***IOT Lab Assignment-3***

1. *Explain Basic Structure of an Arduino Program.*

An Arduino program is also called a sketch.

**Basic Structure:**

void setup()

{

statements;

}

void loop()

{

statements;

}

It consists of two main functions:

1) *setup() function*

* Runs only once when the Arduino board starts or resets.
* Used to initialize hardware components, set pin modes (input or output), and define initial values.

2) *loop() function*

* Runs repeatedly after the setup() function completes.
* Contains the core logic of the program.
* This is where the Arduino performs actions and interacts with the environment.

Both functions are enclosed in curly braces {}

Every statement inside these functions is ended with a semicolon ‘ ; ’

**Basic Sketch:**

This simple sketch blinks an LED connected to pin 13.

void setup() {

pinMode(13, OUTPUT); // Set pin 13 as an output

}

void loop() {

digitalWrite(13, HIGH); // Turn LED on

delay(1000); // Wait for 1 second

digitalWrite(13, LOW); // Turn LED off

delay(1000); // Wait for 1 second

}