ASSIGNMENT DAY-02

Temperature Monitoring System

1. start

2. Define an interval to read the temperature

3. Read the temperature during the defined interval

4.Predifine a threshold

5. compare the input temp with the threshold

6.if temp>threshold, then trigger alarm

7.End

Motor Control System

1.Start

2.Get the required speed from the user

3.if input=current speed,then

skip to step 7

4.else, use PWM to adjust the speed

5.calculate current speed

6 Display current speed

7.End

LED Blinking Pattern

1.Start

2.Read the required pattern from the user

3.configure timers and interrupts to setup the pattern

4.Display the output

5.End

Data Logger

1.Start

2.Initialise variables for storing each sensor data

3.Initialize interval

4.Read the sensor data into the variables

5.Set the destination to store the data

6.store the data

7.input timestamp to fetch the data

8.Retrieve the data required

9.Display the data

10.End

Pseudocode for simple calculator

1.a=enter first no.

2.b=enter second no.

3.options=

      1.+

      2.-

      3./

      4.*

4.if

      4.1 + ,then

        Sum=a+b

        return sum

      4.2 - , then

        res=a-b

        return res

      4.3 / , then

        4.3.1 if b==0,then

            return division by zero not possible

else,

res=a/b

return res

4.4 * , then

res=a*b

return res

5.else, print (ivalid input)

6.End

Factorial

1.a=enter a no.

2 if a<1, print invalid

3. else,

  fact=1

   for(i=1 to a)

        fact=fact*i

4.return fact

Factorial sing Recursion

1.a=enter a no.

2, function fact(a)

 if a==1

  return 1

 else

  return n*fact(a-1)

end function

3. stop

Smart Irrigation System

1. start

2. a=read soil moisture

3. b=threshold value

4. Read current time as t

5. if a<b and time between (6AM and 6PM) then

    5.1 pump=activate

    5.2 set flag=true

6.else if a>=b, then

    6.1 print(watering not required)

7. print a

8. print b

8 if flag==true,

       print(pump is active)

9. print t

10. end

```
                    ( start )
                        │
    ┌───────────────────┼────────────────────────────┐
    │           ┌────────────────────┐                │
    │           │    read a,b,t      │                │
    │           └────────────────────┘                │
    │                    │                             │
    │                  ╱   ╲                           │
    │                ╱       ╲        no    ┌──────────────────┐
    │              ╱   a<b     ╲────────────│  pump=inactive   │
    │                ╲       ╱              └──────────────────┘
    │                  ╲   ╱                           │
    │                    │ yes                         │
    │                  ╱   ╲                           │
    │                ╱       ╲      no                 │
    │              ╱ 6Am<=t<=6 PM ╲───────────────────┘
    │                ╲           ╱
    │                  ╲       ╱
    │                    │ yes
    │           ┌────────────────────┐
    │           │  pump=activate     │
    │           │  flag=true         │
    │           └────────────────────┘
    │                    │
    │           ┌────────────────────┐
    │           │    print a,b,t     │
    │           └────────────────────┘
    │                    │
    │                  ╱   ╲        no
    │                ╱       ╲────────────────┐
    │              ╱ flag==true ╲             │
    │                ╲       ╱                │
    │                  ╲   ╱                  │
    │                    │ yes               │
    │           ┌────────────────────┐       │
    │           │   print pump       │       │
    │           │   status=active    │       │
    │           └────────────────────┘       │
    └────────────────────┼───────────────────┘
                         │
                     ( stop )
```