Program No. – 16

Program Title – **Smart irrigation system**

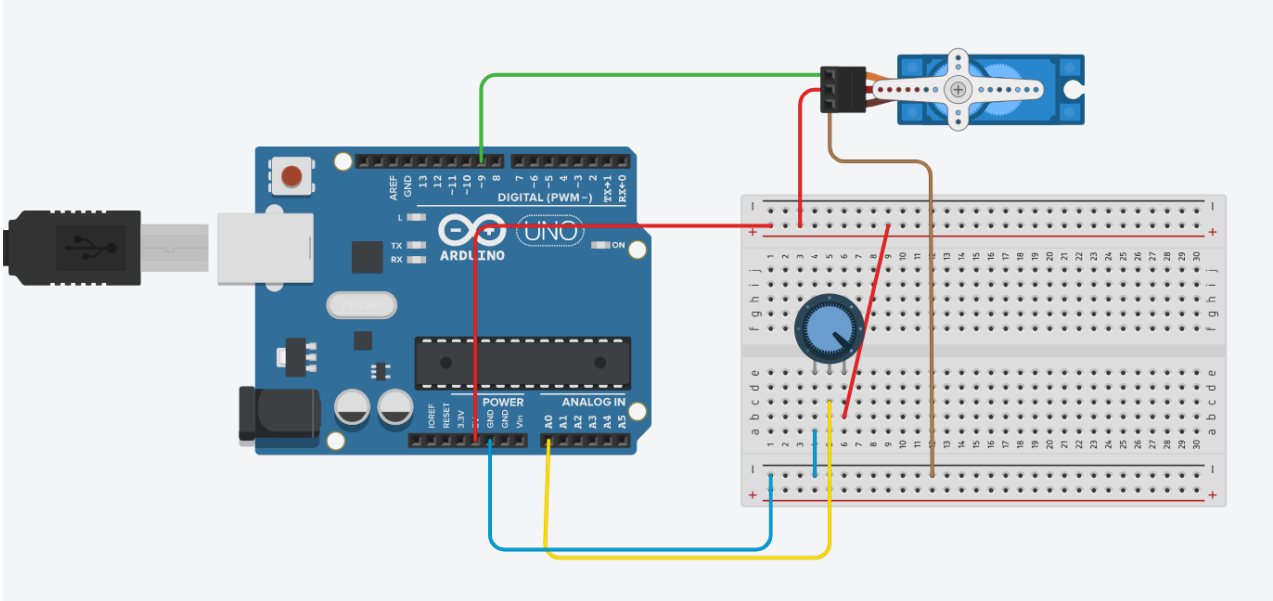
AIM

Design a smart irrigation system (Potentiometer, Servo motor shaft).

HARDWARES REQUIRED

- Arduino Board
- Breadboard Small
- Potentiometer
- Servo motor shaft

CIRCUIT DIAGRAM



WRITE-UP

PFA

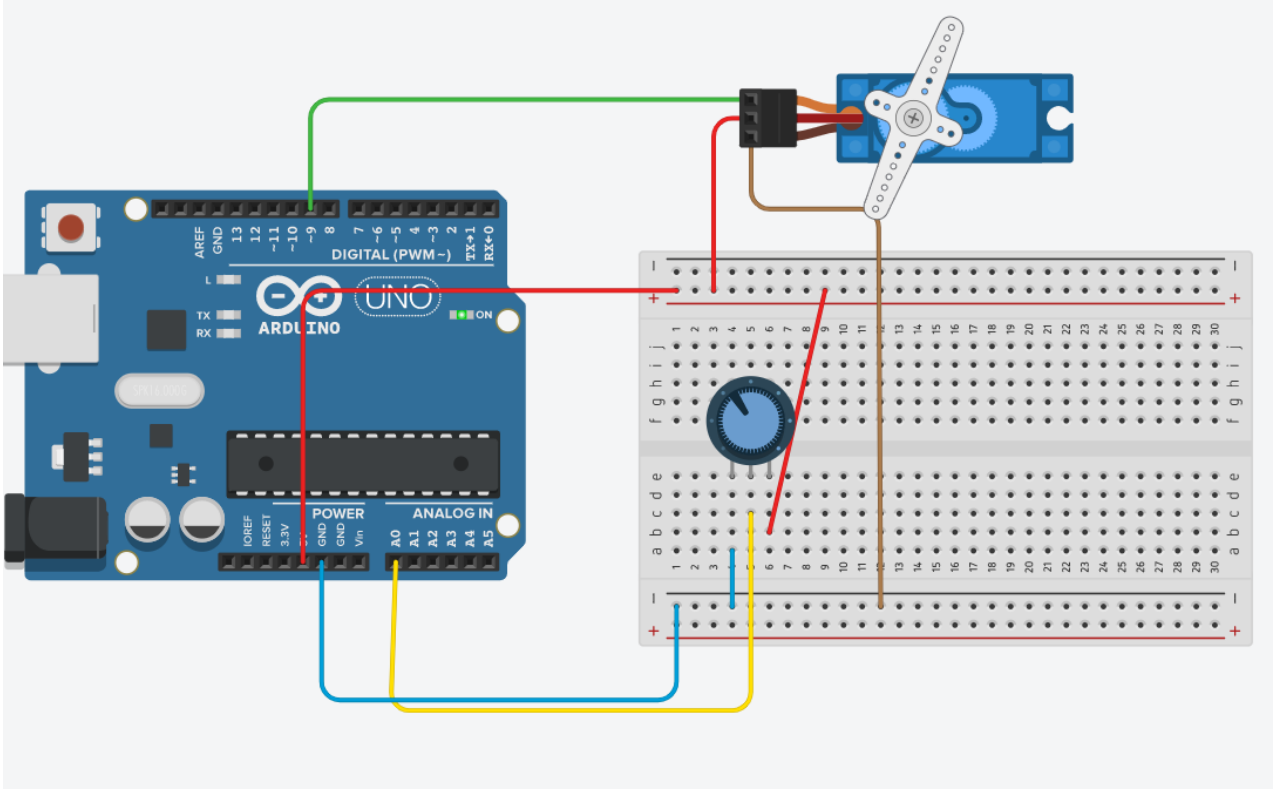
CODE

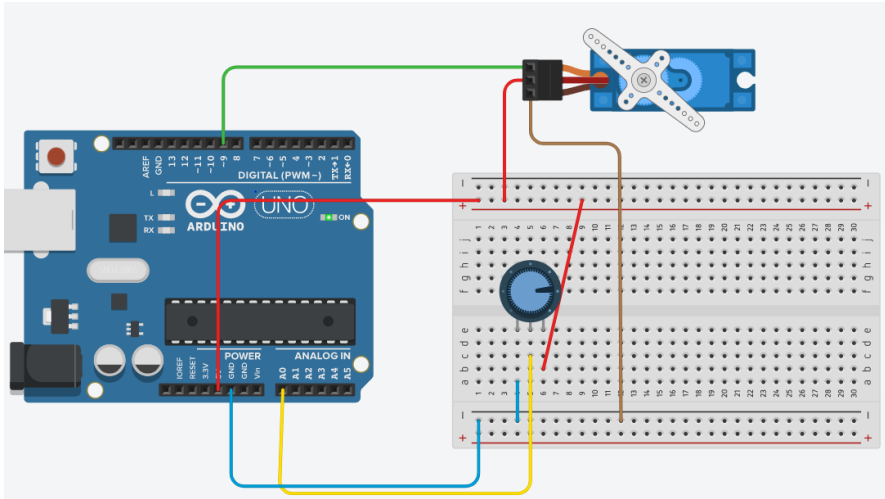
```
#include <Servo.h>
Servo myservo; // create servo object to control a servo
// twelve servo objects can be created on most boards

int pos = 0;    // variable to store the servo position
int sensorPin = A0;    // select the input pin for the potentiometer
int sensorValue = 0; // variable to store the value coming from the sensor
void setup() {
myservo.attach(3); // attaches the servo on pin 9 to the servo object
Serial.begin(9600);
}
void loop() {
 // read the value from the sensor:
sensorValue = analogRead(sensorPin);
Serial.println (sensorValue);
if(sensorValue>500)
{
 for (pos = 0; pos <= 180; pos += 1) { // goes from 0 degrees to 180
degrees
```

```
  // in steps of 1 degree
  myservo.write(pos);              // tell servo to go to position in variable 'pos'
  delay(15);                       // waits 15ms for the servo to reach the position
 }
 for (pos = 180; pos >= 0; pos -= 1) { // goes from 180 degrees to 0 degrees
  myservo.write(pos);              // tell servo to go to position in variable 'pos'
  delay(15);                       // waits 15ms for the servo to reach the position
 }
}
delay (1000);
}
```

OUTPUT

Designed a smart irrigation system (Potentiometer, Servo motor shaft).





Text

```
#include <Servo.h>

Servo myservo;

int potpin = 0;
int val;

void setup() {
  myservo.attach(9);
}

void loop() {
  val = analogRead(potpin);
  val = map(val, 0, 1023, 0, 180);
  myservo.write(val);
  delay(15);
}

```