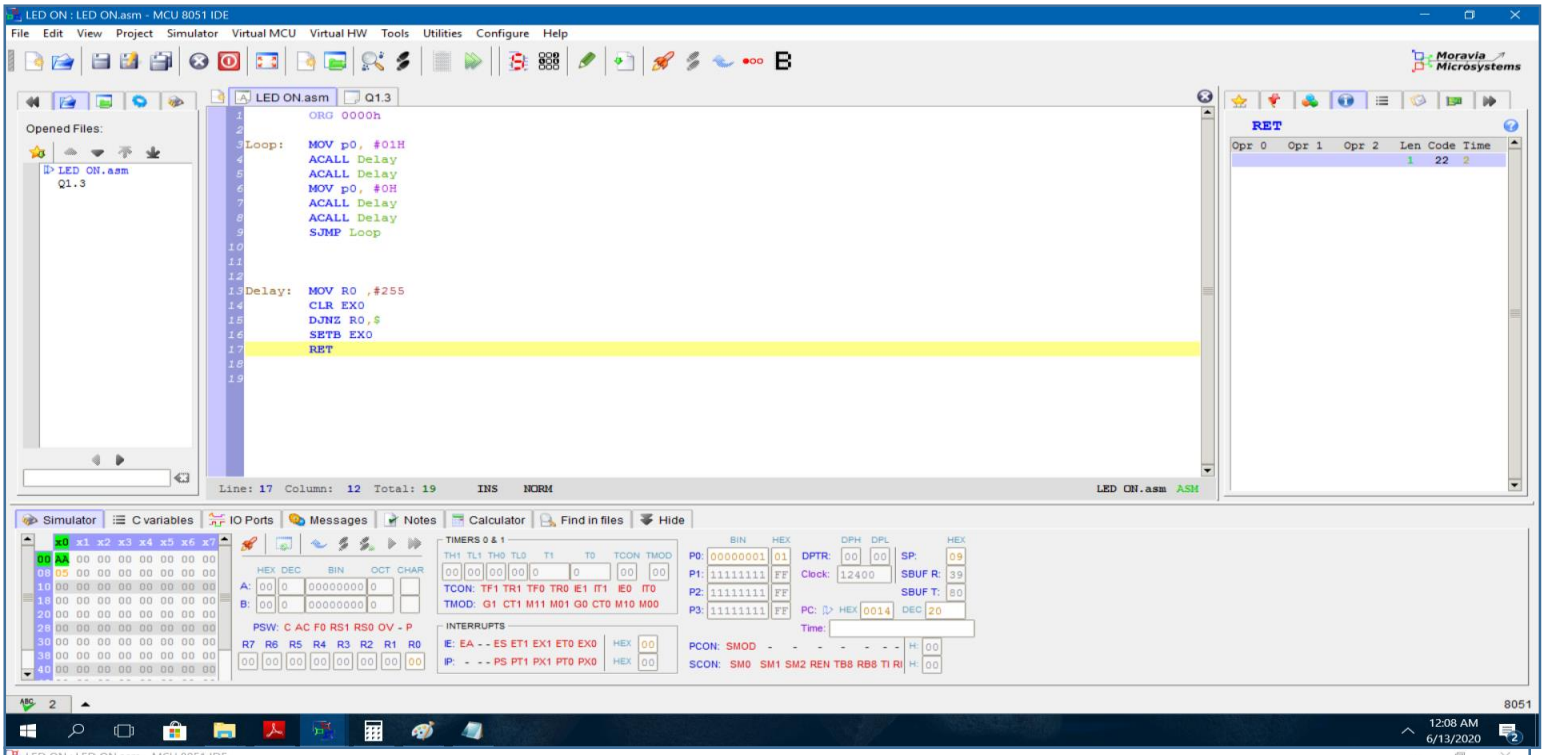
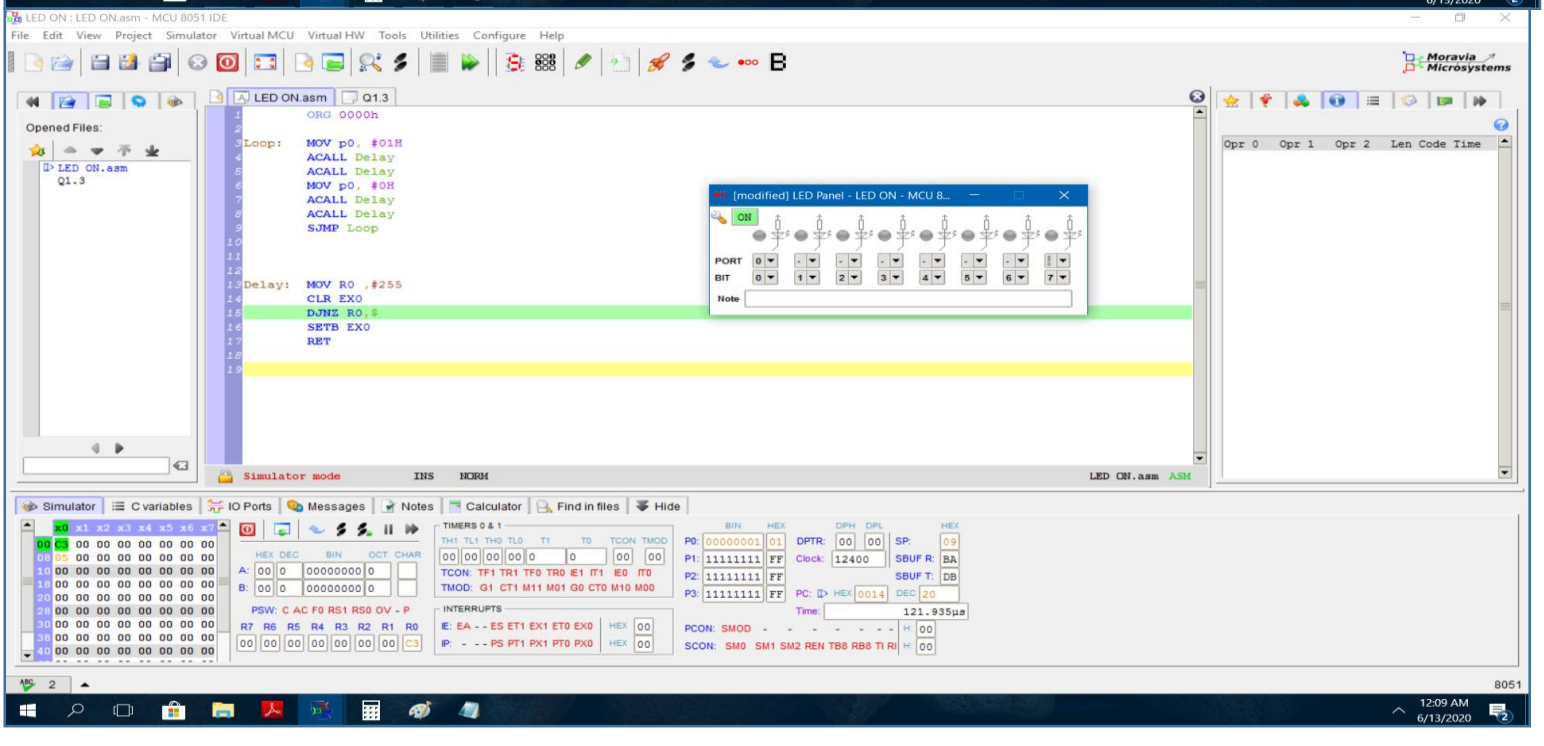
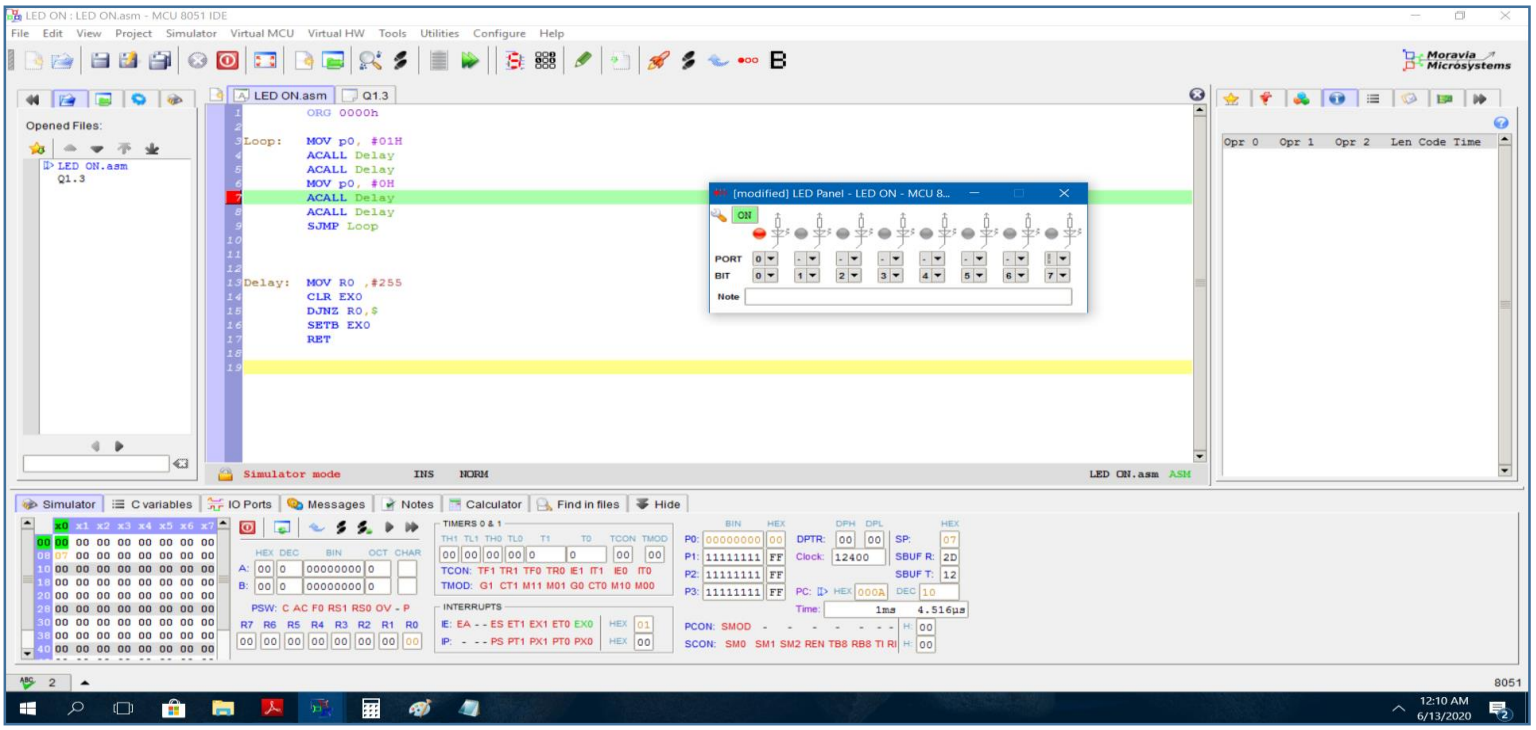
Q1.

```
1.          ORG 0000h
Loop:       MOV p0, #01H
            ACALL Delay
            MOV p0, #0H
            ACALL Delay
            SJMP Loop
Delay:      MOV     R1, #015h
            MOV     R0, #0F4h
            DJNZ    R0, $
            DJNZ    R1, $-4
            RET
```

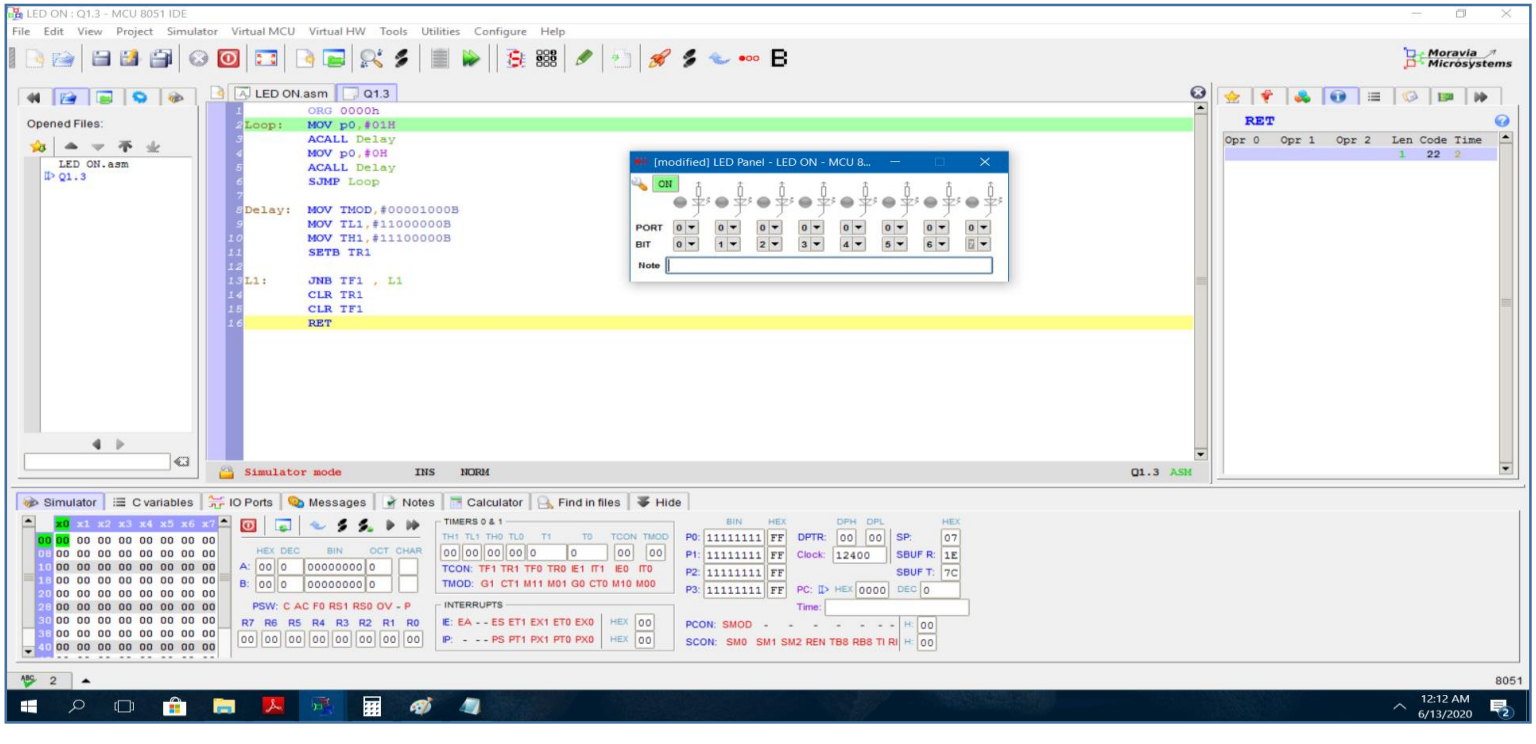


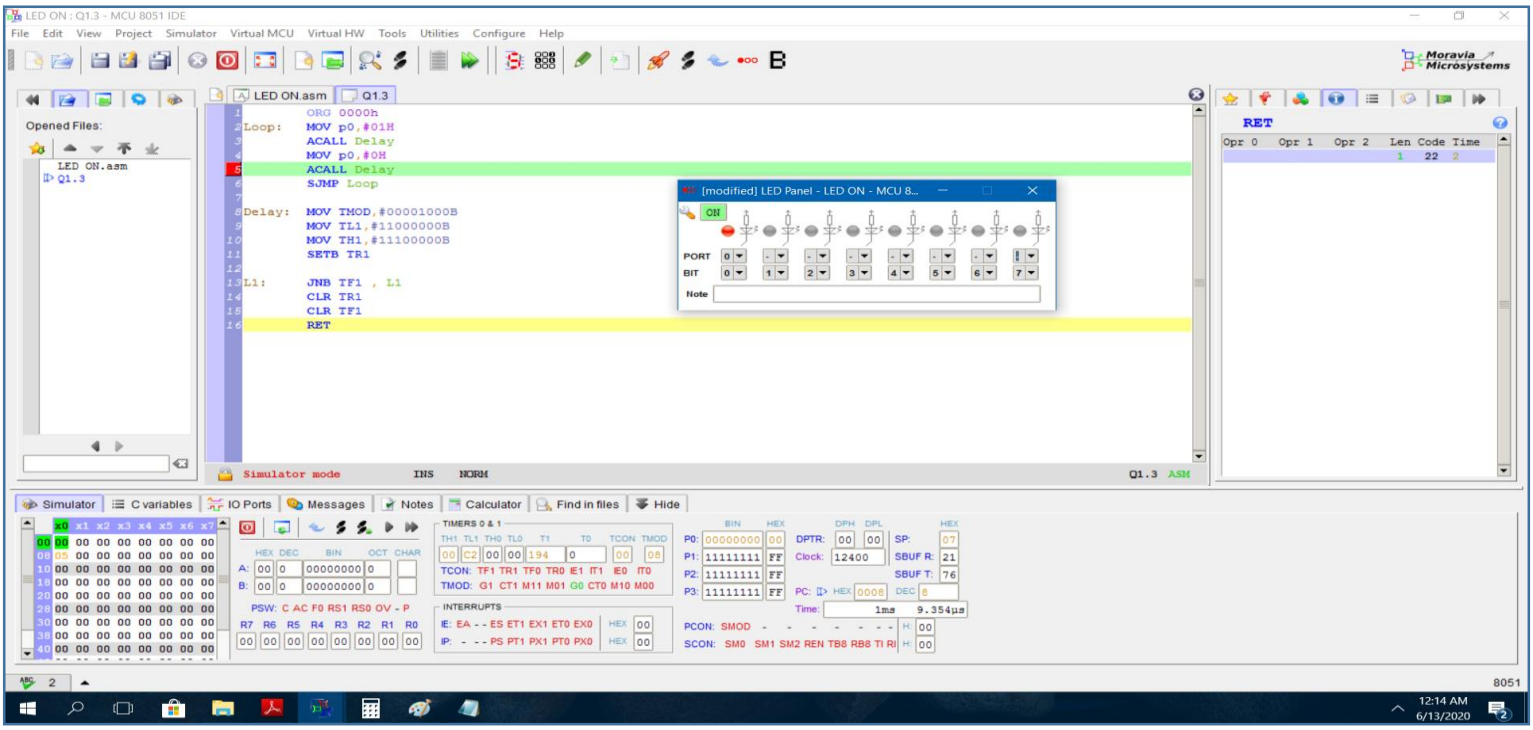




3.

```
        ORG 0000h
Loop:   MOV p0,#01H
        ACALL Delay
        MOV p0,#0H
        ACALL Delay
        SJMP Loop
Delay:  MOV TMOD,#00001000B
        MOV TL1,#0A3H
        MOV TH1,#0D7H
        SETB TR1
L1:     JNB TF1 , L1
        CLR TR1
        CLR TF1
        RET
```





Task 02

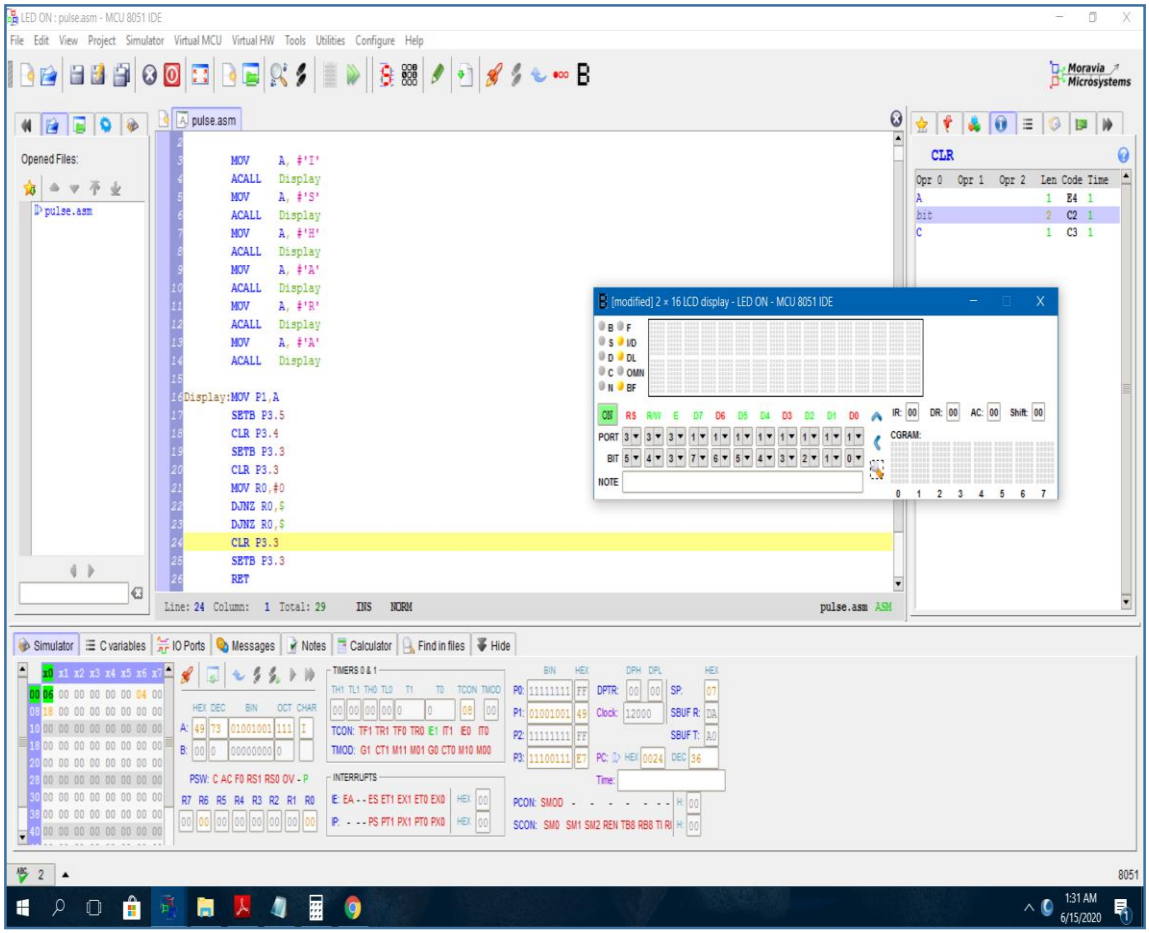
```
ORG     0000H
L1:     JNB
ORG 0003H
START
        LCALL   INTERRUPT
ORG     0010H
        MOV     TMOD, #00000110B
START:  SETB    P0.0
        SETB    TR0
MAIN:
        SETB    P0.0
        MOV     TH0, #0FBH
        MOV     TL0, #0F7H
        JNB     TF0, L1
INTERRUPT:
        CLR     P0.0
        CLR     TR0
        MOV     R1, #006h
        MOV     R0, #0AAh
        DJNZ    R0, $
        DJNZ    R1, $-4
        SETB    P0.0
        RET
        END
```

Task 3

1)

```
ORG 0000H
MOV A,#'I'
ACALL Display
MOV A,#'S'
ACALL Display
MOV A,#'H'
ACALL Display
MOV A,#'A'
ACALL Display
MOV A,#'R'
ACALL Display
MOV A,#'A'
ACALL Display

Display:  MOV P1,A
          SETB P3.5
          CLR P3.4
          SETB P3.3
          CLR P3.3
          MOV R3,#0
          DJNZ R3,$
          DJNZ R3,$
          CLR P3.3
          SETB P3.3
          RET
          END
```



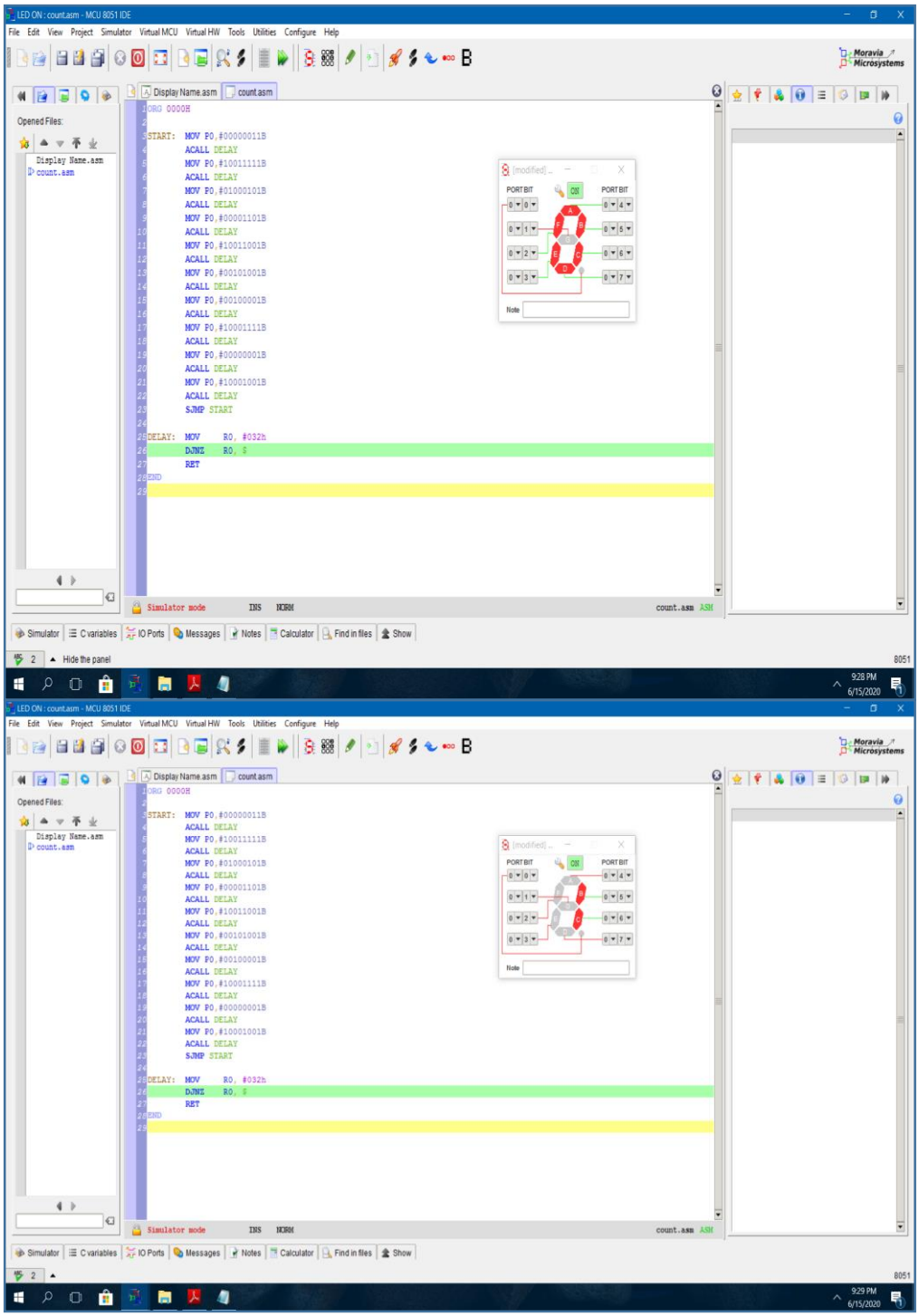
2)

```
ORG 0000H

START:  MOV P0,#00000011B
        ACALL DELAY
        MOV P0,#10011111B
        ACALL DELAY
        MOV P0,#01000101B
        ACALL DELAY
        MOV P0,#00001101B
        ACALL DELAY
        MOV P0,#10011001B
        ACALL DELAY
        MOV P0,#00101001B
        ACALL DELAY
        MOV P0,#00100001B
        ACALL DELAY
        MOV P0,#10001111B
        ACALL DELAY
        MOV P0,#00000001B
        ACALL DELAY
        MOV P0,#10001001B
        ACALL DELAY
        SJMP START

DELAY:  MOV     R0, #032h
        DJNZ    R0, $
        RET

END
```



Task 4

// Here the motor is Starts after Port 3 pin 2 is switched.

//The signel goes to a Electric switch, then ignites high tention current.

//Manual switch is assumed as bounce back switch.

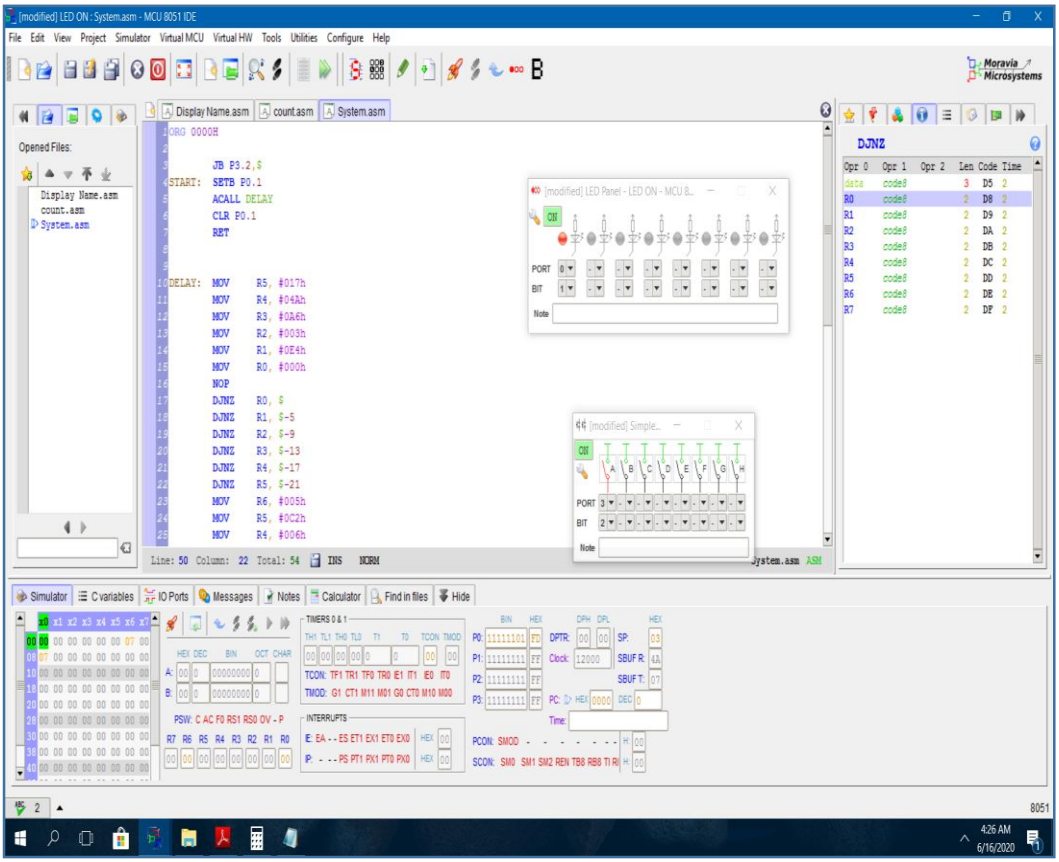
//After 20m the motor is automatically turne off.

//20m is the time taken to fill the tank.

```
ORG 0000H

        JB P3.2,$   ; Switch Control
START:  SETB P0.1
        ACALL DELAY
        CLR P0.1
        CLR P3.2
        RET

DELAY:  MOV     R5, #017h   ; 20m time delay
        MOV     R4, #04Ah
        MOV     R3, #0A6h
        MOV     R2, #003h
        MOV     R1, #0E4h
        MOV     R0, #000h
        NOP
        DJNZ    R0, $
        DJNZ    R1, $-5
        DJNZ    R2, $-9
        DJNZ    R3, $-13
        DJNZ    R4, $-17
        DJNZ    R5, $-21
        MOV     R6, #005h
        MOV     R5, #0C2h
        MOV     R4, #006h
        MOV     R3, #006h
        MOV     R2, #022h
        MOV     R1, #020h
        MOV     R0, #004h
```



```
        NOP
        DJNZ    R0, $
        DJNZ    R1, $-5
        DJNZ    R2, $-9
        DJNZ    R3, $-13
        DJNZ    R4, $-17
        DJNZ    R5, $-21
        DJNZ    R6, $-25
        MOV     R3, #00Ah
        MOV     R2, #0EDh
        MOV     R1, #01Dh
        MOV     R0, #01Bh
        NOP
        DJNZ    R0, $
        DJNZ    R1, $-5
        DJNZ    R2, $-9
        DJNZ    R3, $-13
        MOV     R1, #002h
        MOV     R0, #0DFh
        NOP
        DJNZ    R0, $
        DJNZ    R1, $-5
        RET
END
```