

Laboratory 2: MPLAB and Simulation**Problem 3:**

The following program is given

```
1  list p=16F84A;
2  include "p16f84A.inc";
3  org 0;
4  main ;
5  clrf 0Ch;
6  clrf 10h;
7  movlw 07h;
8  movwf 0Ch;
9  clrw;
10 movf 0Ch,0;
11 movwf 10h;
12 clrf 0Ch;
13 goto main;
14 end;
```

- a. Explain line by line what the program does.
- b. Create a new MPLAB project. Write and compile the program code.
- c. Simulate the program in MPLAB. Write down the content of the file register and the working register in each step of the program.
- d. Write down the machine code for each instruction in the program.
- e. Open the hex-file of the program in MPLAB. Compare line 2 of the hex-file to your machine code.