

Assembler BootCamp Exercise

This little exercise can help you understand how programs are executed, and the differences between instructions and data.

Type in the following program:

```
WHATNOW  CSECT
          L      1,12(0,15)      Instruction
          DC     X'5010F000'      Hexadecimal Data
          BC     B'1111',0(0,15)  Instruction
          DC     X'1B1107FE'      Hexadecimal Data
          END

$ENTRY
```

and save it as WHATNOW.ASM. Then, run it with ASSIST/I.

(If you don't see your program in memory, look at the WHATNOW.PRT file to see if there were any assembly errors. If so, correct them and try again.)

Your final assembly listing will look something like this:

```
000000          00000 00010    1 WHATNOW  CSECT
000000 5810 F00C          0000C    2          L      1,12(0,15)      Instruction
000004 5010F000          00000    3          DC     X'5010F000'      Hexadecimal Data
000008 47F0 F000          00000    4          BC     B'1111',0(0,15)  Instruction
00000C 1B1107FE          00000    5          DC     X'1B1107FE'      Hexadecimal Data
                                6          END
```

Now, step through the program. What happens at each step?

Which parts of the program are instructions, and which are data? When?