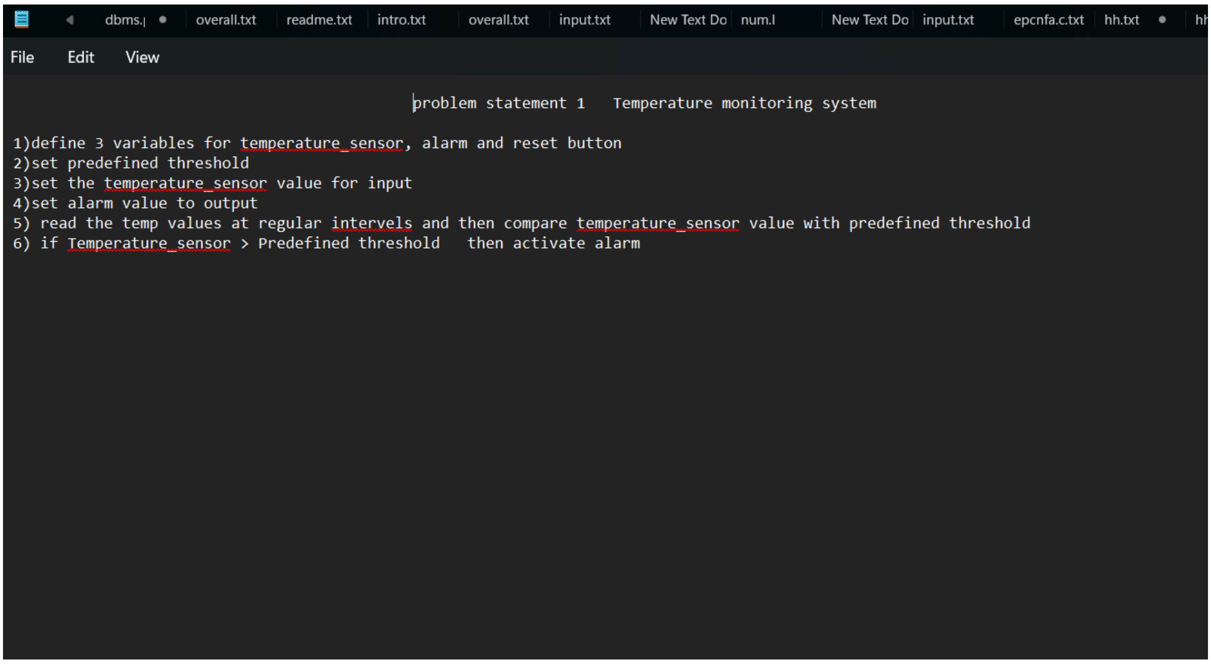
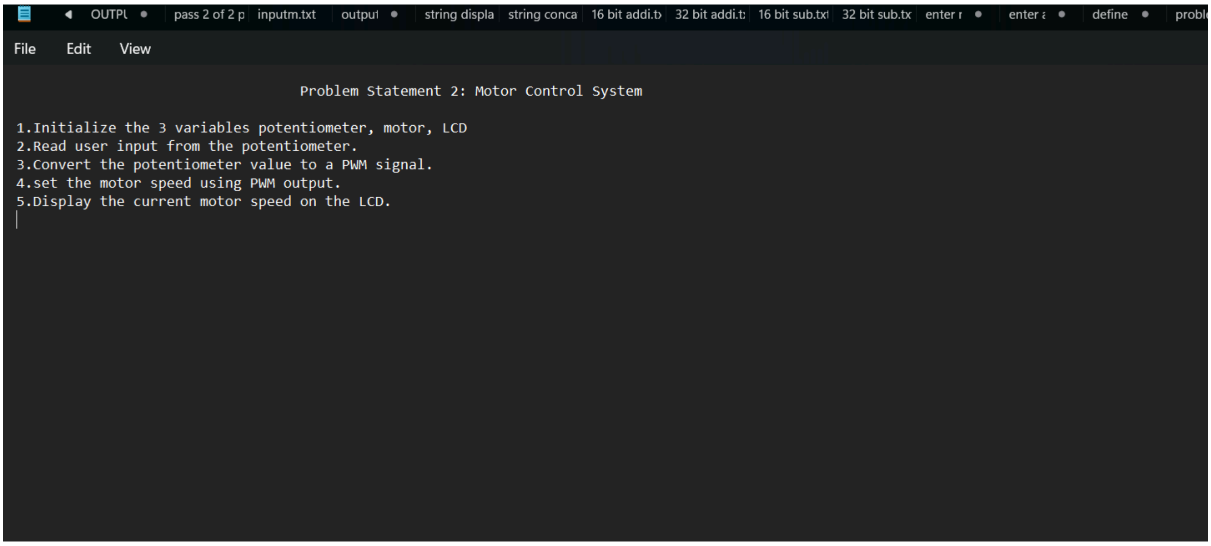


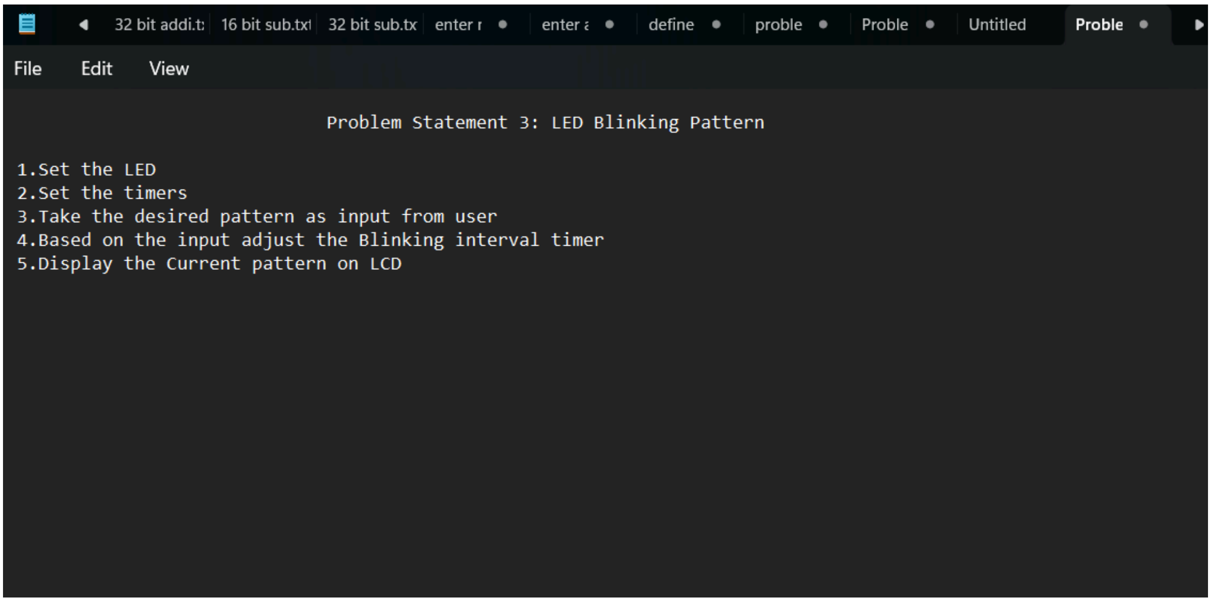
problem statement 1   Temperature monitoring system

1)define 3 variables for temperature_sensor, alarm and reset button
2)set predefined threshold
3)set the temperature_sensor value for input
4)set alarm value to output
5) read the temp values at regular intervels and then compare temperature_sensor value with predefined threshold
6) if Temperature_sensor > Predefined threshold   then activate alarm



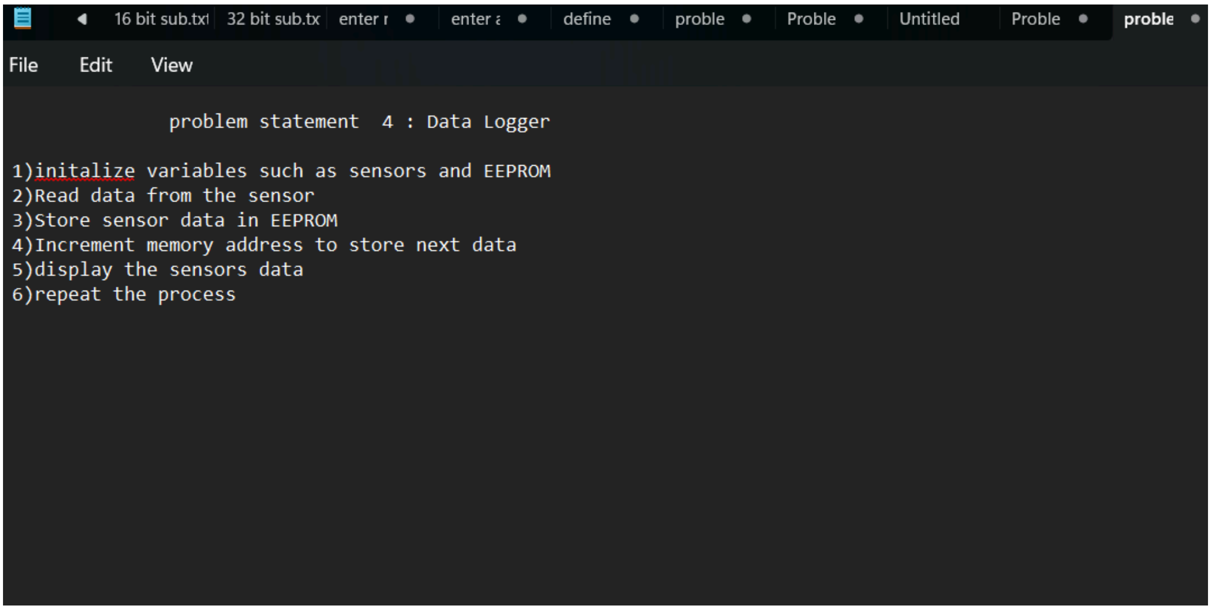
Problem Statement 2: Motor Control System

1.Initialize the 3 variables potentiometer, motor, LCD
2.Read user input from the potentiometer.
3.Convert the potentiometer value to a PWM signal.
4.set the motor speed using PWM output.
5.Display the current motor speed on the LCD.

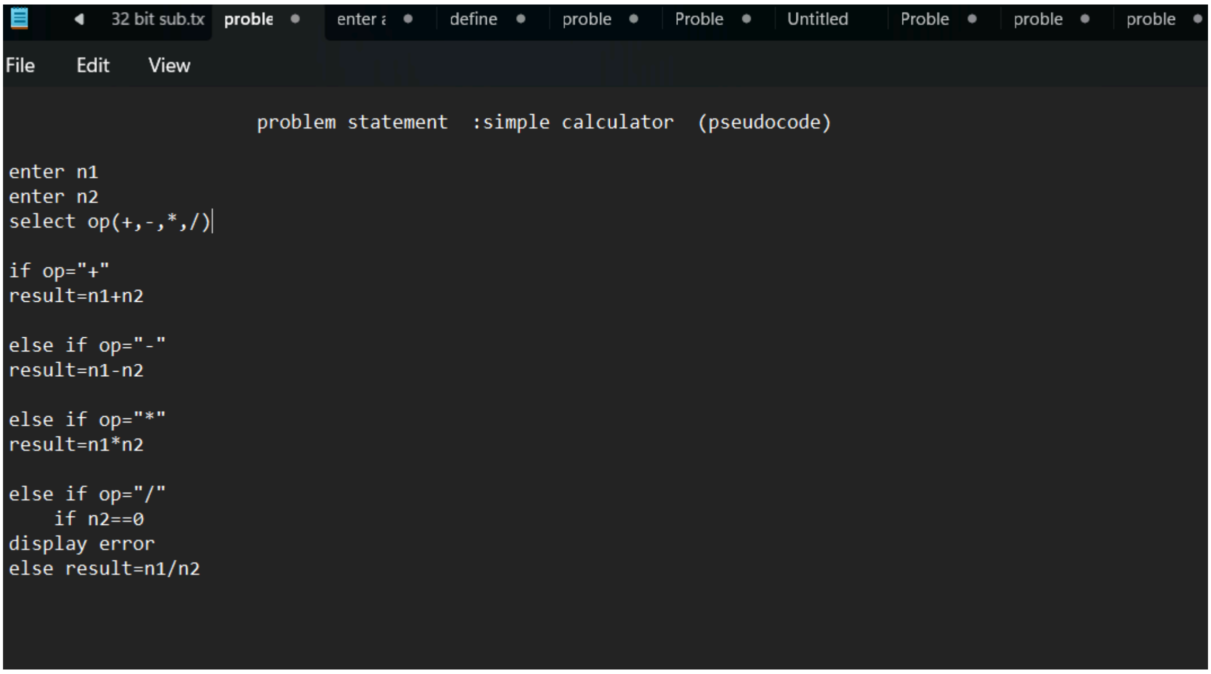


Problem Statement 3: LED Blinking Pattern

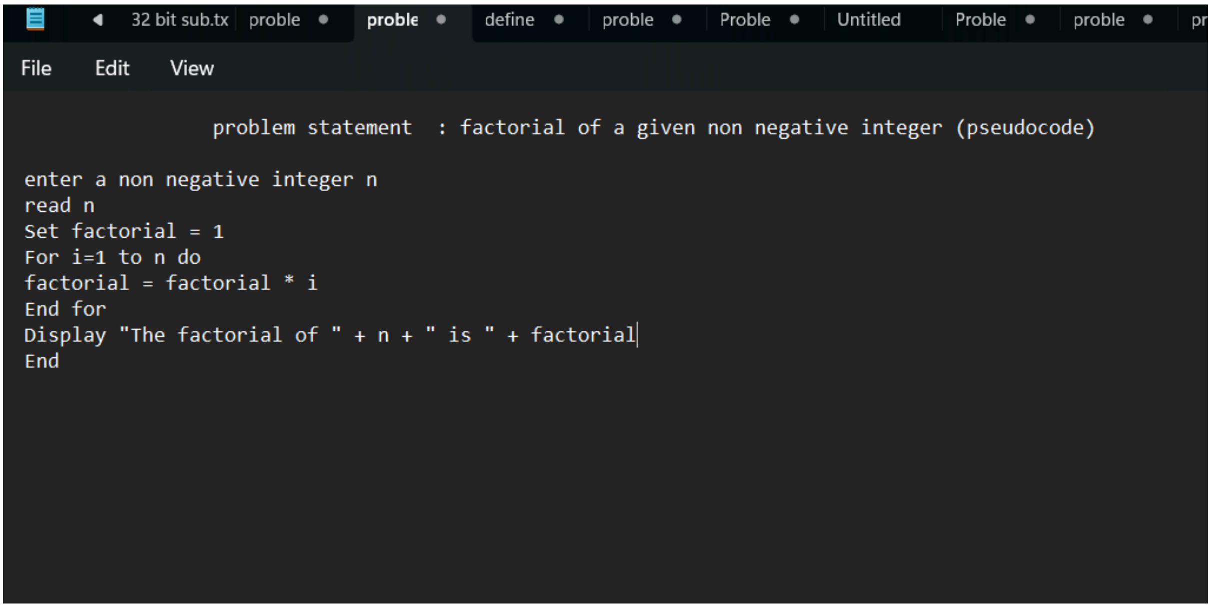
1.Set the LED
2.Set the timers
3.Take the desired pattern as input from user
4.Based on the input adjust the Blinking interval timer
5.Display the Current pattern on LCD



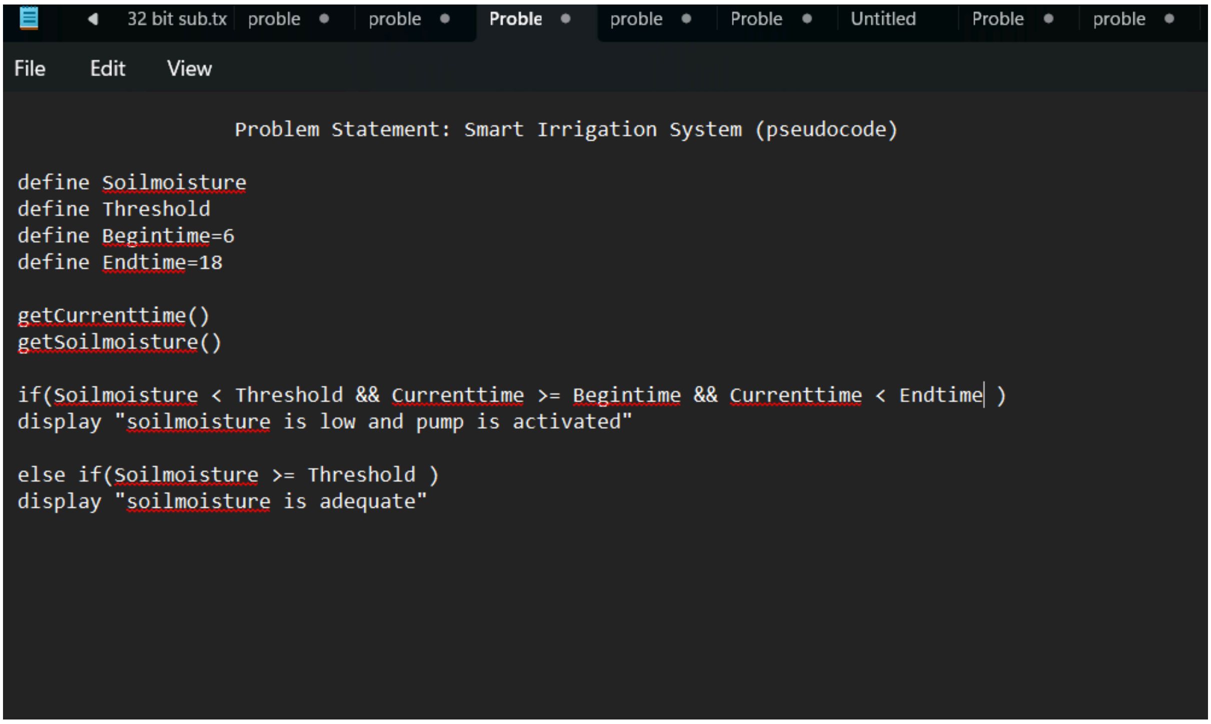
```
               problem statement  4 : Data Logger

1)initalize variables such as sensors and EEPROM
2)Read data from the sensor
3)Store sensor data in EEPROM
4)Increment memory address to store next data
5)display the sensors data
6)repeat the process
```



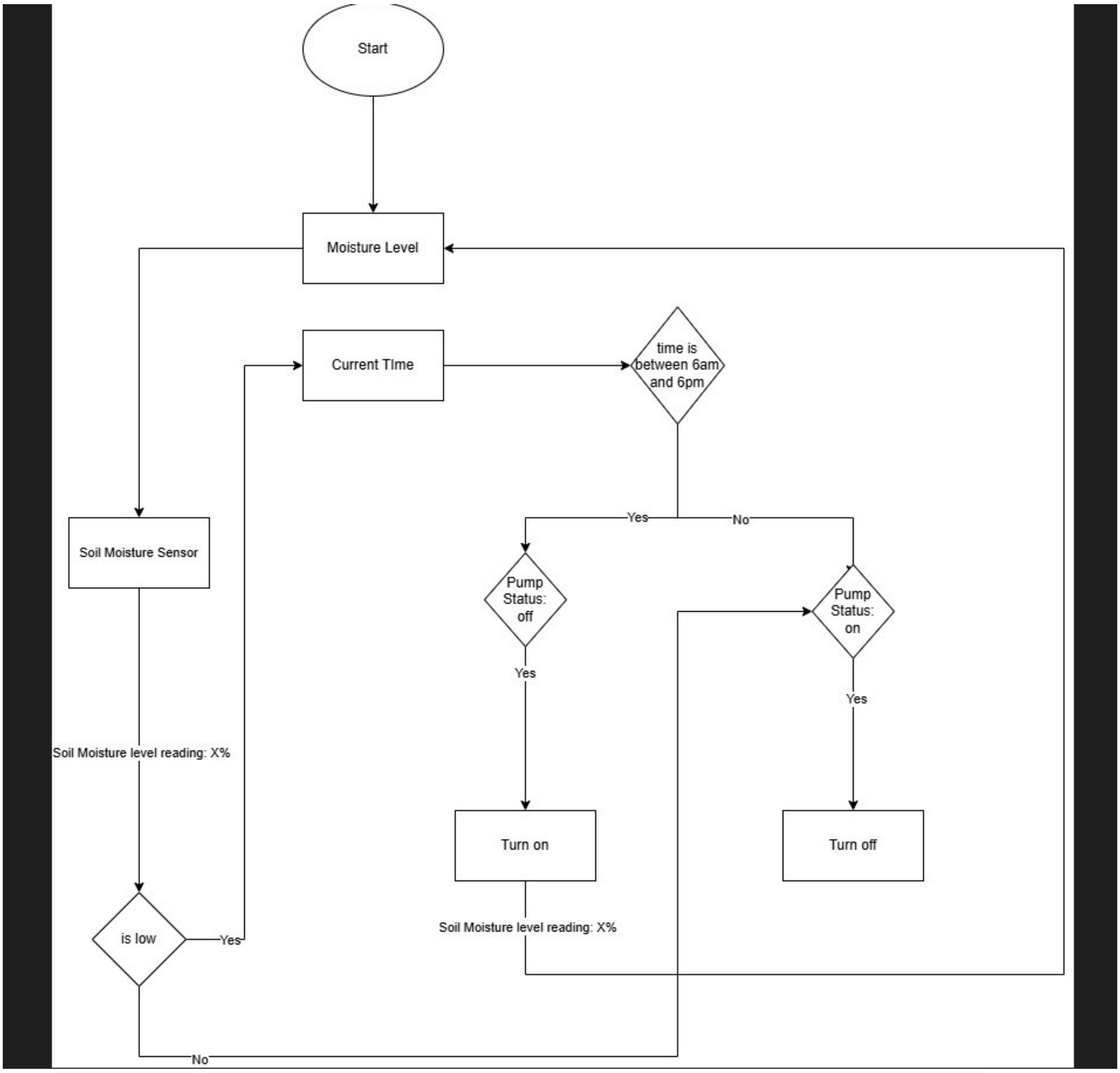
```
                      problem statement  :simple calculator  (pseudocode)

enter n1
enter n2
select op(+,-,*,/)

if op="+"
result=n1+n2

else if op="-"
result=n1-n2

else if op="*"
result=n1*n2

else if op="/"
    if n2==0
display error
else result=n1/n2
```



```
                 problem statement  : factorial of a given non negative integer (pseudocode)

enter a non negative integer n
read n
Set factorial = 1
For i=1 to n do
factorial = factorial * i
End for
Display "The factorial of " + n + " is " + factorial
End
```



```
                   Problem Statement: Smart Irrigation System (pseudocode)

define Soilmoisture
define Threshold
define Begintime=6
define Endtime=18

getCurrenttime()
getSoilmoisture()

if(Soilmoisture < Threshold && Currenttime >= Begintime && Currenttime < Endtime )
display "soilmoisture is low and pump is activated"

else if(Soilmoisture >= Threshold )
display "soilmoisture is adequate"
```


Start
Moisture Level
Current TIme
time is between 6am and 6pm
Soil Moisture Sensor
Yes
No
Pump Status: off
Pump Status: on
Yes
Yes
Soil Moisture level reading: X%
Turn on
Turn off
Soil Moisture level reading: X%
is low
Yes
No