Printing a hexadecimal number

In MP1, we will compute and print a histogram. The histogram computation code will be provided, but the histogram printing code needs to be developed. In this lab, we will develop a code to print a value stored in a register as a hexadecimal number to the monitor. You will then use this code in MP1.

Printing a value in hexadecimal notation involves turning each group of four bits into a digit, calculating the corresponding ASCII character, and printing that character to the monitor. The flowchart to implement is in the file flowchart.pdf

In the file lab1.asm, write a program to print a value stored in register R3 as a hexadecimal number to the monitor. You need not set or clear R3 in your program. To test, you can manually set R3 before running your program. In the graphical simulator, you can click on the box for R3 and set it. In the command line simulator you can use the 'reg' command.

For example,

```
reg r3 x00e0
```

will set the value of r3 as x00e0