

**Lab Report # 02**

**Course Title : Microprocessor Systems & Interfacing**

**Course Code : EEE342**

**Class : EPE 5A**

**Teacher’s Name : Muhammad Naveed Shaikh**

**Group # : 01**

**S. No Student Name Registration No**

**1**

**Mian Abdullah FA16-EPE-005**

**2**

**Osama Muneem FA16-EPE-007**

**3**

**Wahaj Khalid FA16-EPE-018**

**4**

**Umair Saifullah** **FA16-EPE-035**

**Type Total Marks Obtained Marks**

**Affective Psychomotor Cognitive**

**Department of Electrical and Computer Engineering**

**COMSATS University Islamabad, Abbottabad Campus**

Microprocessors System InterfacingLab Report-2

**MPLAB CODE:**

include <P18F452.INC>

ORG 00H

START

BCF TRISB,1;Led 1 for even check

BCF TRISB,2;Led 2 for < 10 check

CLRF TRISD;Count led

BCF PORTB,1;just to make sure its cleared after every run

BCF PORTB,2

CLRF 06H

CLRF 05H

MOVLW 0AH;COMPARE WITH 10

MOVWF 03H

;making two copies of input

MOVFF PORTC,01H; to be used in last loop

MOVFF PORTC,00H; to be used in zeros/ones check

BCF STATUS,C;we will rotate so make it zero initially

BTFSS PORTB,0;Switch at RB0

BRA ZEROS;switch off

BRA ONES;switch on

ONES

MOVLW D'8' ;Placed a counter to count rotations

MOVWF 05H

LOOP1

RRCF 00H,F

BTFSC STATUS,C

INCF 06H;NUMBER OF ONES

DECF 05H;COUNT 8

BNZ LOOP1

MOVFF 06H,PORTD

BRA EN

ZEROS

MOVLW D'8'

MOVWF 05H

LOOP2

RRCF 00H,F

BTFSS STATUS,C

INCF 06H;NUMBER OF ZEROS

DECF 05H;COUNT 8

BNZ LOOP2

MOVFF 06H,PORTD

BRA EN

EN

;To check if the number or the condition is changed

MOVF PORTC,W

CPFSEQ 01H

BRA START

;for led <10 check

BTFSC PORTC,0;check if inputs 1st bit is zero

BRA LESSCHECK;if not dont turn on led

CPFSEQ 02H;if yes check if whole input = 0

BSF PORTB,1;if not turn led even on as 0 is not even nor odd

LESSCHECK

MOVF 03H,W;Moving 10 or A in hex to working so to compare

CPFSLT PORTC

BRA EN

BSF PORTB,2;Turn on <10 led

BRA EN

END

**SCREENSHOTS:**

