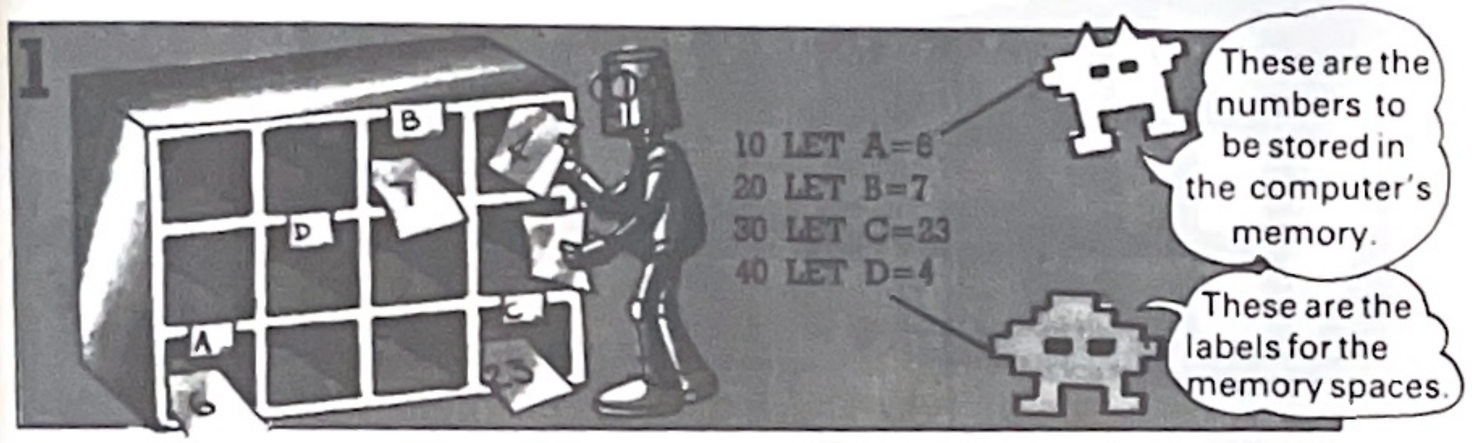
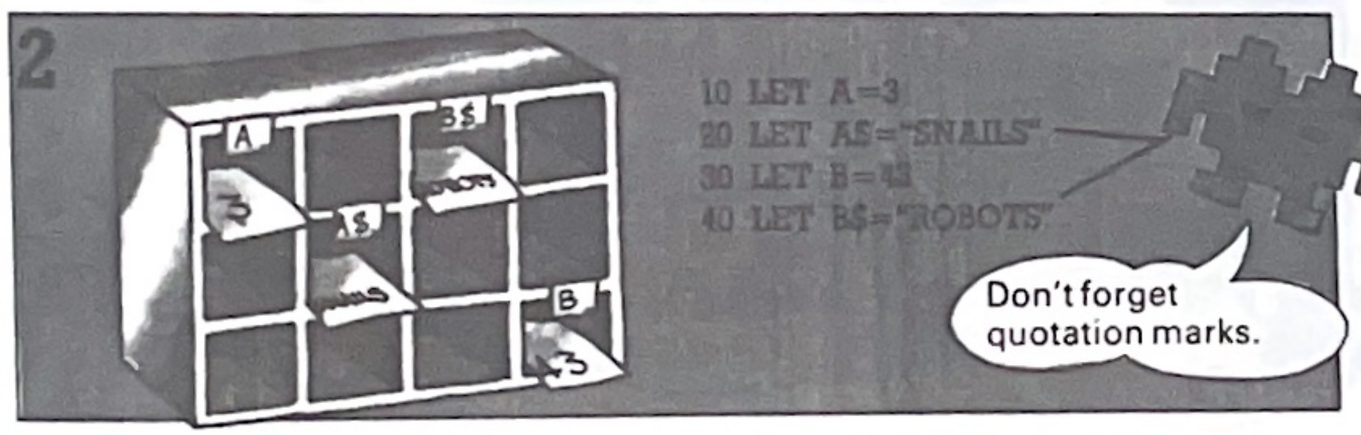
Giving the computer information

To make the computer do something more useful than just displaying things on the screen you have to give it information or "data" to work on. The computer stores this information in its memory until you tell it to use it.



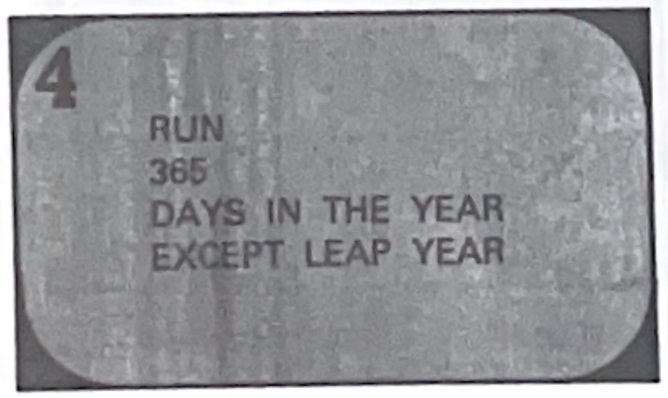
When you put a piece of data into the computer's memory you have to give it a label so you can find it again. You can use letters of the alphabet as labels. To label a memory space and put a number in it you can use the word LET, as shown above. A labelled memory space is called a variable because it can hold different data at different times in the program.



You use a different kind of label to store letters and symbols in memory spaces. Letters and symbols are called "strings" and you use letters of the alphabet with dollar signs to label them, e.g. C$.*

You put a string in a memory space using LET in the same way as for a number variable, but the letters and symbols must be enclosed in quotation marks, as shown above.

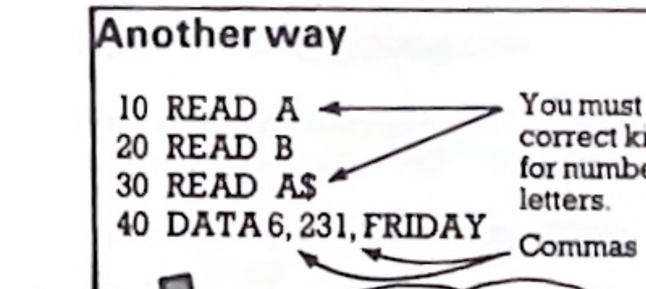
To display the information on the screen you use the word PRINT with the name of the variable, e.g. PRINT A$. This short program prints out the information from variables B, D$ and L$.

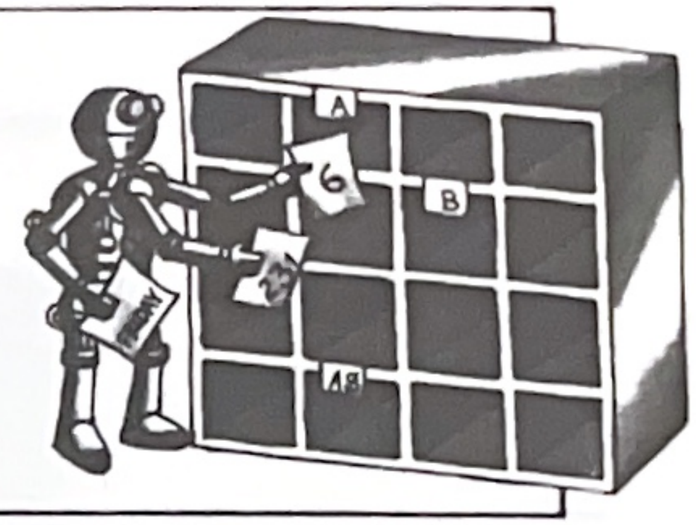


You can run the program as many times as you want. Each time the computer will print out the same information. The data in the variables stays the same until you change it.

*This is pronounced "C dollar" or "C string".

Another way

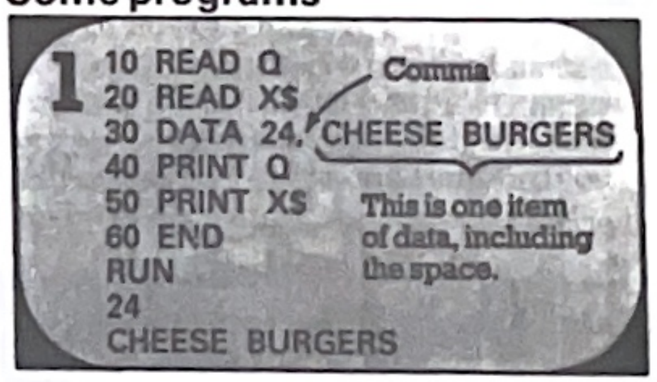




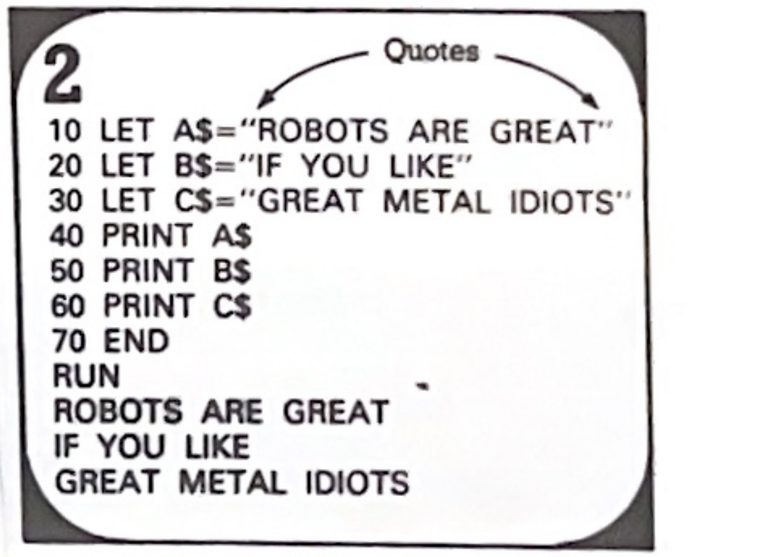
Another way to store information is with the words READ and DATA, as shown above. The READ lines tell the computer to label memory spaces and the DATA line contains the information.

When you run the program the computer puts each piece of data in a memory space, taking them in order. The items of data must have commas in between so the computer knows how long each one is.*

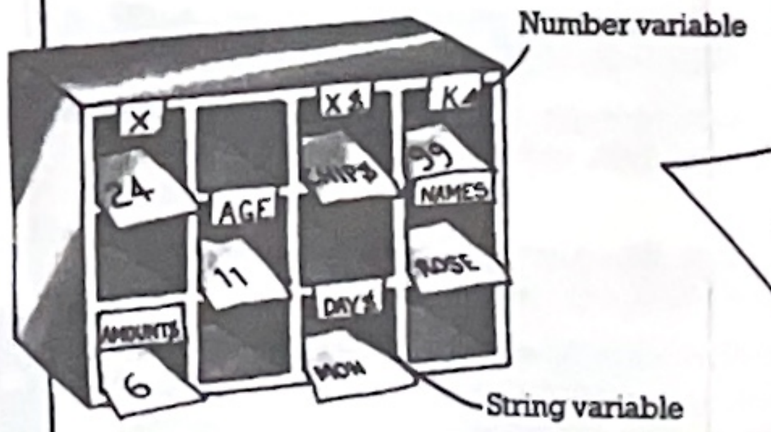
Some programs

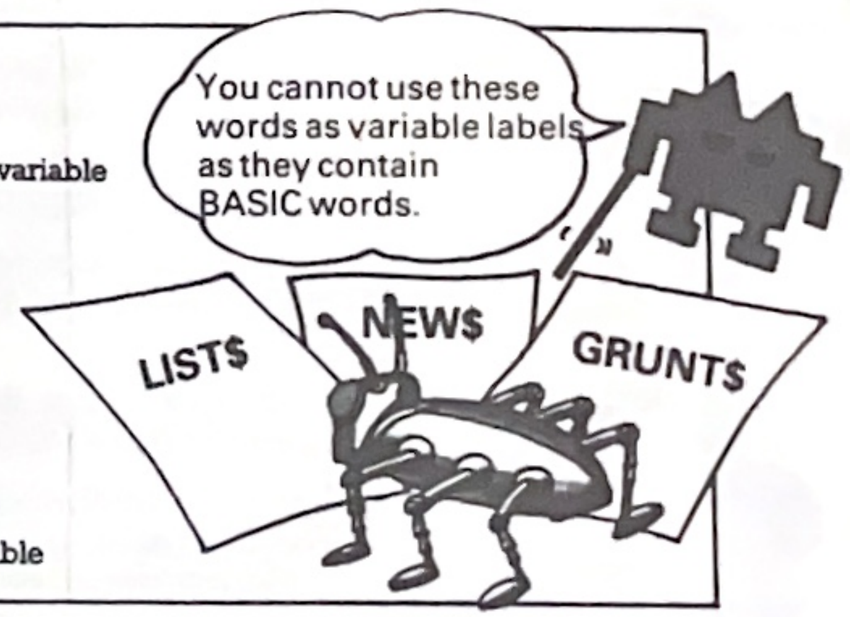


Here are two programs, one using READ and DATA and the other using LET to store information in the computer's memory.



More about variables





Variables are labelled spaces in the computer's memory where information is stored. A variable containing numbers is called a number variable and one which contains letters and symbols is called a string variable. The contents of variables can change during the program. Some computers can use words as labels for variables, but not words which contain BASIC words as this would confuse the computer.

*You cannot use this method on the ZX81 computer.