

The ASCII code value for the minus sign is 45. The code value for the dollar sign is 36. Because 36 is less than 45, the computer thinks that the '-' is greater than the '\$'. This also holds true for letters of the alphabet and their ASCII code values.

In real life, rarely do you compare one letter to another. Instead, you compare whatever keystroke was entered with a known, desired choice. I cover this topic in the next section.

- ✓ See Appendix B for a gander at ASCII values.
- ✓ Run the program again and try typing these two letters: **a** (little *a*) and **Z**. The big Z is less than the little *A*, even though *A* comes before *Z* in the alphabet. The reason is that the ASCII code has two alphabets: one for uppercase letters and another for lowercase. The uppercase letters have smaller values than the lowercase letters do, so "a-z" always is greater than "A-Z".



Severely boring trivia on the nature of "alphabetical order"

So why is it A, B, C first, and why does Z come last? The answer is buried in the bosom of trivia, which most computer junkies are also fond of memorizing. Because I was curious, I thought I would look it up. And, lo, here's what I found.

Our alphabet is based on ancient alphabets, which in turn are based on even older, dinosaur-age alphabets. Back in those days, the letters they used were based on symbols for various things they encountered in everyday life, and the symbols were often named after those things as well: The letter *A* was named after and shaped like the ox, an important beast. *B* was named after a house and shaped like a door. And so on for all the letters. That's how it was for most of the early Semitic languages, which used phonics rather than pictographs or ideographs.

The Greeks borrowed their alphabet from the Semites. The Romans stole their alphabet from

the Greeks (the Romans stole just about everything). But the Romans didn't really steal all of Greek. They left out a few sounds they didn't think they needed: (theta), U, V, X, Y, and Z. Eventually, they realized that the sounds were important, so they added them to the end of their alphabet in the order in which they were accepted. (The theta was never added by the Romans, though some middle English scripts used a Y symbol to represent it. That's why, for example, you have "Ye Old Shop" for "The Old Shop.")

That sort of explains how the alphabet got to be in alphabetical order. The ASCII numbering scheme came about from the early teletype days as a way to encode numbers, common symbols, and secret codes. There's probably a story to tell there, but at this stage in the book, I'm just too lazy to look it up.