1.

Before the days of ATMs you had to go to the bank and manually make a deposit. Usually you would use one of the preprinted deposit slips found in the back of your checkbook. These came with your account number written in magnetic ink on the bottom of the slip.

If you ran out of slips, the bank would provide you with one. It had no number written at the bottom, so when it was processed using the bank's automatic machinery, so the machine kicked it out and a clerk manually entered the account number.

A crook printed up his own version of the "generic" deposit slip. It looked like the normal "generic" deposit slip, except that the crook's account number was printed in magnetic ink at the bottom.

He then went to the bank and slipped these slips into the bins holding the "generic" slips.

The scam worked this way: A customer entered the bank to make a deposit and got one of the doctored slips. He filled it out and made a deposit. Since the slip contains an account number, the computer automatically processed it and made a deposit into the account written on the bottom. Ignored was the handwritten account number on the slip. In other words, our crook was hijacking deposits.

A detective assigned to the case was baffled. Deposits were disappearing and no one knew how. He narrowed it down to deposits made in the bank. He decided to try and make a large number of deposits and see what would happen. Since he was using his own money, the deposits would have to be very small. Very very small. In fact they were for 6¢ each.

The detective spent a week making deposits. He would go to the bank, fill out a slip, get in line, make a deposit for 6¢, fill out a new slip, get in line, make a deposit for 6¢, and so on. The clerks thought he was crazy. One day, one of his deposits disappeared. So he had the bank search its records to see if anyone else had made a 6¢ deposit that day. Someone had, and the crook was caught.

2.

User:	I can't log on to the system today. The modem won't connect.
Aide:	Look at your modem and tell me which lights are lit up.
User:	I can't do that.
Aide:	Well, I can't help solve your problem unless you can describe what's happening. Can't you look at the modem and tell me the status?
User:	No, I can't do that.
Aide:	Why not?
User:	The modem is down in the basement.
Aide:	So, why can't you go down and look at it?
User:	Are you kidding? There's six feet of water down there!
Aide:	Computers don't work under water.
User (amazed):	Really?

3.

One electronic assembly company was having a problem with pilferage. Thousands of electronic parts were just disappearing. The company instituted a lot of new security measures, but the shortages kept continuing. Where could all the parts be going?

Finally a janitor solved the mystery. He was up in the rafters changing a light when he came across three birds' nests. The birds had taken parts from the factory floor and used them to make their nests. It was estimated that the nests were valued at $10,000 each.

4.

One clever programmer came up with a way of robbing a bank. He stole about 1/2¢ from every depositor. When banks compound interest the result is not always a whole number. For example, the interest might 3.2¢ or 8.6¢. Banks routinely round this number, so 3.2 becomes 3 and 8.6 becomes 9. The result is that about half the time, the number is rounded up and the other half it's rounded down. So everything comes out roughly even.

A crooked programmer changed the algorithm to always truncate. Thus 3.2 becomes 3 and 8.6 becomes 8. This leaves a lot of fractions of cents floating around. The programmer collected these and added them to the last name in the list of accounts. Since he had opened an account in the name of ZZYMOCK, that account was his.

The thief was very clever. He stole less than one cent from everyone. And no one noticed. After all, how many people check their interest down to the last decimal point? How many people even check their interest at all?

But the fellow was caught. Seems that ZZYSKI opened up an account. Now his name was last on the list. And when he got his first statement he was rather surprised to learn that he was getting $38,238.83 in interest on a $200 account.

5.

One weather service computer required the meteorologist to enter rainfall in inches. Now these people were used to dealing with hundredths of inches so when you asked them how much rain fell today, they would say, "50" meaning 50/100 of an inch or half an inch.

However to enter this into the computer you had to type "0.50." One fellow forgot this and entered the rain for the day as "50." Now 50 inches is a *lot* of rain. An awful lot of rain. The computer caught the error, however, and issued an appropriate message:

```
Build an ark. Gather the animals two by two. . .
```

6.

A programmer I know thought he'd figured out how never to get a parking ticket. His three choices for personalized license plates were 1) 0O0O0O, 2) O0O0O0, and 3) I1I1I1. He figured that if a policeman did spot the car, the letter "O" and digit "0" look so much alike that it would be next to impossible to copy down the license plate correctly.

Unfortunately, his plan didn't work. The DMV clerk who issued the plates got confused and he wound up with a plate reading "OOOOOO."

7.

One system administrator makes a habit of announcing that an upgrade has been installed at least two weeks before he actually installs it. Typically there will be a rash of complaints such as, "My software just crashed and all due to your upgrade," on the day of the announcement. The administrator knows that it can't be the upgrade, since he hasn't really done it yet.

When he does actually install the upgrade (which he does secretly), any complaints that then come in are probably legitimate.

8.

A hacker received an assignment to write a program that simulated a four-function calculator. The assignment called for a program that could add, subtract, multiply, and divide. However, the assignment didn't specify what type of numbers, so the hacker's program worked with Roman numerals (IV + III = VII). A users' manual was also required, but the assignment didn't say what language, so the programmer supplied an extensive manual - written in Latin.

9.

Real Programmers don't write in COBOL. COBOL is for wimpy applications programmers.

Real Programmers' programs never work right the first time. But if you throw them on the machine they can be patched into working in "only a few" 30-hour debugging sessions.

Real Programmers never work 9 to 5. If any Real Programmers are around at 9 a.m., it's because they were up all night.

Real Programmers don't document. Documentation is for simps who can't read the listings or the object deck.

Real Programmers don't write in Pascal, or BLISS, or Ada, or any of those pinko computer science languages. Strong typing is for people with weak memories.

10.

The Social Welfare computer in Washington state used to store a person's age as two digits. One lady got too old for the system. When she reached 100 the computer recorded her age as 00. 101 was stored as 01. This didn't become a problem till she reached the age of 107 and the government sent a truant officer out to her house to see why she wasn't in the first grade.

11.

The most cryptic error award goes to:

```
Error: Success
```

I'm still trying to figure this one out.

12.

The UNIX command true does nothing. Actually the first version of the program was a 0 line batch file (UNIX calls them *shell scripts*). Over the years various pieces of source control nonsense and other junk were added to it, until the 0 line program grew till it looked like:

```
#! /bin/sh
#
#     @(#)true.sh 1.5 88/02/07 SMI; from UCB
#
exit 0
```

The 1.5 is a version number. It means that they had to go through four previous versions of the program before they came up with this one. Why they had to reinvent a null program four times is beyond me.

13.

A customer called the service center:

- *Customer:* The computer smells funny.
- *Service man:* Could you please check the back of the computer?

Over the phone the service man heard the customer walk over to his computer. Then came a yelp and a crash.

- *Customer* (angry): The computer bit me!

The service man had to see this, so he scheduled an on-site call. When he arrived, he noticed that the flat cable running from the computer cabinet to the modems had melted. All the insulation was gone, and there was nothing left but a set of bare wires.

The service man pulled out his trusty volt ohm meter and tested the wires. There were 110 volts on the line! (Five volts is normal.) After a few minutes he traced the problem to the wall plugs. The electrician who put them in had reversed power and ground on one set of plugs. This improper wiring caused the ground line of the modem to be at 110 volts. When the modem and the computer were connected the result was a lot of current running through some very small lines. That caused the melted insulation. And when the customer touched the lines, the 110 volts caused the computer to bite him.

14.

The computer center for a large university was located in a very old building. They were having a rather annoying problem. At night, when the operator left the room, the computer would reboot.

A computer service technician was called in and quickly discovered that the system rebooted only when the operator went to the bathroom. When he went out for a drink of water, nothing happened.

A series of service technicians was called in to look at the problem. A lot of diagnostic equipment was put on the computer. Finally they discovered the cause of the problem. The ground in that building was connected to the water pipes. The operator weighed about 300 pounds, and when he sat on the toilet, he bent it forward a few inches, just enough to separate the pipes. This broke the connection to the ground, causing a glitch that rebooted the computer.

15.

A secretary had just completed a memo and was having problems saving it. "Do you have enough space?" asked the local computer expert.

"Oh sure," she replied. "I've got a message that says 'Disk space OK.'"

The computer expert looked over her shoulder, and sure enough there was the message:

```
Disk space: OK.
```

Then he deleted some files and the message read "Disk space: 4K." After a few more deletions the message read "Disk space: 32K," and she was able to save her memo.

16.

Q: How many programmers does it take to change a light bulb?

A: None. It's a hardware problem.

17.

A company I worked with had a communications line that would fail every day at exactly 5:00 p.m. Every morning it would automatically start up around 7:00 a.m. Extensive checks of both the hardware revealed nothing. Finally, an engineer was assigned to stay after hours and watch the communications line. That night the problem went away.

The next night the communications went down as usual. The next night the engineer stayed late and the problem went away. After several cycles of this it was determined that the communications line would crash at 5:00 p.m. unless an engineer was watching it.

Finally one night an engineer decided to make a final check of the communications modem before leaving for the day. It was working. He turned out the lights and happened to glance back at the modem. It was dead. Turned on the lights, it came back on. Flipping the light switch on and off he found out that the modem was plugged into a switch wall socket.

Mystery solved. When the staff left for the day, they turned off the lights, killing the modem. When they came in the next day, they turned on the lights. The engineer couldn't find the problem when he pulled his all-nighters because he left the lights on so he could watch the equipment.

The modem was plugged into a regular wall socket, and all communications problems disappeared.

18.

Modern typewriters use what is called a QWERTY keyboard (named for the top row of letters on the keyboard). This is the standard design. You might wonder why this particular layout was chosen. The answer is simple: It was to make typing difficult.

Back in the days of the manual typewriter, the machine makers had a problem. People would type too fast and jam the keys. The solution was to arrange the keys to slow the people down and thus prevent jamming.

A newer standard keyboard layout called the Dvorak keyboard has been created that greatly improves typing speed, but its acceptance has been limited by the fact that so many people already know QWERTY.

19.

The original version of the UNIX mt command had a unusual error message that appeared when it couldn't understand a command:

```
mt -f /dev/rst8 funny
mt: Can't grok "funny"
```

For those unfamiliar with Robert Heinlein's *Stranger in a Strange Land*, *grok* is a Martian term for *understand*.

This term did not transfer well to other countries. One German programmer went nuts trying to find "grok" in his English/German dictionary.

20.

The debugger for all DEC computers is called DDT. In the PDP-10 DDT manual there is footnote as to how this name came about:

Historical footnote: DDT was developed at MIT for the PDP-1 computer in 1961. At that time DDT stood for "DEC Debugging Tape." Since then, the idea of an on-line debugging program has propagated throughout the computer industry. DDT programs are now available for all DEC computers. Since media other than tape are now frequently used, the more descriptive name "Dynamic Debugging Technique" has been adopted, retaining the DDT acronym. Confusion between DDT-10 and another well-known pesticide, dichloro-diphenyl-trichloroethylene (C_{14} H_9 Cl_5), should be minimal since each attacks a different, and apparently mutually exclusive, class of bugs.

21.

A cleaning lady discovered a scuff mark on the floor of the machine room and decided to remove it. First she tried wax, then an ammonia-based cleaner, and finally, as a last resort, steel wool. The combination proved deadly. Not for the scuff mark, but for the computers.

The next day, when the computing staff came to work, they found all their machines down. Opening the cabinets, they discovered massive shorts in all the circuit boards.

What had happened? The cleaning lady first applied a coating of wax to the floor. The ammonia vaporized the wax, which was sucked into the computers by the cooling fans. Thus every board was coated with an even layer of sticky wax. That wasn't too bad, but next came the steel wool. The steel fibers were sucked into the machine where they stuck to the wax coating on the inside of the machine.

22.

"There are two ways of constructing a software design. One way is to make it so simple that there are obviously no deficiencies, and the other way is to make it so complicated that there are no obvious deficiencies."

— C. A. R. Hoare

23.

There are two ways to write error-free programs. Only the third one works.

24.

"The C programming language — a language that combines the flexibility of assembly language with the power of assembly language."

25.

90 percent of the time, the documentation will be lost. Of the remaining 10 percent, 9 percent of the time it will be for an earlier version of the program and therefore completely useless. The 1 percent of the time you have the documentation and the correct revision of the documentation, it will be written in Japanese.

I told this joke to a fellow working at Motorola and he laughed for a few minutes, then pulled out his manual to Hitachi FORTRAN, written in Japanese

26.

Real Programmers don't comment their code. If it was hard to write, it should be hard to understand.

Real Programmers don't draw flowcharts. Flowcharts are, after all, the illiterate's form of documentation. Cavemen drew flowcharts; look how much good it did them.

Real Programmers don't play tennis, or any other sport that requires you to change clothes. Mountain climbing is okay, and Real Programmers wear their climbing boots to work in case a mountain should suddenly spring up in the middle of the machine room.

27.

A programmer at IBM's Yorktown Heights Research Center had a problem. When he was sitting down, everything went fine. When he stood up, the computer failed. Now this problem was interesting in that it was completely repeatable. When he stood up, the machine always failed, and when he sat down it always worked. Nothing flaky about this problem.

The people in the computer office were baffled. After all, how could the computer know when the guy was standing or sitting? All sorts of theories were floated, such as static electricity, magnetic fields, and even acts of a playful God.

The most likely theory was that there was something loose under the carpet. It was a nice theory, but unfortunately it didn't fit the facts. Loose wires tend to cause intermittent problems, but this was 100 percent reproducible.

Finally a sharp-eyed engineer noticed something. When the programmer sat down, he touch typed. When he stood up, he used the hunt and peck method. A careful examination of the keyboard revealed that two of the keys had been reversed. This didn't matter when the fellow sat down and touch-typed. But when he rose and used the hunt-and-peck method, he was misled by the reversed keys and input the wrong data. When the key caps were switched, the problem went away.

28.

Error messages from an old Apple C compiler:

"Symbol table full - fatal heap error; please go buy a RAM upgrade from your local Apple dealer"

"String literal too long (I let you have 512 characters, that's 3 more than ANSI said I should)"

"Type in (cast) must be scalar; ANSI 3.3.4; page 39, lines 10-11 (I know you don't care, I'm just trying to annoy you)"

"Too many errors on one line (make fewer)"

"Can't cast a void type to type void (because the ANSI spec. says so, that's why)"

"... And the lord said, 'lo, there shall only be case or default labels inside a switch statement'"

"A typedef name was a complete surprise to me at this point in your program"

"'Volatile' and 'Register' are not miscible"

"You can't modify a constant, float upstream, win an argument with the IRS, or satisfy this compiler"

"This union already has a perfectly good definition"

"Huh?"

"Can't go mucking with a 'void *'"

"This struct already has a perfectly good definition"

"We already did this function"

"This label is the target of a goto from outside of the block containing this label AND this block has an automatic variable with an initializer AND your window wasn't wide enough to read this whole error message"

"Call me paranoid but finding '/*' inside this comment makes me suspicious"

29.

Law of advanced programming languages: Make it possible for programmers to write in English, and you will find the programmers cannot write in English.

30.

There is nothing that cannot be solved through sufficient application of brute force and ignorance.

31.

A sufficiently high level of technology is indistinguishable from magic.

— Arthur C. Clarke

32.

Shakespeare has given us the age-old question, "To be or not to be?" Computer science has given us the answer: "FF".

```
0x2B | ~0x2B == 0xFF
```

Note Most of the time when I tell this joke to non-technical people, they just look at me strangely. Technical people tend to think for a minute and then say, "You're right." Only one person in about a hundred actually laughs.

33.

There is a contest held every year called the Obfuscated C Contest. The contestants try to figure out how to write the most difficult and hard-to-read program possible. After all, they're programmers, and they know programs hard to understand under the best of circumstances. This contest gives them a chance to understand a program under the worst of circumstances.

Some of the awards have interesting titles:

- BEST SIMPLE TASK PERFORMED IN A COMPLEX WAY.
- BEST NONSIMPLE TASK PERFORMED IN A COMPLEX WAY.
- MOST ILLEGIBLE CODE.
- MOST WELL ROUNDED IN CONFUSION.
- BEST RESEMBLANCE TO RANDOM TYPING ON THE KEYBOARD.
- WORST ABUSE OF THE RULES.
- STRANGEST SOURCE LAYOUT.
- BEST ABUSE OF ANSI C.

34.

The First Rule of Program Optimization:

Don't do it.

The Second Rule of Program Optimization:

Don't do it yet.