

Indian Institute of Information Technology
Kalyani
Microprocessor and Microcontroller
(EC 511)

Lab Assignment 4 (8051 Microcontroller)

NAME :- Rajnish Singh

ROLL NUMBER :- CSE/19061/488

PROB.1 WRITE A PROGRAM TO READ AN 8-BIT TEMPERATURE IN CELSIUS FROM PORT 1 AND TO OUTPUT THE FARENHEIGHT TEMPERATURE EQUIVALENT ONTO PORT 2.

CODE:

ORG 0000H

SJMP MAIN

MAIN:MOV A, P1

MOV B, #09H

MUL AB

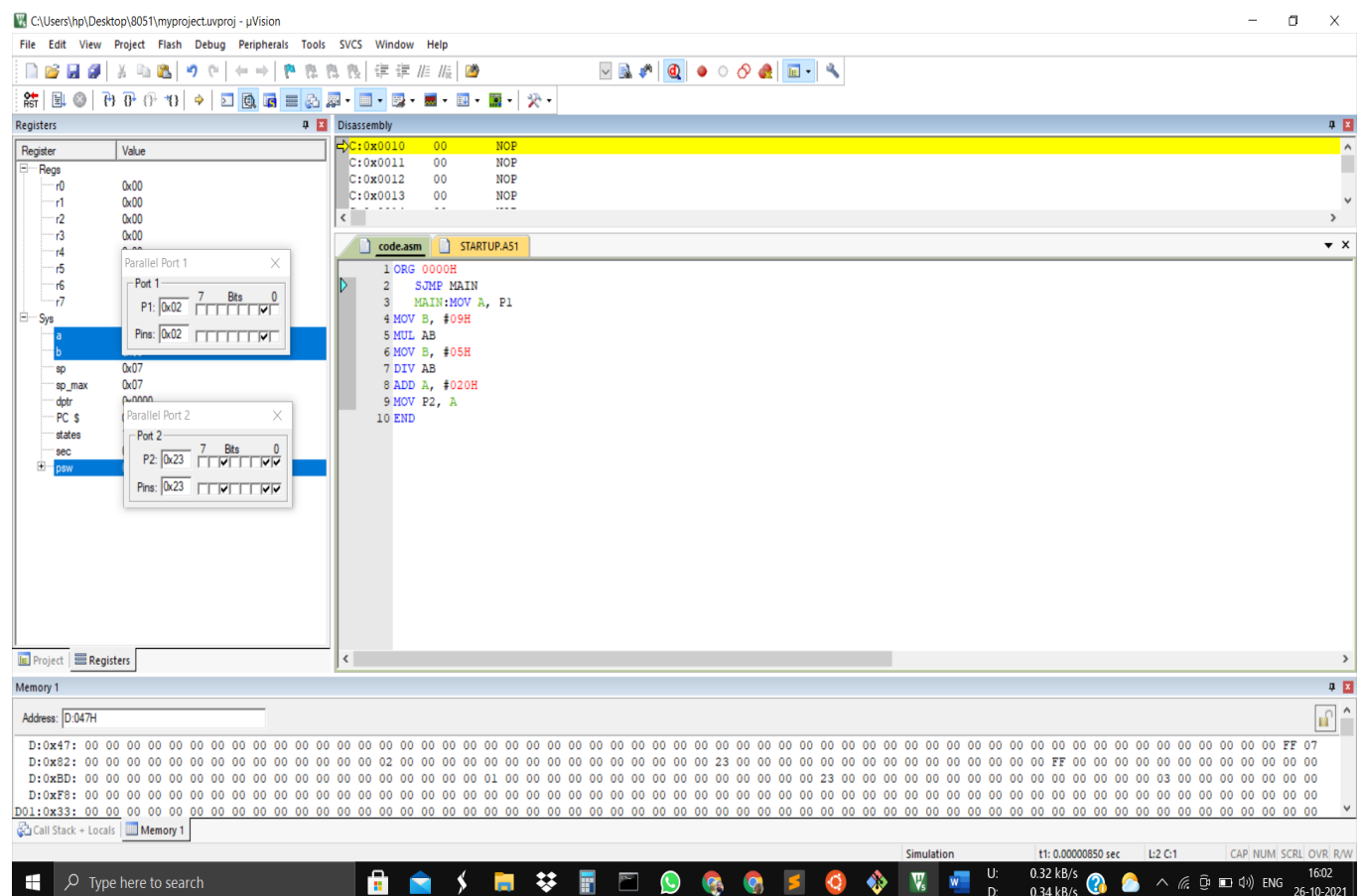
MOV B, #05H

DIV AB

ADD A, #020H

MOV P2, A

END



PROB.2 WRITE A PROGRAM TO TOGGLE BIT P1.2 WITH ONE SEC DELAY.

Code:

ORG 0000H

SJMP MAIN

MAIN:MOV P1, #04H

ACALL DELAY

MOV P1, #00H

ACALL DELAY

SJMP MAIN

DELAY: MOV R2,#200

J1: MOV R3, #200H

J2: MOV R4, #250H

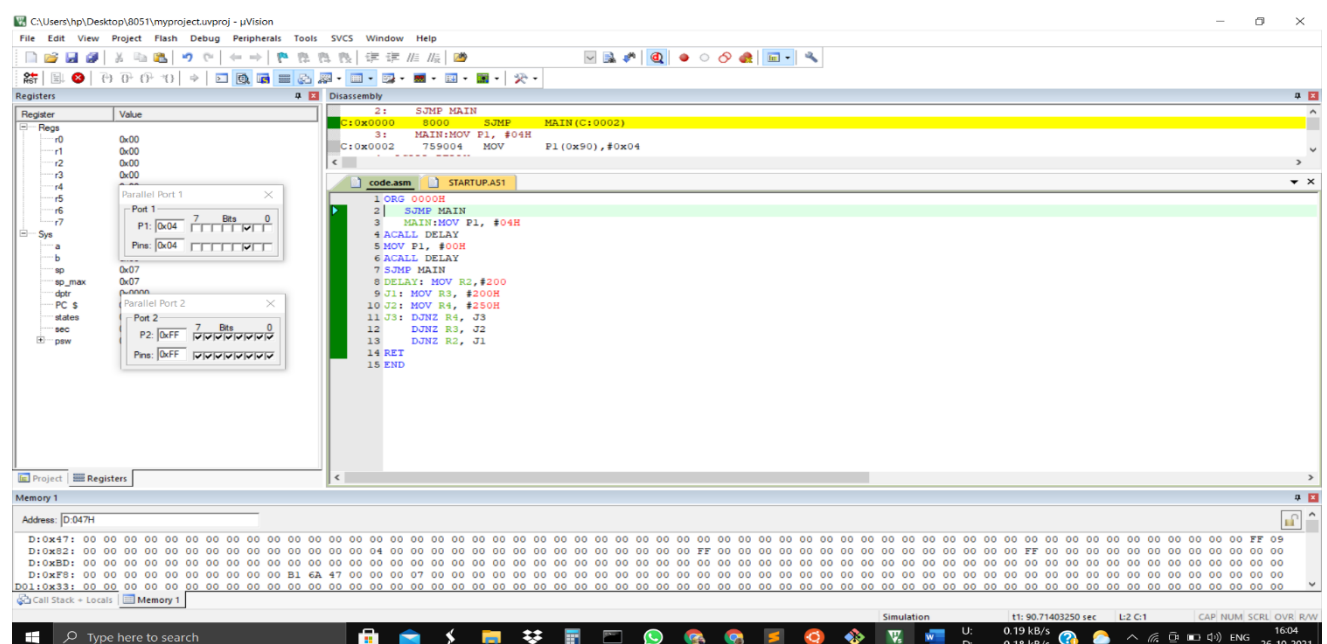
J3: DJNZ R4, J3

DJNZ R3, J2

DJNZ R2, J1

RET

END



PROB.3 WRITE A PROGRAM TO SHIFT THE BITS OF P1 ONE BY ONE IN SEQUENCE CONTINUOUSLY WITH 1 SEC DELAY.

Code:

ORG 0000H

SJMP MAIN

MAIN: MOV A, P1

RR A

MOV P1,A

ACALL DELAY

SJMP MAIN

DELAY: MOV R2,#10

J1: MOV R3, #200

J2: MOV R4, #250

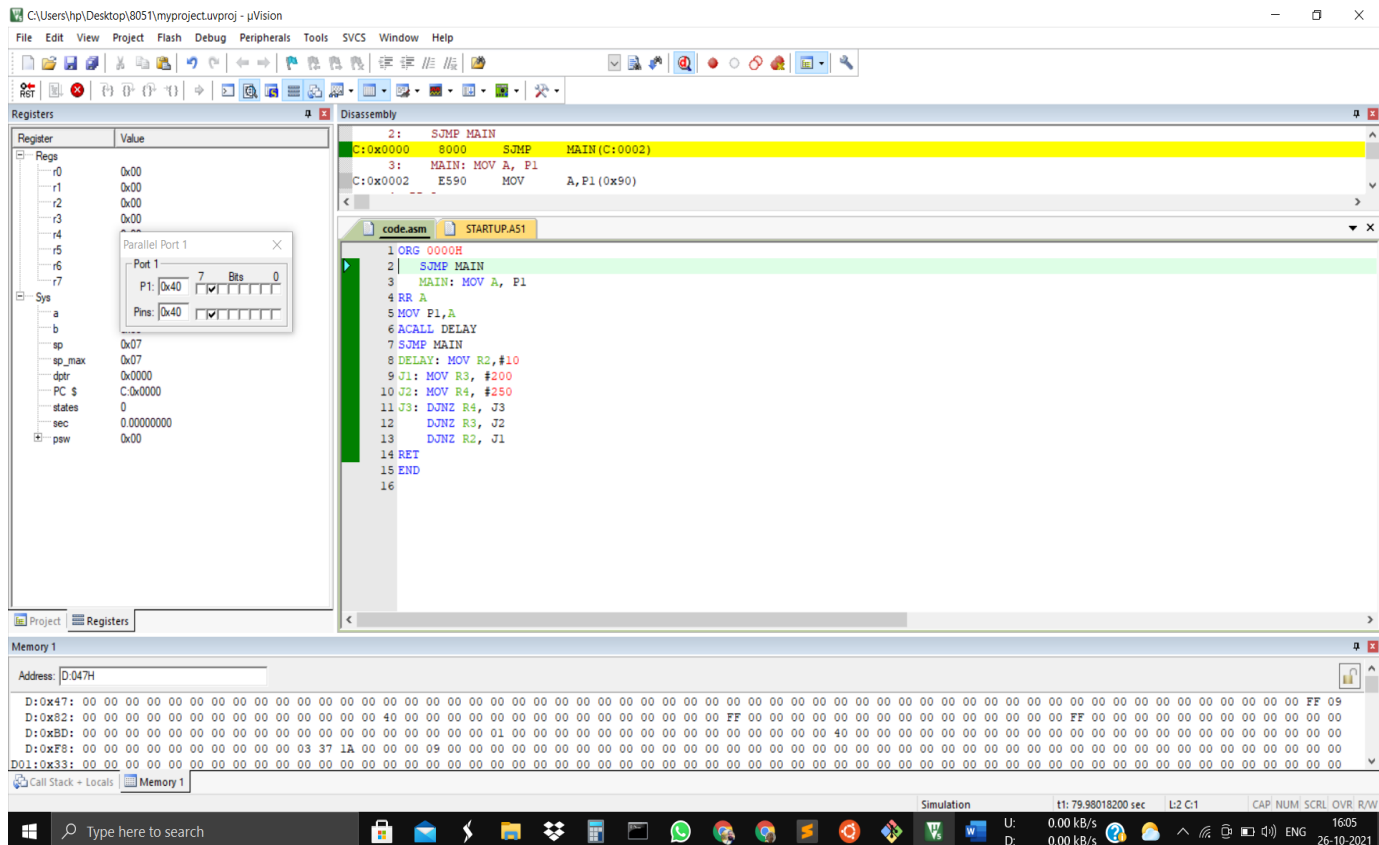
J3: DJNZ R4, J3

DJNZ R3, J2

DJNZ R2, J1

RET

END



PROB.4 IN A SEMESTER, A STUDENT HAS TO TAKE SIX COURSES. THE MARKS OF THE STUDENT (OUT OF 25) ARE STORED IN RAM LOCATIONS 47H ONWARDS. FIND THE AVERAGE MARKS , AND OUTPUT IT ON PORT 1.

Code:

```
ORG 0000H
```

SJMP MAIN

```
MAIN: MOV R0,#47H
```

MOV R2,#06H

MOV A,#00H

```
LOOP: ADD A, @R0
```

INC R0

DJNZ R2,LOOP

MOV B, #06H

END

