3-70's

Maria (mild sarcasm):
All PL/C on 3-70's!

Tony:
Sharpen your wits on 3-70's
32 bits on 3-70's
Everything fits on 3-70's

Maria:
Till it all quits on 3-70's.

Tony:
I think I'll go back to Yorktown

Maria:
Wouldn't that just be a comedown?

Tony:
Hundreds of projects in full bloom

Maria:
Hundreds of hackers in each room!

It's like a slum on 3-70's
Software is dumb on 3-70's
We won't succumb to 3-70's

Tony:
Your paycheck comes off 3-70's!

Maria:
Well, maybe. But I'm far from convinced. Take today's talk; I mean, what kind of topic is "A Strongly Typed Theoretical and Systematic Basis for Implementation of Formal Theories of Systems?" I don't want to hear any systems talks.

Tony:
Systems? I thought it was a theory talk! After all, it's being given by Professor Dana Scottowels of Oxbridge.

Maria:
Maybe we ought to go listen and find out.

Tony:
Do you think it'll help us to understand the title?

Maria:
Not really, but as a first-year student I feel guilty about eating the donuts and not showing up for the talk.

Tony:
I understand you get over that in six months or so.

{They move to other side of stage where a few chairs are set up. They sit. A random professor rises to do the introduction.}

Random Professor:
Today's lecturer is a man who has never had an introduction. And we're going to keep it that way.

{He sits. Professor Scottowels rises.}

Professor Scottowels:
Today I'd like to talk to you
{sticks fingers in eyes}
about the lack of vision of today's computer scientists.
When one is treating such subjects as denotational histrionics,
there comes a time when one must say, "Why am I doing this?"
The answer to such a question is often found deep in the structures
of uncategorical theory. The foundations of this field can be traced
to a paper by Stearns, Lewis, Hartmanis, Rosenkrantz and
Guildenstern, who are now, unfortunately, dead.

{Professor Scottowels starts to mumble, buzzwords such as Strachey, semantics, lambda, category of all categories, can be heard. He gradually retreats behind his hands. Two students come forward and carry him off.}

Stagehand:
Has this guy been working with Demers lately?

{2 enecS}

{Scene 3}

Announcer:
The authors of this scene, who shall remain anonymous...

Offstage:
In an attempt to avoid libel suits!

Announcer:
were forced to justify putting in a bunch of classroom skits. As usual, the skits were written before the scene was written. Therefore, the authors simply took the weakest pretext of the skits to generate the scene. The weakest pretext is:

Although Tony and Maria were in different fields, they were forced to take the same courses. The scenes you are about to see are false. The names are the same, but the stories have been changed to protect the humor.

{exit}

{Whole cast comes out to sing}

Van Loan!
All matrices come from Van Loan!
He'll change the way you think
And then he will turn pink with glee
Van Loan!
He's the coach every baseball season,
Miss a game and he treats it like treason.
Van Loan, we all go to bat for Van Loan!

Professor Van Loan:
Ohhhhh, Kayyyy Squad. I'm going to give you a little preview of the next topic by way of a little chit-chat. By now you should all be able to invert Non-singular Positive Definite Skew-Symmetric Linear Orthogonal Upper Hessenberg Matrices without batting an eyelash. Or a softball. But this was only possible if you had the gradient "on tap", that is to say, as a fait accompli. Suppose you are inverting the matrix downtown on Aurora Street, and you don't have the gradient "on tap"?

{presumably this doesn't get too much of a laugh}

I don't know, squad, that was a pretty hushed laugh. I mean, I'm just trying to make things interesting here. But never mind, you people in the last row can go back to reading the New York Times.

Ohhhh, Kayyyy, enough foolin' around, let's get down to brass tacks, you know, like fundamentals and basics, I mean reality. This ain't no mellow natural foods restaurant. To wit: we don't need the gradient if we have the Barnum-Bailey matrix. Actually, the matrix was first discovered by yours truly, C. van Loan. I mentioned it to colleagues Ralph and Waldo Ringling, who brought it to the attention of Bailey, who showed it to Barnum. It was originally published as the Ringling Brothers Barnum and Bailey Matrix, but was later shortened. The bottom line here is that the transpose of the Barnum-Bailey matrix is a good approximation to the gradient, if you don't look too closely. This can be shown by getting a ball-park estimate for the singular value decomposition. The resulting error is less than m+m, which equals 2m (a little result I proved in my thesis).

Ohhhh, Kayyyyy, squad. It's time for a little workout. Pencils ready? O.K.

1, 2, 3 Integrate
4, 5, 6 Differentiate
1, 2, 3, Interpolate
4, 5, 6, Eliminate
1, 2, 3, ...

{Is carried off stage.}

{Cast comes forward to sing:}

Hartmanis!
I've got a great proof for Hartmanis
And even though it's wrong
It's only three lines long you see.
Hartmanis!
Spend five years on starvation wages
For a thesis that's just twenty pages.
Hartmanis, the dog writes the proofs for Hartmanis!

Constable:
As you may know, Professor Hartmanis has been hospitalized with a severe case of tendonitis, brought on by excessive hand-waving. The doctors have suggested complete rest as a cure, so we had to take away all his theorems. I've given up my PL/CV meeting to be here today.

First, I'm supposed to clear up a slight misunderstanding left over from last class. Juris said he was trying to prove Rice's Krispie Theorem. Why don't we rewrite it and try to prove the constructive version? If I don't convince you that it's true in thirty seconds, we'll go on to something else.

If you notice, the identity function is only properly constructed if the arguments are well defined. Now in PL/CV, we get around this by simply allowing no arguments. Of course, in the latest version, PL/CV-debris, we go all the way. I mean, we allow any version of equality as long as it satisfies the basic Herbrand-Godel assumptions of the universe. Of course, in the Godel Dialectica Interpretation, equality doesn't hold, which makes it difficult to prove ANYthing.

I guess my thirty seconds are up. Give me another thirty, alright? So when the seven dwarves came along, that is, Sleepy, Dopey, Grumpy, Doc, Sneezy, Bashful, and Gentzen, they wrote this neat way of approaching DEDUCTIONS. NATURALLY; when Merrill Lynch, Pierce, Fenner, and Gentzen heard of this they reproved the equality axioms and created a system which we have tried to implement.

Thirty seconds up again? Well, this time I'll get it right.
So then we take the...

{He is carried off stage, protesting "But we'll get it right this time!"}

{Cast comes forward to sing:}

Dick Conway!
There's thousands of books by Dick Conway
He writes one every fall
And really they are all the same.
Dick Conway!
No one else is as good as Conway
Jeffrey Ullman can't write like Dick Conway.
Dick Conway, 100 can't last without Conway!

Professor Conway:

Today I want to talk about the 240 th Great (TM) Data Model. We've seen the fourth, the fifth and so on, but they all had their problems. Now the great (TM) thing about this design by Conway, Conway, Conway, and Company, (the people who brought you ASAP, PL/C, and other great (TM) implementations), is that it contradicts everything Ullman says in his book. And it still works! Not only that, but it doesn't fit any of the models proposed by Weiderhold in his book. Or Date in his book. Which just goes to show that THE book on data bases has yet to be written.

{Pauses and grins suggestively}

Some of you may have been reading about data bases in Ullman's book -- that was the one I put on the required text list. Some of you may even have gone so far as to spend $25 to buy it. That's too bad. You should have known better -- I made the same mistake three years ago. Well, let me show you that Ullman doesn't do it right.

Arbitrary Theory Student {or Maria}
How can you say this about my idol? I don't think you know what he is saying.

Conway:
Do you have Jeff Ullman here to prove it? I happen to teach databases at Cornell University, and what I ....

{Maria goes off behind the blackboard and brings in Ullman.}

Maria:
As a matter of fact, I have Jeff Ullman right here.
{To Ullman} Would you mind?

Ullman:
It would be a pleasure. You don't understand my book at all. You don't know anything about relational models. How you ever were allowed to teach anything at all is totally beyond my comprehension.

{Ullman looks very self-righteous. Maria leads him off.}

Conway:
I'll take care of him! Where's my Ullman voodoo doll?
{Picks up doll and pins} Ah, here it is!

{Sticks pins in doll, is dragged away kicking and screaming by students.}

{Cast comes forward again to sing:}

John Hopcroft!
My time is controlled by John Hopcroft!
I used to eat and sleep
But now I sit and weep because:
John Hopcroft!
I can't randomize space like Hopcroft.
I can't store and erase like John Hopcroft.
John Hopcroft. My workload would pale without Hopcroft!

{Props for this scene: A hat with a toy car and scraps of paper inside.}
Hopcroft:
Any questions? If not, I presume you all understand everything, so I will leave out today's lecture and go on ahead with The 1980 CS681 HOPCRAFT Show! For today's show I want to prove a few theorems. To start out with, I want to prove a theorem that is most likely to give an INTUITIVE feel for prime numbers in a field of daisies. How do I find such a theorem you may ask? It's easy -- I pick them at random out of a hat.

{He pulls a scrap of paper out of a hat.}

This will do nicely. Let p be a prime of the form 2 to the kth power. You will let me pick my primes to be powers of 2, won't you? If not, to convince you, I'll have to prove a lemma or somethin'.

Off-stage:
What lemma could you possible prove for that?

Hopcroft:
Oh, Oh, ... Well, if you have believed everything else I've said, you surely have to believe that. But with a little bit of imagination and Hopcraftery I'll do it for you anyway. No. On second thought, this lemma has too many details for me to prove it. You can fill in the details of the proof yourself as soon as you figure out what the theorem was, that I was trying to prove. Is everybody bored -- I mean on board? I see some blank faces. You may think this result isn't possible. Actually, it probably isn't. That is if you insist on using any standard model of computation. After you have straightened out your notes, you should be able to find a suitable model which will make this theorem interesting or somethin'. Now for my next theorem...

{He reaches into the hat and pulls out a toy car}

Ah, this is to remind me of one of my favorite models: Random Simultaneous Log Space Alternate-Side-of-the-Street Parking.

{He hitches his pants up while listening.}

Arbitrary Student:
That will work most of the time, but isn't that model suspended on holidays?

Hopcroft:
I'm glad you asked that question. Even practitioners of Hopcraftery have to be kept honest. But will you let me owe you an answer to that? Put it on my tab, along with the other twenty proofs I owe you.

{He picks up his notes off the lectern.}

Let me go on about time and space comlexity classes. We all know that PTIME's a subset of NP, which is contained in PSPACE.

But what we don't know is the definition, or even the existence of polymorphic perverse random pseudo-Fibonacci space, which is contained in outer space. But since clearly:

Pi-1 is contained in Pi-2,
And Pi-2 is contained in Pi-3,
And Pi-3 is contained in Pi-4,
And Pi-4 ...

{They start to carry him off stage. He stops them part way.}

My friends, we got problems
Right here in River City.
With a capital "P"
And that rhymes with "T"
And that stands for TIME!

{They finish carrying him off.}

OR SOMETHIN'!!

Tony:
These professors sure are spaced out.

Maria:
Yeah, and this last one wasn't even in the right musical.

{Cast comes forward to sing:}

Fred Schneider!
I just took a test from Fred Schneider.
To go through all this pain
It really seems insane to me.
Fred Schneider!
First you sit and you slave for four hours
Get your grade and then jump from the towers.
Fred Schneider, there's no parallel to Fred Schneider!

Schneider:
Today we're going to discuss a variation on an old problem. This variation is known as the Dying Philosophers problem, and it's a nice illustration of liveliness properties. Now, we have these five philosophers who each have a place at the dining table. {Draws table on blackboard, five plates} and we have a bowl of sticky spaghetti in the middle {draws circle in middle} and forks between the plates {draws forks} and as usual the philosophers need two forks to eat the spaghetti.

Okay? So far that's fairly normal. Now it gets more interesting. As you know, in the original solution, one of the philosophers can starve to death if the ones on either side of him

{The following interruption is liable to occur at every masculine reference}

Offstage:
or her!

Schneider:
conspire. Now, we're going to allow the philosophers to send messages back and forth. As one starved philosopher gets increasingly hungry, he sends increasingly abusive messages to the ones on either side of him. {Draws messages with lots of punctuation marks.} The recipients used to teach operating systems, so they correct the grammatical errors in the messages and send them back. This continues until the one in the middle gets so frustrated that he sends letter bombs to each neighbor {draw explosions} and thus finally gets a chance to eat.

Some of you may be wondering about the source of this problem. Well, it came up one day when I was talking to David. I thought it was kind of a neat problem, but I was worried that I might be overlooking some of its ramifications. So I called Edsger to see what he thought. I said "Edsger" and he said "Yes, Fred" (he calls me Fred, you know), and I said "Edsger, I have an interesting problem that I've been discussing with David and I thought you might like to see it." So I told him about the problem and he gave me some suggestions. But we then decided to call Tony in on it. So I called him up and said "Hello, Tony" and he said "Hello, Fred" (he calls me Fred too) and we discussed it and he agreed that it was interesting.

{Getting increasingly excited}

Now at this point I knew I was onto something, so I decided to call in Nissim and Alain and then I put a call in to Stanford for Don. And we were really rolling now, so I added Susan and Leslie. But at this point it looked like national security might be involved, so I called Zbigniew and Edmund and Warren and they brought in Jimmy, and we decided that Ronald and George had better be involved, and we all

{At this point, a couple of students move up on either side of him and take him offstage and out of earshot as he continues to talk}

were discussing it up and down and....

Maria:
What happens now?

Tony:
Well, they take him back to his office and wait for him to enter a quiescent state.

Together:
There's a course for us,
Somewhere a course for us.
Cogent teachers, coherent talks
Wait for us somewhere.

{Exeunt}
{3 enecS}

{Scene 4}

Announcer:
Things did not calm down for Tony and Maria. In fact, as the A's approached, the tension mounted exponentially. It peaked the day of the A exams.

{Announcer doesn't leave at this point.}

Tony:
Last night, last night
I got no sleep last night
Last night, I studied stacks, graphs and trees!

Maria:
Last night, last night,
I searched through graphs all night
And linked lists, AVL's, and 2-3's!

Together:
The A's! the minutes drag like hours!
The hours go so slowly,
And still no hope in sight.

Oh brain! Get bright!
I hope you learned to do this stuff right
Last Night!

{Tony and Maria leave.}

Announcer:
Finally the A exams are over, and I hope we won't have any more people going crazy in this production. It seems very easy for people to get carried away doing this stuff. Not me. It won't happen to me - no way. I happen to look something like Archer, and HE never went crazy. It can't happen to me.

{Gets more and more emphatic and hysterical about how it won't happen to him. Stagehands come up and carry him off.}

Offstage:
That's what he gets for not staying with Conway!

Tony:
Those exams were brutal!

Maria:
I hope nobody knew any more than I did.

Tony:
Well, if you fail, I'll go with you.

Maria:
And if you fail, I'll go with you.

Offstage:
That sounds like a song cue!

Maria:
Don't be silly. There are no songs in Romeo and Juliet.
Maybe we could work for GE. After all,
Hartmanis got his start there -- maybe we could sort mail too!

{Other students wander in, mumbling about suicide, jumping, gorging out, writing a resume, etc.}

Tony:
I wonder if we could try to explain to the faculty ....

Maria:
Yeah, I can imagine what kind of reception we'd get.

Student 1:
Dear kindly Gerry Salton,
You gotta understand
We don't know data bases
That's why we're out of hand!

Our teachers all were theorists,
And Conway's book's not done,
Golly Moses,
You said this was fun!

Student 2 (Conway):
Dear graduate student,
Don't be so upset.
You didn't go to Harvard
Like a proper taught Jet.

This stuff isn't complex,
It isn't intense!
Deep down inside it
There is sense.

Group:
There is sense! There is sense!
There is untapped sense!
Like inside, the worst of it
Makes sense!

Student 3:
Dear kindly Franklin Luk, sir,
These matrices are tough,
Their orthonormal transforms
Are singularly rough!

We didn't wanna take this,
But somehow we were took!

Leapin' lizards
That's why we're so shook!

Student 4 (Van Loan):
Dear graduate student,
You're really a square,
Eliminating Gauss
Won't force your norms to compare.

It's just a small difference
That ought to be curbed,
Deep down inside it
It's perturbed.

Group:
It's perturbed! It's perturbed!
It's a slight perturb!
Like it's infinitesimally
Perturbed.

Student 5:
Tim Teitlebaum and Schneider
And Donahue and Gries
Are hard on us outsiders
And very tough to please!

We may be David's students
But we don't look like Dave!
Goodness gracious,
We don't even shave!

Student 6 (Schneider):
Yes! Graduate student,
Concurrency's cool,
If you use preconditions
You can stay at our school.

If you think that GOTO's
Are terribly slick,
Deep down inside you
You are sick!

Group:
We are sick! We are sick,
We are sick, sick, sick,
Like, we're sociologi-
Cally sick!

Student 7:
Dear kindly Bob and Juris,
We're missing the gestalt
We know that it is finite,
Can't show that it will halt.

I love recursive functions
But can't see why they work
Gloryosky,
That's why I'm a jerk!

Student 8 (Constable):
Eek! Graduate student,
You've done it again,
Not only will it halt
It runs in time n-log-n.

It ain't just a question
Of misunderstood;
Deep down inside you
You're no good!

Group:
We're no good, we're no good,
We're no earthly good,
Like the best of us
Is no damn good!

Student 2:
Their understanding's hazy,
Student 4:
They haven't reached first base,
Student 6:
In programming they're lazy,
Student 8:
They can't tell time from space,

Student 9 (Hopcroft):
They think a hier-archy's,
An offer from GE!

Group:
Hopcroft, we're still
Flound'ring in NP!

{VERY SLOWLY!!!!!}

Entire Cast:
Dear faculty members,
We're down on our knees,
We wonder if you'll ever let us
Get our degrees.

Dear faculty members,
What are we to do?
Gee! Faculty members,
FAC YOU!!

Announcer:

Thank you, and good night!

HOLIDAY PARTY PRODUCTIONS 1981 PRESENTS

THE UPSON HALL AFFAIR

MC: {Ad-lib -- welcome everyone, thank people}
We now present this year's holiday production "The Upson Hall Affair". Scene one takes place in a dark, seedy office somewhere in downtown Ithaca.
{The rest of the MC lines are said off stage}

ACE: {To audience.}
Ya know, some days it just doesn't pay to be a nice guy. In fact, in this business it can be down right dangerous. Being a gumshoe teaches you three things. First, never get in anybody's way. Second if anybody gets in your way go around them. Third, if neither of these things is possible, fire three rounds at point blank range. This philosophy has kept me in one piece over the years. Oh, I've had my ... ah ... wings clipped a few times, but the money still smells sweet.
Heh, money, that's what it all comes down to.
{Takes a bottle out of top desk drawer.}
You get a little nervous when the bottle's empty.
{Emptys bottle into glass. Looks up at audience in disgust.}
That's why my brain shifts into third when a new case knocks at the door.

{There is a knock at the door}
ACE: {Looks at audience in mock pleasure. To door.}
It's open.

SUZIE: {Terribly upset}
Are you Ace Mountain, private detective?

ACE: That's what the sign says sister.

SUZIE: {Buries face in hands}
Oh Ace you've got to help, it's terrible, terrible ...

ACE: {Goes over to her with glass.}
Take it easy. Here, have a sip of this.

{She downs entire glass}
{Ace takes glass and looks at it with a great sense of loss.}

SUZIE: {Sniffles}
Thanks, that's better. My name is Suzie Semaphore. I'm an assistant professor in the Computer Science Department at Cornell University.

ACE: All right tell me the whole story and don't leave out any details. Nothing is too trivial. I'm not about to play cards unless I know what's in the deck.

SUZIE: {A little nervous}

O.K. but you've got to give me your word that you won't go to the police. This is a very delicate matter involving some of my best friends.

ACE: Don't worry, I wouldn't go to the cops if you paid me. Make that "if you paid me I wouldn't go to the cops."

SUZIE: All right, let me start at the beginning. I'm what is often called a "young faculty member".

ACE: Are there "old faculty members"?.

SUZIE: Of course! Old faculty members never retire, they just become invariant. Anyway, I've been there for three months now. Right from the beginning I knew something was wrong. The very first day I walked down the hallway there were strange squeaking noises and evil laughter. At first I tried to make up some explanation. "Oh, it must be Hartmanis trying to teach that fluffy white dog to kill people." But that couldn't be it. The dog already knew how to kill people! One day last week I couldn't stand it any more.

{She starts to get upset. It gets worse as she talks.}

After a particularly savage chuckle from an unmarked door on the fourth floor, I went up and knocked loudly. There was a moment of silence followed by frantic shuffling and then silence again. My heart beat wildly as I slowly opened the door. Then I stepped into the room and my heart almost stopped...

{She breaks down again.}

ACE: {Excited} Yes, yes go on...

SUZIE: {Recovering somewhat}

There were no people in the room, only a desk, some chairs, a few journals and ... {she sobs} ... a blackboard. The room was full of chalk dust. It was everywhere, in thick layers on the furniture, the window sills, on the shelves and the floor. Great billowing clouds of dust filled the air as if a herd of cattle had just charged through. I choked and stumbled forward. Regaining my balance against the desk I looked up at the blackboard through tearing eyes. It had been hastily and incompletely erased. The few unfortunate marks which remained told the entire story. There were some mutilated omegas and deltas, a few unbounded infinite sums, some indistinguishable phi's and psi's, and even some triply nested subscripts. It was ... horrible.

{She lapses into silence.}

ACE: {To audience.}

So that was it, the oldest game in the book, ABUSE OF NOTATION. I'd seen it a thousand times before in a thousand different places, and it was always the same. Some professor, perhaps getting on in years, or perhaps just starting in the field, couldn't quite come up with original research. But the pressure was there, they had to publish. At first they'd make excuses as they tried desperately to find something worth writing down. The harder they tried the worse it got, nothing would come. Finally it occurs to them "it works on undergraduates, why not other professors". So they start confusing people with illegible and incorrect notation. Characters get torn and mutilated until no one can tell that the ideas are completely meaningless. It's always the weak who suffer the most, the poor defenseless symbols. The world can be an ugly place...

{To Suzie}

What did you do next?

SUZIE: What could I do? I ran from the room. For two days I stayed home not daring to go into Upson Hall. I desperately hoped that the problem would go away. But it didn't. Three days later someone was still at it, shredding and chopping symbols, producing totally meaningless results. Ace you've got to do something, you've got to find out who it is!

ACE: {Looks at audience with each cliche}

Don't worry Suzie, I'm on the case, I'll carry the ball from here, put my nose to the grindstone, and become busy as a bee. Someone's got to make the world safe for mathematics. Or is that safe from mathematics. Anyway, buck up, there's no sense crying over spilled milk. Let's pay a visit to Upson Hall.

{They exit.}

MC: Scene two, in a hallway of Upson Hall.

SUZIE: What's the plan of action?

ACE: I think this case calls for a little subterfuge.

SUZIE: Subterfuge?

ACE: I'm going to pose as a prospective graduate student. This will allow me to ask lots of questions without arousing any suspicions.

SUZIE: That's a good idea. I can introduce you to the faculty members to lend credence to the story.

ACE: That won't be necessary, my true identity will be perfectly concealed.

SUZIE: How?

ACE: I'll pay a visit to Penny's Disguise Department.

SUZIE: {Disbelieving}

And disguise yourself as a Computer Scientist?

ACE: Sure. I've got their catalog right here.

{Takes out some sheets of paper.}

Let's see ...

{Runs finger along papers while talking.}

... student ... student ... ah, here we go.
Now let's see ... chemistry ... civil engineering ... here it is, Student of Computer Science Disguise.

{Reads from the papers}

"This kit contains all of the essential items to capture the true computer scientist: calculator, four different colored pens, plastic pocket reinforcer, used punch cards, thick glasses, green double-knit pants, undershirt, shiny black shoes, hair grease ..."

SUZIE: {After trying to interrupt several times.} ACE!

ACE: {Looking up as if distracted} Hmmm?

SUZIE: That kit refers to undergraduates! You have to look like a graduate student!

ACE: There's a difference?

SUZIE: Of course! Graduate students in computer science are good looking, warm, sensual, well dressed people with a flair for living and a tendency to wear one hundred per cent cottons and wools in rich earthy colors.

ACE: Wait a minute ...

{Runs finger along papers again}

good looking ... warm ... sensual ... well dressed ... flair for living ... earthy colors ... here it is, sophisticated millionaire! You mean to tell me they look like sophisticated millionaires?

SUZIE: Are you kidding? They can hardly afford to look like sophisticated derelicts. Look, this catalog doesn't seem quite appropriate. Maybe I should take you to the Zoo so you can meet some graduate students in person.

{They start to cross the stage.}

ACE: The Zoo? Do you keep them in cages?

SUZIE: We'd like to, but cages take up too much room.

{Cast Of Thousands (COT) comes out and stand packed together like sardines. They lean all over each other.}

MC: Scene three, at the Zoo.

ACE: I see what you mean, it does seem to be a little crowded. Why don't you use the three rooms we saw upstairs?

SUZIE: {Ala Woody Allen}
Oh those rooms ... yes, well those are the visiting prospective lecturer's office, the temporary post-doc's office and the ping pong room respectively.

ACE: But they're empty! Why not put graduate students in them?

SUZIE: Well ... you can never tell when someone IMPORTANT is going to show up. One can never be too careful.

ACE: How about this desk over here. No one seems to be using it.

SUZIE: That desk just came in. It's going to be shared by the new students.

ACE: Two or three of them?

SUZIE: No, the whole class. Come on, let me introduce you. Hey kids ...

COT: {In synchronization} Hi Suzie, What's up?, How's life?

SUZIE: I'd like to introduce you to Ace Mountain, a prospective graduate student.

COT: {In synchronization} Hi Ace, What's up?, How's life?

ACE: Hi everyone. What can you tell me about the faculty members here?

COT: {ad-lib things like: "Constable is ok","Don't take NA", "Fred has a mustache".}

ACE: wait ... hold it ... just a second ... SHUT UP!!!!
{Disgustedly} Look, can you just give me a list of names?

{A hand reaches out with a sheet of paper and hands it to Suzie}

SUZIE: Thanks. Let's see ...
{She looks at the sheet of paper}
where should we start? How about SAM TWOEGGS?

ACE: No thanks I've already eaten breakfast. Why don't you read names instead.

SUZIE: I WAS reading names! Sam Toueg is another young faculty member.

ACE: What??!! Let me see that.
{He takes the sheet of paper}
You're right! He sounds like the breakfast special at Manos. In fact the whole group is pretty strange. This guy sounds like some kind of adhesive : OZALP BABA-O-GLUE. And this one sounds like a road surface : BANKED ASPHALT. Let's skip these people and start at the top. Who is the department chairman?

SUZIE: {Embarrassed} ah ... Juris Hartmanis.

ACE: {Covers eyes with hand and shakes head} Juris Hartmanis, eh, it figures. Isn't there anyone with a normal name?

SUZIE: Well, there's Tom, Dick and Gerry.

ACE: OK, I feel better.
Is there some place I can see this Hartmanis in action?

SUZIE: Yes, he teaches 481.
{Checks watch}
In fact it should just be starting. There's a slight chance we can find him there.

ACE: A slight chance? Doesn't he go to his own classes?

SUZIE: No, most of the time he's too busy traveling.

ACE: That's sounds suspicious. We better watch this guy very carefully.

{They exit.}

MC: Scene four.
Ladies and gentleman and children of all ages, welcome to the World Famous Juris Hartmanis Traveling Magic Show. This show has been astounding and amazing audiences for many years. The troupe just got back from a wildly successful tour of Puerto Rico. Without further ado I give you the mystical master of magic, Juris Hartmanis.

JURIS: Hello everyone. I'd like to ask for a volunteer from the audience.
{Looks over the audience}
You sir, would you like to come up please?
{Bob acts embarassed and excited and goes up}
And what's your name?

BOB: Bob.

JURIS: Hello Bob, where are you from?

BOB: Long Island.
{A small round of cheers comes from the audience}

JURIS: I see you brought your fan club tonight.
{Bob giggles in nervousness and in deference to Hartmanis' senority}
How is your family?

BOB: Pretty good Dr. Hartmanis, except for my grandfather.

JURIS: Oh? What's wrong with your grandfather?

BOB: Well, he thinks he's a computer.

JURIS: He thinks he's a computer? Have you taken him to see a doctor?

BOB: We can't, we need the disk space.

JURIS: Ha ha ha, and you thought automata theory was BORING. I'd like to do a little joke by induction now. It goes like this: if you thought that last joke was funny wait until you hear the next one. Perhaps I should do a trick eh? Tell me Bob, have we ever met before or have you been in any way prepared for this class?

BOB: Absolutely not.

JURIS: Good! Now here are three proofs by induction.
{points to table top}
I want you to inspect them carefully and tell me if you find anything unusual.

BOB: All right. Let's see ...
{looks at table top}
Wait, none of them has a base case!

JURIS: Great! Anything else?

BOB: ... No, other than that they appear to be normal.

JURIS: O.K. now here is a base case.
{pretends to pull something out of his pocket and puts it down}
I'm going to insert it in the middle proof here. Now I'm going to shuffle them around.
{shuffles around}
Now, find the base case.

BOB: Uh ... here! {points to a proof}

JURIS: No. {he holds it up}

BOB: Uh ... here. {points to a proof}

JURIS: Wrong. {he holds it up}

BOB: Uh ... here? {points to a proof}

JURIS: Wrong again! {he holds it up}
It's actually {reaches behind Bob's ear} ... poof ... behind your ear.
{Crowd cheers}
Thank you. Thank you.

BOB: That's amazing. How did you do that?

JURIS: It was a simple application of the ... poof rules.

{To crowd}
How about a hand for my wonderful assistant Bob.
{Crowd cheers. Bob sits down.}
You've really been a great audience. I have to go catch a plane now. See you next month.

{Crowd cheers. Juris exits. Suzie and Ace get up and walk to center stage}

ACE: Hartmanis is definitely a PRIME suspect. I think I'd like to see ...
{Looks at list of names}
... this Gries fellow next.

SUZIE: Let's go over to his office and I'll introduce you.

{They cross stage. Simultaneously Gries comes out and sits behind his desk.}

MC: Scene five, in Gries' office.

GRIES: {Talking on the phone.}
Hello ... hello Edsger? ... Edsger, this is David ...
{He frowns}
David Gries! ... No not from Arizona, that's Levin!!! ...
That's right, from Cornell University. We're missing EWD-58,337C.
OK, you'll send it? Fine, thanks, Bye.
{He hangs up the phone. Then in a surly voice.}
What do you want?

SUZIE: Gries, do you have a few minutes to talk to Ace Mountain, a prospective graduate student?

GRIES: How many minutes?

SUZIE: Just a couple.

GRIES: OK, Hello there Mountain. Sit.

SUZIE: Why don't you pass him on when you're done with him.

GRIES: Sure.

SUZIE: Thanks. {She leaves}

ACE: {Sits down} Thanks. Can I ask you a few questions?

GRIES: You can and you may.

ACE: Uh, right. How did you come to work here?

GRIES: I drove my car.

ACE: No, I mean originally.

GRIES: I've had the car for years.

ACE: No, I mean how did you get hired here?!

GRIES: Oh that, well one day I was at the bank making a withdrawal and ran into Dick Conway making a deposit. He was trying to hire people who knew less computer science than he did. I was tenured before he realized his mistake.

ACE: So you were hired by accident?

GRIES: No, by Conway!

ACE: {Starting to get suspicious} Hmmm. What about the famous compiler book?

GRIES: What about it?

ACE: How did you come to write it? ... No, wait ... why did you decide to write it?

GRIES: I didn't decide to write it. My publisher had this new computer type setting system. I tried it out and forgot to erase my files. The following month Compiler Construction was published.

ACE: What luck.

GRIES: No, the typesetting system was terrible.

ACE: {sarcastically} How about the work on parallel computation with Owicki? I suppose you were writing a compiler and your pencil slipped.

GRIES: No, as I recall we were proving the correctness of a sort procedure but things got out of hand. Before we knew it, we had proved interference freedom.

ACE: But where did you get the proof rules?

GRIES: Oh the assertions were supposed to be comments but everyone misinterpreted them.

ACE: Look, what about your new book?

GRIES: First Knuth wrote "The Art of Programming", then Dijkstra wrote "The Discipline of Programming", then Reynolds wrote "The Craft of Programming". My publishers asked me to jump on the noun-of-programming bandwagon. First I tried writing "The Joy of Programming" but that didn't work. Then I tried "The Agony of Programming" but that didn't work either. I was trying to write "The Salience of Programming" when I sneezed and it came out as "The Science of Programming".

ACE: And your editor didn't correct it?

GRIES: I'm the editor! I edit all my books.

ACE: Uh ... right. I think I've heard enough, thanks for your time.

{He stands and starts to leave}

GRIES: Wait, you have to talk to Schneider.

ACE: Is that the short guy with the mustache and the funny hat?

GRIES: That's him. Come on.

{They start to cross stage.}

ACE: I have a question. Why is there a green glow in the hallway?

GRIES: That's because everybody who is important uses an Ambassador Terminal with a green background.

ACE: Why is that? Is it easier to read?

GRIES: No.

ACE: Does it save power or increase screen life?

GRIES: On the contrary.

ACE: Then why do it?

GRIES: Because we can't figure out how to switch it over to normal black background and no one wants to ask Demers.

ACE: I see.

{They continue walking. Simultaneously Fred comes out and sits behind his desk.}

MC: Scene six, in Fred's office.

FRED: {Talking on the phone.}
Hello ... hello Mom? ... Mom, this is Fred ...
{He frowns}
Fred Schneider! ... No not from Arizona, that's Levin!!! ...
That's right, from Cornell University. I'm missing tie number 58,337C.
OK, you'll send it? Fine, thanks, bye.
{He hangs up the phone.}
Gries! What do you hear from Edsger?

GRIES: Schneider, this is Mountain, he's a prospective graduate student.

FRED: He is? He doesn't look very smart to me. I looked a lot smarter than that when I started graduate school.

ACE: Really? So you're a student here too?

FRED: WHAT??!! {Sputters incoherently with rage}

GRIES: {To Ace} No he's faculty now. That's why he doesn't look so smart any more. {To Fred} Talk to him for a while.

FRED: Sure.

GRIES: Thanks. {He leaves}

ACE: {Sits down} Can I ask you a few questions?

FRED: You can and you may.

ACE: Right! There are a few things which I'd like to know.

FRED: THAT you'd like to know.

ACE: {pauses} Are you finished?

FRED: I wouldn't count on it, if I was in your shoes.

ACE: {With satisfaction} If I WERE in your shoes.

FRED: {looks bummed} So ask.

ACE: What's this you're working on?

FRED: Oh this is a lecture I'm giving tomorrow to a hostile 613 audience. I expect them to boo a lot, so I'm taking all the material from Knuth.

ACE: Why Knuth?

FRED: Because Knuth is impervious to hisses.

ACE: {May have to help the audience through this joke}
I see. What are your long term goals?

FRED: Well, I have two. One is to publish lots of incredibly influential papers. The other is to have all the women on campus swooning at my feet.

ACE: How are you coming on these goals?

FRED: Not too well. I keep getting outclassed by my grad students.

ACE: Well, what about your second goal?

FRED: I'm talking about my second goal!

ACE: Tell me, do you ever do anything for fun?

FRED: Yes. I enjoy fencing and sailing, and lately I've been getting into signing up for Stellar Conquest games and then taking forever to move. Drives the other players crazy.

ACE: I see. That about covers what I needed to know.

FRED: Good. I have to go now anyway; I need to get the secretaries to make fifty copies of ten different papers. Not that there's any real hurry, of course; there's almost twenty minutes till class starts.

{They exit}

MC: Scene seven, in a hallway of Upson Hall.

ACE: I would say Gries and Schneider are also prime suspects.

SUZIE: Sort of suspect prime and suspect double prime?

ACE: Careful, there Suzie. That kind of talk smacks of abusiveness!

SUZIE: Sorry, you're right. How about tackling Charlie Van Loan, Frank Luk and Tom Coleman next?

ACE: What field are they in?

SUZIE: They're NA.

ACE: NA? What does that stand for? Non-Active? Numerologists Anonymous?

SUZIE: No silly, Numerical Analysis.

ACE: Oh well there's no sense bothering with those people.

SUZIE: You mean because they use rigorous mathematical notation?

ACE: No, because they've been abusing notation for centuries. It started with Newton. By now it's tradition.

SUZIE: {Glumly} I suppose you're right.

ACE: Cheer up Suzie, {Looking at audience} every cloud has a silver lining. I did find a potential lead that you can help me with. I understand that Fred Schneider has modeled his entire life on a certain senior faculty member. Do you know if this is true?

SUZIE: Isn't it obvious?

ACE: Who is it, Gries?

SUZIE: No, of course not, it's Teitelbaum.

ACE: Tim Teitelbaum?

SUZIE: Sure haven't you noticed the matching mustaches, the similar sneers and the twin ties?

ACE: Now that you mention it.

SUZIE: Despite what Fred says, his major goal in life is to become a senior lecturer.

ACE: You'd never guess that from talking to him! What's this Teitelbaum character like?

SUZIE: Oh a nice enough guy I guess, though a little on the eccentric side.

ACE: In what way?

SUZIE: Well he has this synthesizer see... I think it would be easiest if you saw him in person.

ACE: I always try to {Looking at audience} get it from the horses mouth, as long as it's not a gift horse of course.

SUZIE: Well the horse himself is doing a demonstration in G-14. Why don't you check it out.

ACE: I'll do that. Where is G-14?

SUZIE: It's across campus in Uris Hall next to ...
{speaking softly and looking around nervously}
Computer Services.

ACE: {puzzled} What's wrong with Computer Serv...

SUZIE: Shhhhh!

ACE: {softly} Computer Services.

SUZIE: If anyone finds out that you've gone over there your cover will be completely blown.

ACE: Why?

SUZIE: The people in our department never visit Computer Services. You see over there they ...
{speaking softly and looking around nervously again}
actually RUN programs!

ACE: {In mock horror} No!

SUZIE: Yes it's true, I've seen it with my own eyes!

ACE: Well I'll be sure to steer clear of them!

SUZIE: Good! See you later.

ACE: Right.
{Suzie exits. Ace shakes his head and exits muttering}
Strange, weird people.

MC: Scene eight, in G-14 near {softly} Computer Services.

TIM: Are you tired of typing your programs on a clunky old line oriented editor? Are you sick of wading through stacks of incomprehensible compiler output to find one trivial syntax error? Have you had it up to here with trying to debug your programs by inserting print statements?

Hi, I'm Tim Teitelbaum and if you answered yes to any one of these questions then I've got good news for you. Here at Cornell we've developed a revolutionary piece of software which solves these problems. It's called the Cornell Program Synthesizer. The Cornell Program Synthesizer is not just an editor, not just an interpreter, and not just a debugger. In fact, it's all three and more! Template editing mode frees you from the drudgery of typing reserved words and trying to indent your constructs correctly. Syntax errors are instantly identified and highlighted for easy correction. And that's not all! Our exclusive debugging features give you split screen, multi-speed variable and program trace facilities with ellipses. And we even give you single step mode!

What would you expect to pay for this amazing piece of software? Wait, don't answer yet, because if you order yours by midnight tonight we'll send you, at no extra cost, thirty two K of memory so that you will actually have enough storage to edit and run your own programs. And that's not all. We'll also send you your own Terak with a special green filter so that you can look like David Gries.

All of this, the Synthesizer, the memory, the Terak and the green filter would cost twenty thousand dollars anywhere else. But if you take CS100 right now it's only six dollars. That's right, six dollars! Impossible you say? How can we afford to offer you such a fantastic deal? Because we paid graduate students starvation wages to write it, that's how! This offer is not available from any other department. Order your Cornell Program Synthesizer today, but hurry, supplies are limited.
{In a deeper voice}
To order your Cornell Program Synthesizer send a check or money order to Synthesizer, Computer Science Department, Cornell University, Ithaca New York, 14853, or call area code (607) 256-4934. Operators are standing by.

MC: Scene nine, on the fourth floor of Upson Hall.

ACE: I guess this Teitelbaum character is free from suspicion.

SUZIE: Why is that?

ACE: He has the ultimate proof of his work. You insert the disk and boot the machine. I suggest we move on. Who's left?

SUZIE: Let's see, there's Hopcraft and Demers. Why don't you see Hopcraft next and we'll ... ah ... deal with Demers later.

ACE: Fine. Shall we meet for lunch at, say, one thirty?

SUZIE: Sure. We can go to the Statler where we won't be annoyed by students.

ACE: See you later.

{Suzie exits. Ace crosses stage where COT is forming, some playing games, some sleeping, some writing their memoirs. A large "NOW SERVING #4" sign is hung up along with "PLEASE TAKE AN INDEX". The next available number is six.}

ACE: {To self} Take an INDEX? Well ok, six isn't too bad if he's on four now.
{To GS1}
What are all of you doing here. You look like you've been here for hours?

GS1: We're waiting to see the Doctor.

ACE: WHICH doctor?

GS1: No, not Witchcraft, Hopcraft.

ACE: Uh, right. But he's on four now and I'm number six. Didn't everyone take an index?

GS1: Sure. That's four and six modulo some large prime.

ACE: {Aside} Primes again! {To GS1 jokingly} I suppose the prime is a power of two?

GS1: {amazed} How did you know?

ACE: {disgusted} Just a RANDOM guess.

HOPPY: {coming out} Did I hear someone say they had a fast random algorithm for recognizing primes that are powers of two?

COT: {blase} No... Nah.
{Hoppy enters office again}

ACE: {To COT} I've been looking at course descriptions. Some of them seem interesting.

GS2: Name one.

ACE: Well, how about 682?

{COT cringes visibly. Shocked silence}

GS1: 682? Why bring up 682?

ACE: Why are you all so upset? What HAPPENED in that class?

GS2: {shudders} Oh it was so painful.

ACE: Who teaches it?

GS2: Bob Constable. He covered ... ah ...
{to COT} what did he cover?

COT: {Ad lib mutter about phis and psis}

ACE: If it's so bad, why doesn't someone else teach it. Doesn't Hopcraft's book cover most of the material?

GS2: Yes, but he couldn't deal with the notation.

ACE: {Waking up} Notation?

GS1: Is there anything else in 682?

GS2: Hopcraft could handle the standard stuff, all the little phi sub i's, and he was ok with the complexity classes, you know, the big phi sub i's. But when he had to explain the recursion theorem ...
I mean Hopcraft is a nice guy. He just couldn't do that sort of thing to a subscript.

ACE: It's in his book, isn't it?

GS1: Yes, but Ullman wrote those parts.

{A gong sounds. Hopcraft leaves for lunch, sees Ace and stops}

HOPPY: Who are you? ...Forget that, the real question is, do you play tennis?

ACE: They call me Ace.

HOPPY: {impressed} Are you in one of my classes, or did I just pull you out of a hat?

ACE: Neither, I'm a prospective graduate student.

HOPPY: {Rubbing his hands together in glee} I see. How's your backhand?

ACE: Flawless. I SERVE with it.

{Hopcraft nods, smiles and leaves. COT congratulates Ace on his early admission to Cornell.}

GS1: There's no sense in hanging around now, he won't be back for hours.

{They walk across stage as crowd disperses}

MC: Scene ten, in a hallway of Upson Hall again!

GS: One of these days I'm going to melt down that stupid gong. Then Hopcraft will never leave his office. Oh well, there's no sense getting upset on Thursday. Things are always great on Thursday.

ACE: Why is that?

GS: Because I get a lot of sleep.

ACE: Don't you have any classes?

GS: Sure, I have Sam Toueg's Network seminar at ten o'clock.

ACE: That hardly allows you to sleep late.

GS: Yes it does. I'm up at nine forty-five, in class by ten ten and asleep again by ten fifteen. Around noon I get some lunch. At three I usually try to catch a few winks in systems seminar but it's difficult because the blinds don't close that well. Then after a few donuts it's time for some deep sleep in cookie seminar. The seats in B17 are really comfortable.

ACE: And they pay you to sleep through your classes?

GS: I don't sleep through all my classes! I never sleep through Data Base class.

ACE: What time is that held?

GS: At noon.

ACE: Wait, I thought you said you ate lunch at noon.

GS: That's right. I don't sleep through Data Base class, I skip it.

ACE: Why?

GS: Are you kidding? It's incredibly boring. You could fall asleep in there!

ACE: I see. Listen, speaking of lunch, I was supposed to meet Suzie about an hour ago but she never showed up. Have you seen her lately?

GS: Yes, she was in earlier. Said something about an appointment with Demers.

ACE: {Frowning and getting worried} Demers? And she's an hour late? Did she say what they were going to talk about?

GS: {Looking off into the distance and thinking}
She said they were going to talk about ...
{Turns to face Ace with a worried expression}
... Russell. Ace, you don't think ...

ACE: We can't afford to think anything else, the woman could be in real danger! Look at the facts. She met Demers to talk about Russell, missed an appointment for lunch, and hasn't been seen since. I mean Demers gets ten or eleven cups of coffee and forget it. Once he starts grooving on Russell ...

GS: You're right. She must be trapped. We've got to save her!

ACE: All right. I'll go to Demers office and you call Donahue in case there's any trouble. He's the only one who can talk to Demers.

GS: What are you going to do?!

ACE: Leave that to me. Now get going!
{GS leaves}
That crazy kid, I should have known she'd try something like this. {Looking at audience} If she gets hurt I'll never forgive myself.

{Ace crosses stage. Simultaneously COT forms on the other side}

MC: Scene eleven, on the fourth floor of Upson Hall.

ACE: Is this Demers's office?

COT: {Synchronized} Sure is.

ACE: You mean you're all waiting to talk to Demers?

COT: Yes, I can't get several UNIX routines to work.
And I have a question about error recovery in my compiler.
And I have a question about the lambda calculus.

ACE: This is as bad as Hopcraft. I guess this is going to take a long time.

COT: {Synchronized} Sure is.

ACE: {Thinking hard} Uhhhh ... Ah, that's too bad. I understand there's a special seminar today and donuts are being served right now.

COT: Really!
Interesting.
A special seminar eh?
{There is five seconds of silence}
Oh it's almost four o'clock, I have to run over to the graduate office before they close.
Gee, I'm might miss my ride home if I don't leave.
I think I suddenly understand the lambda calculus.

{They start to slowly edge away and then break into a dead run off stage. Ace takes a step forward and Demers and Suzie come out. Suzie is huddled up in a chair as Demers pontificates over her.}

DEMERS: ... the universal polymorphic value space has data types as functions which yield a signature calculus with a representation independent semantics ...

ACE: {Breaking in excitedly} Alan, Alan, we've noticed a sudden performance degredation on the VAX!

{Suzie collapses as his gaze leaves her}

DEMERS: A performance degredation on MY VAX? Impossible!

ACE: It's true! Even after we kicked off all the rogue players it still took five minutes to compile a simple program.

DEMERS: {Slowly curling up into a ball}
Ah .. eh ... uh ... fumph ... cough
{Uncurling}
I guess I'll have to rewrite UNIX.
{To Suzie}
I'll be back in an hour.
{He exits}

ACE: Come on, let's get out of here.

{They cross the stage quickly}

SUZIE: Thanks Ace, that was a close one.
{Sighs}
I really can't take too much more of this.

ACE: If it's any help, I think I'm very close to breaking this case wide open.

SUZIE: You're kidding! Who is it?!

ACE: Well, I don't know who it is, but I do know how to figure out who it is. Tell me something, is there any time at which all the faculty members get together in one room?

SUZIE: Hmmm ... let me think ... oh of course, during the annual Computer Science Holiday Party at the Hillendale Lodge.

ACE: Good. I want you to put a copy of this ...
{Takes out a sheet of paper and hands it to her}
in the mailbox of every faculty member. Is it possible to get me into the party?

SUZIE: Sure, it's open to everyone, from respectable tenured faculty to the most disreputable drunkard in the department.

ACE: You mean Diane Duke?

SUZIE: Exactly. Two glasses of wine and she really hits those high notes.

ACE: Two more and she really hits Fred Schneider.

SUZIE: You should see what happens when she gets hard liquor! What have we got here ...
{Looks at sheet of paper and slowly smiles}
I think I know what you're up to!

ACE: Let's just hope THEY don't figure it out, too.

{They exit}

MC: Scene twelve, at the holiday party at the Hillendale Lodge. Stage directions now refer to the audience as well as cast.

SUZIE: You all received notices that there would be a special seminar today. I would like to introduce the speaker to you. He does not come from Carnegie-Mellon or MIT or even Harvard. He does not have a formal degree, and in fact never finished college.
{Gasps and mutters from the crowd}
Yet he does have an education, it comes from the College of Hard Knocks, from the Street-Wise University. I turn the floor over to Ace Mountain.
{Noise from crowd swells as Suzie sits down and Ace rises}

ACE: {Holding up his hands and getting silence} Good evening everyone. Perhaps you find this whole situation somewhat disconcerting. You were expecting to hear a technical talk from a respected member of Oxford University and suddenly find yourselves confronted by a college dropout. Not only that, but one who has been masquerading as a prospective graduate student for some time now. I guess I owe you an explanation and perhaps an apology. After all I've always said that honesty is the best policy. My name IS Ace Mountain, but I am in no way connected with academia. In fact, I am a private eye who has been called in to investigate some very serious accusations against your department.

{Ad lib mumbles from crowd "Our department?", "What could it be?"}
It is apparent that for at least a year, if not longer, there have been regular occurrences of brutal abuse of notation ...
{Ad lib protests from crowd "What?!", "Couldn't be"}
by person or persons within this department!
{Pauses while this takes effect and protests get louder. Then loudly }
Come on, don't play innocent. You've all seen the signs but were afraid to speak out against a colleague, particularly since you weren't quite sure who it was.
{The protests subside}
Up until a few minutes ago I wasn't sure either. Oh I had a few suspects but nothing definite. For example take ...
{swings to face Hartmanis suddenly}
Juris Hartmanis, a man with a past. A past riddled with fuzzy proof outlines and incomprehensible theorems. A man known to force an entire lecture onto the confines of a single blackboard! And when people start to ask questions what happens? "Oh I'm sorry Hartmanis isn't in town today, try again next week." Do you believe that all those trips were really for technical reasons?
And how about ...
{swings to face Schneider suddenly}
Fred Schneider, a man with a plan for the future. A future of fame and fortune. A man willing to do anything to assure that future, no matter how brutal, no matter what the cost.
And then there's ...
Robert L "Bob" Constable, a man who can't lecture his way out of a paper bag. A man who delights in teaching a gruesome subject his own colleagues avoid like the plague. Would YOU buy a verifier from this man?
And how about ...
{swings to face Demers suddenly}
Alan Demers, a jack of all trades, but a master of what? Confusion? Incomprehension? It appears that way to the few unfortunates who have tried to talk to him. How many people here tonight actually understand the Russell report? {Get some response} Could it be that underneath that confident exterior is the biggest fake the world has ever known?
Finally there's David Gries. A man whose entire career was built on dumb luck, a man used to being in the right place at the right time. But what happens when the luck runs out? He's worked himself into a highly visible position with no way out.
{Pauses to reflect for a moment}
Oh the motives were there all right, one of these people was clearly guilty. But the thing that kept me awake at night was how to prove it,
{smacks fist into hand}
how to prove it. I tossed and turned trying to figure out a way to expose the culprit beyond a shadow of a doubt. Then it came to me in a flash of insight.
{Takes out a sheet of paper and holds it up.}
I had this notice put into the mailbox of every faculty member.
Let me read it to you. It says
{Reads from sheet, pronounce NOTRED as NOTE-REED}

"Special seminar on December sixth at the holiday party. Speaker will be a staff member from Oxford's NOTRED project. The NOTRED project was started last year and has had great success developing a NOTation REDuction system. The system takes as input any formal theory and reduces it to the minimum notation necessary to embody the theory. All faculty members are requested to bring their current work for demonstration purposes."

{Stops reading}

Clearly anyone doing valid work would jump at the chance to get their notation cleaned up. And anyone doing content-free work would be deathly afraid of having their latest tech-report reduced to the single word, BOGUS. Therefore I conclude that any faculty member not in this room right now is guilty of the terrible crime of ABUSE OF NOTATION!

{General uproar from the crowd as the missing faculty members are identified}

So there you have it. This terrible crime must be wiped out in our lifetime and you are the only ones who can do it. When you meet any of the people we've identified today confront them directly! Let them know they're being watched! But that's just a beginning.

{Crowd starts to hum Battle Hymn of the Republic}

For the rest of your lives you must always be on guard, always ready to spot the tell-tale signs of Abuse of Notation. And when you spot these signs don't just hide your head! Investigate them with all the energy you have! Don't close your eyes in that dark seminar room and go to sleep just because you can't follow the talk. Maybe no one else can follow it either! And when you find this horrible crime rearing it's ugly cockroach head, stamp it out with all the self-righteous vigor you can muster! Remember, only you can make the world a safe place to live in!

{Sing final words "The Truth Goes Marching On"}

T H E   E N D

Experimental scene thirteen which was never performed:

ACE: Now that we've identified the criminals we can relax and enjoy ourselves. To this end I have been asked to introduce the traditional holiday party show. This year it is called "The Upson Hall Affair". Scene one takes place in a dark, seedy office somewhere in downtown Ithaca.

{He sits behind desk. To audience.}

Ya know, some days it just doesn't pay to be a nice guy. In fact, in this business it can be down right dangerous. Being a gumshoe teaches you three things. First, never get in anybody's way. Second if anybody gets in your way go around them. Third, if neither of these things is possible, puff out your cheeks and pretend you're a chipmunk. This philosophy has kept me in one piece over the years. Oh, I've had my ... ah ... wings clipped a few times, but the money still smells sweet. That's why my brain shifts into third when a new case knocks at the door.

{There is a knock at the door}

ACE: {Looks at audience in mock pleasure. To door.}
It's open.

SUZIE: {Terribly upset}
Are you Ace Mountain, private detective?

ACE: That's what the sign says sister.

SUZIE: {Buries face in hands}
Oh Ace you've got to help, it's terrible, terrible ...

COP: Wait a minute, hold everything.

ACE: Hey, we've got a play going here, who are you?

COP: I'm an agent of the FBI.

ACE: {Skeptical} Oh yeah? What level of this production are you from, the play or the play within the play?

SUZIE: It could be worse than that. He could have wandered back from the play within the play within the play which begins later.

COP: Actually I'm a Meta-character. I'm global to all levels of the play. I've come to arrest you both!

ACE: On what charge?! Certainly not abuse of notation.

COP: No, something much worse, UNBOUNDED CHARACTER ASSASSINATION.

ACE: {Trying to stall for time while he looks for a means of escape}
That's preposterous! We would never do anything like that.
{Spotting a convenient exit. To Suzie}
Run for it!!

{They run across stage. They come back to desk to find another Ace and the cop gone.}

ACE2: Ya know, sometimes it doesn't pay to be a nice guy.

SUZIE: Where are we?

ACE: We've run into another copy of the play.

ACE2: What's going on here?

SUZIE: {to Ace2} Ace, I'm a Suzie and this is another Ace. We're from the previous copy of the play.

ACE2: What brings you here?

SUZIE: We're being pursued by a meta-character who's trying to arrest us for unbounded character assassination.

ACE2: {worried} What are we going to do?

ACE: I figure it this way. He can't arrest a few of us at a time, he's got to get us all at once. However, he only has a finite number of handcuffs. Therefore, there is some finite level at which there will be too many of us for him to arrest.

ACE2: Good idea, let's go.

{They exit as Cop enters.}

COP: It was a good idea, except for one fatal flaw. They forgot that whenever you have non-terminating recursion, you eventually exceed your processor time limit. Therefore I have a simple way of stopping them ...

Thank You and Good Night.