SHEET 4

Q1. Write an assembly function that initializes port F pins 1, 2, and 3 as Digital Output with initial zero values.

Q2. Write an assembly function that initializes port F pin 4 as Digital Input that will be connected to a switch.

Q3. Write an assembly function that reads PORTF pin4.

Q4. Write an assembly function that clears pin1, pin2, and pin3 then update the mentioned pins with new values of data in PORTF.

Q5. In Tiva C, PF4 is connected to a push button and PF1, PF2, and PF3 are connected to an RGB LED. PF1 is red, PF2 is blue, and PF3 is green. Write assembly application that uses the init functions developed in previous questions that reads input from the switch and when it is pressed for the first time the red LED should be turned on then when pressed a second time turn off the red LED and turn on the blue LED then when pressed a third time turn off the blue LED and turn on the green LED then when pressed a fourth time turn off the green LED and turn on again the red LED and then repeat the cycle.

Q6. Repeat all previous questions using C.

Q7. What is a direction register? Why does the microcontroller have direction registers?

Q8. What is the alternative function register?