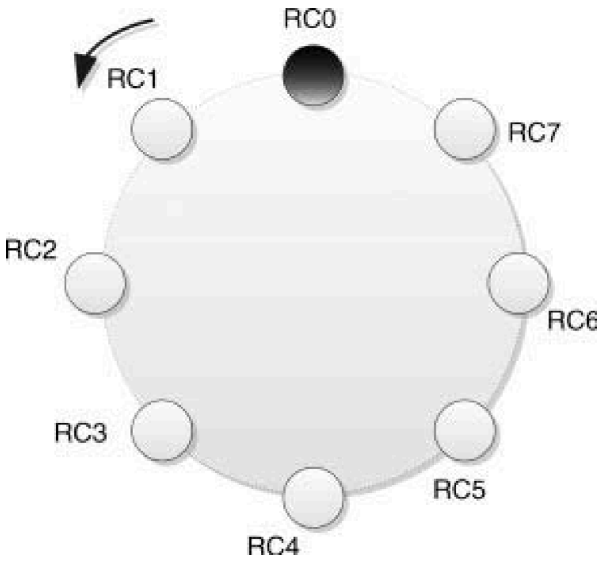
EEE 407 Microprocessors and Microcontrollers Laboratory

EXPERIMENT 4

Objective: In this experiment, it is aimed to learn I/O programming, creating time delays and using bit-wise operators in C language.

Ex.1: Write a C program to toggle all the bits of PORTC and PORTD continuously with a 1s delay. Compile and download the resulting "HEX " file to PIC18F452 and observe the result on PORTC and PORTD.

Ex.2: Write a C program to do the explained operation by using the 8 LEDs connected to PORTC of the PIC18F452 microcontroller. The LEDs turn ON right to left (bit 0 towards bit 7) in a rotating manner, with a 1 second delay between each output where only one LED is ON at any time. If the LEDs are arranged in a circular way, the pattern displayed by the LEDs will be as shown in Figure on the right.



Ex.3: Write a C program to flash the led connected to port pin RC0 of the microcontroller continuously with a pattern, three flashes with 200 ms delay and between each flash there should be 2 second intervals.