

Name J S MEGHANA

USN 1BM18CS039

Program no Week-6(2nd-Question)

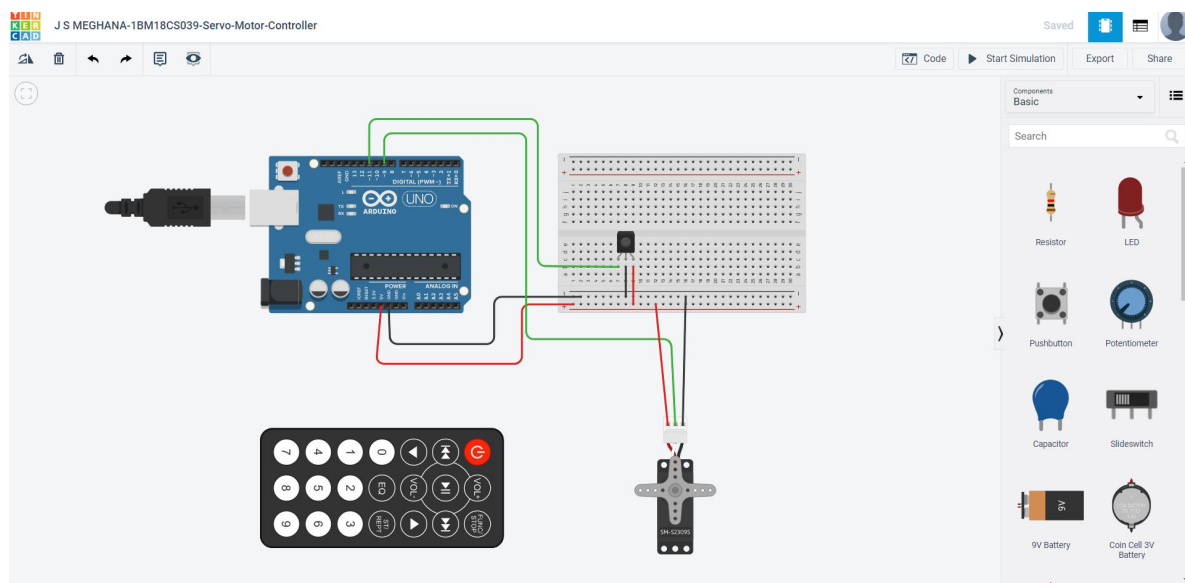
Program Title Servo Motor Controller

Aim: Design an IR based Servo Motor Controller (Clockwise and Counter clockwise rotation of shaft).

Hardware Required

1. Arduino Board
2. Bread Board
3. IR Sensor
4. Micro servo

Circuit Diagram



Code:

```
#include <Servo.h>
#include <IRremote.h>

int RECV_PIN = 11;
IRrecv irrecv(RECV_PIN);
decode_results results;

Servo myservo;

void setup(){
  Serial.begin(9600);
  irrecv.enableIRIn();
}
```

```

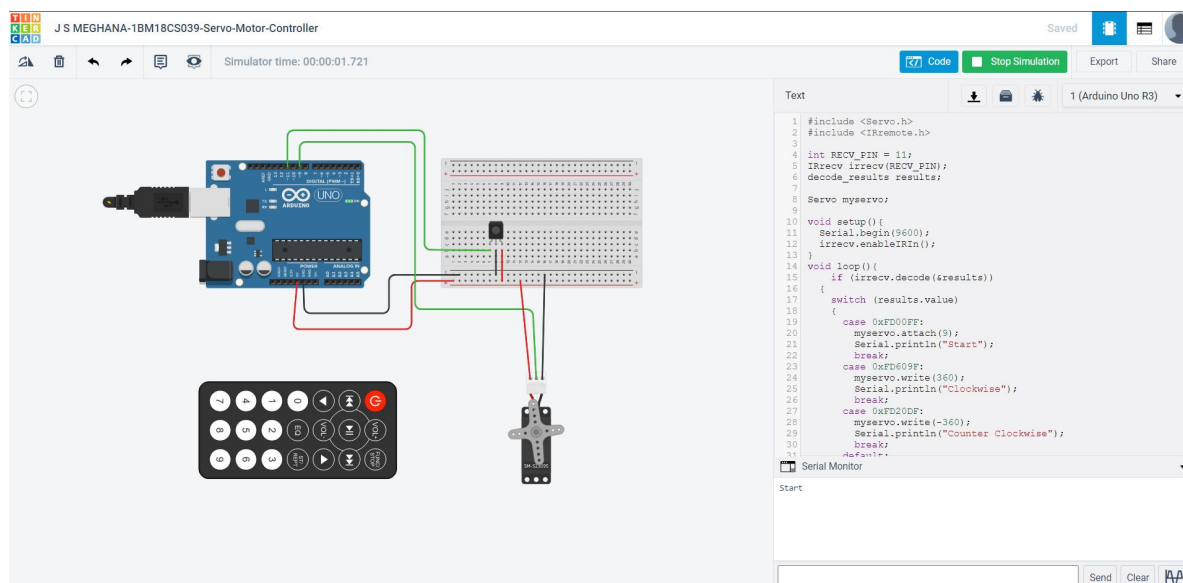
void loop(){
  if (irrecv.decode(&results))
  {
    switch (results.value)
    {
    case 0xFD00FF:
      myservo.attach(9);
      Serial.println("Start");
      break;
    case 0xFD609F:
      myservo.write(360);
      Serial.println("Clockwise");
      break;
    case 0xFD20DF:
      myservo.write(-360);
      Serial.println("Counter Clockwise");
      break;
    default:
      Serial.print("Unrecognized code received: 0x");
      Serial.println(results.value, HEX);
      break;
    }
  }
  irrecv.resume();
}

```

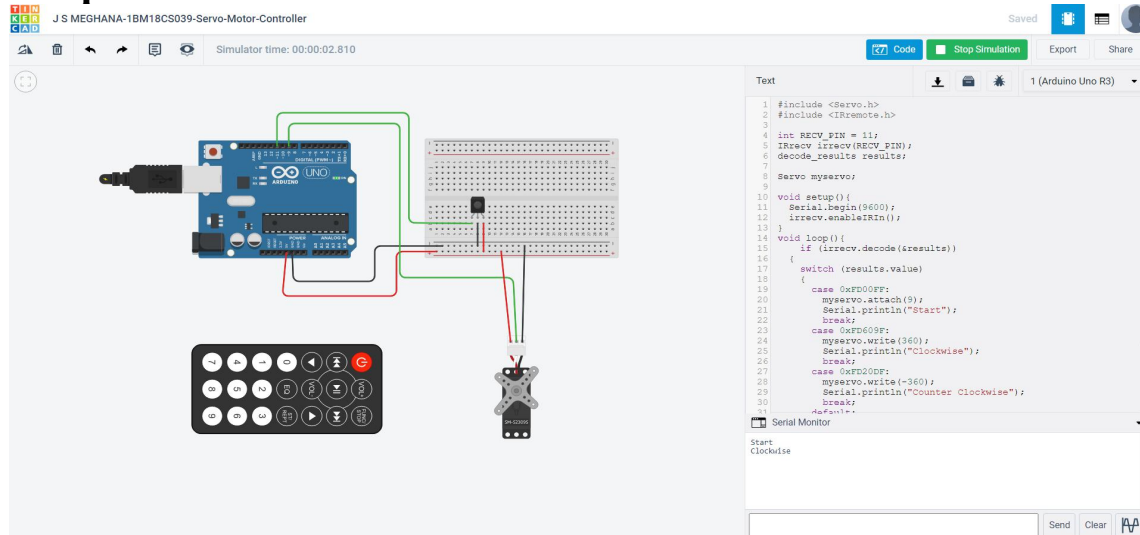
Observation /Output:

Clockwise Rotation:

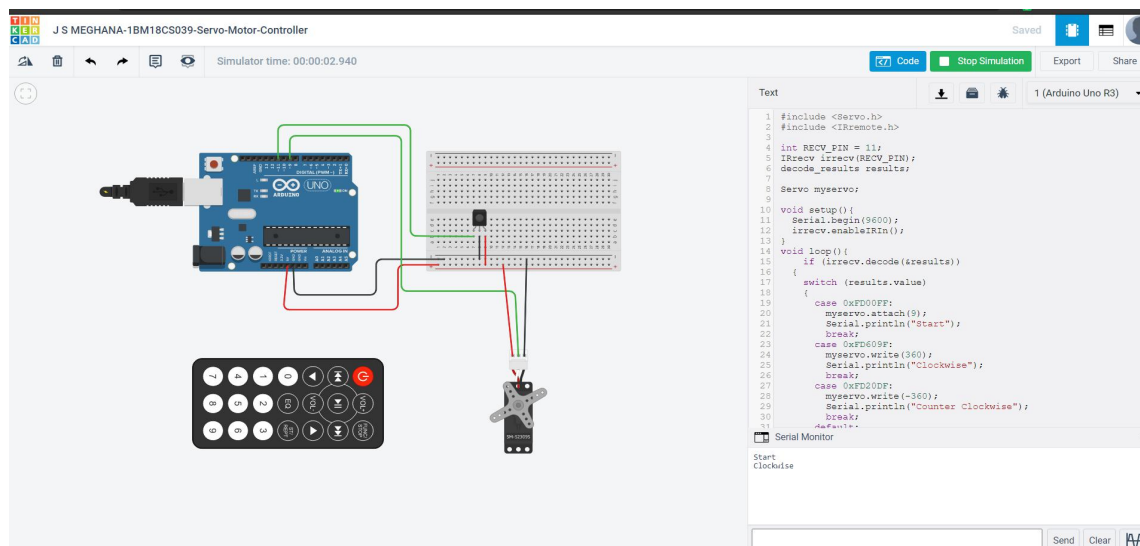
Output-1:



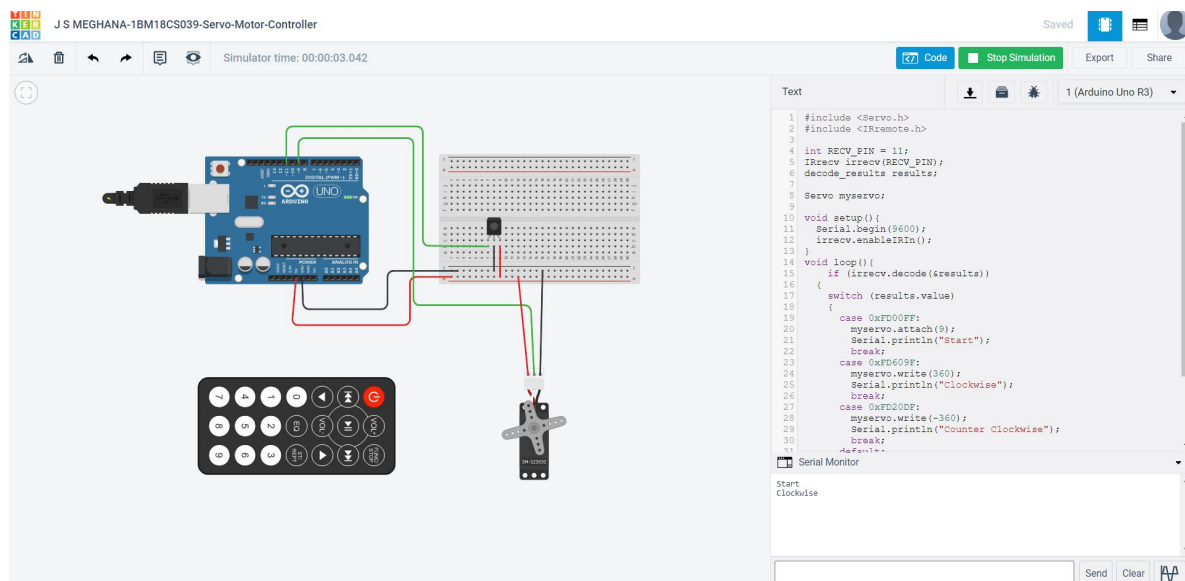
Output-2:



Output-3:



Output-4:



Counter Clockwise Rotation:

Output-1:

J S MEGHANA-1BM18CS039-Servo-Motor-Controller

Simulator time: 00:00:04.173

```
1 #include <Servo.h>
2 #include <IRremote.h>
3
4 int RECV_PIN = 11;
5 IRrecv irrecv(RECV_PIN);
6 decode_results results;
7
8 Servo myservo;
9
10 void setup() {
11   Serial.begin(9600);
12   irrecv.enableIRIn();
13 }
14 void loop() {
15   if (irrecv.decode(&results))
16   {
17     switch (results.value)
18     {
19       case 0xFD00FF:
20         myservo.attach(9);
21         Serial.println("Start");
22         break;
23       case 0xFD609F:
24         myservo.write(360);
25         Serial.println("Clockwise");
26         break;
27       case 0xFD00DF:
28         myservo.write(-360);
29         Serial.println("Counter Clockwise");
30         break;
31       default:
32         break;
33     }
34   }
35 }
```

Serial Monitor

Start
Clockwise
Counter Clockwise

Output-2:

J S MEGHANA-1BM18CS039-Servo-Motor-Controller

Simulator time: 00:00:04.293

```
1 #include <Servo.h>
2 #include <IRremote.h>
3
4 int RECV_PIN = 11;
5 IRrecv irrecv(RECV_PIN);
6 decode_results results;
7
8 Servo myservo;
9
10 void setup() {
11   Serial.begin(9600);
12   irrecv.enableIRIn();
13 }
14 void loop() {
15   if (irrecv.decode(&results))
16   {
17     switch (results.value)
18     {
19       case 0xFD00FF:
20         myservo.attach(9);
21         Serial.println("Start");
22         break;
23       case 0xFD609F:
24         myservo.write(360);
25         Serial.println("Clockwise");
26         break;
27       case 0xFD00DF:
28         myservo.write(-360);
29         Serial.println("Counter Clockwise");
30         break;
31       default:
32         break;
33     }
34   }
35 }
```

Serial Monitor

Start
Clockwise
Counter Clockwise

Output-3:

J S MEGHANA-1BM18CS039-Servo-Motor-Controller

Simulator time: 00:00:04.529

```
1 #include <Servo.h>
2 #include <IRremote.h>
3
4 int RECV_PIN = 11;
5 IRrecv irrecv(RECV_PIN);
6 decode_results results;
7
8 Servo myservo;
9
10 void setup() {
11   Serial.begin(9600);
12   irrecv.enableIRIn();
13 }
14 void loop() {
15   if (irrecv.decode(&results))
16   {
17     switch (results.value)
18     {
19       case 0xFD00FF:
20         myservo.attach(9);
21         Serial.println("Start");
22         break;
23       case 0xFD609F:
24         myservo.write(360);
25         Serial.println("Clockwise");
26         break;
27       case 0xFD00DF:
28         myservo.write(-360);
29         Serial.println("Counter Clockwise");
30         break;
31       default:
32         break;
33     }
34   }
35 }
```

Serial Monitor

Start
Clockwise
Counter Clockwise

Output-4:

J S MEGHANA-1BM18CS039-Servo-Motor-Controller

Simulator time: 00:00:04.654

Serial Monitor

Start
Clockwise
Counter Clockwise

Output-5:

J S MEGHANA-1BM18CS039-Servo-Motor-Controller

Simulator time: 00:00:04.795

Serial Monitor

Start
Clockwise
Counter Clockwise

Output-6:

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Simulator time: 00:00:04.895

Serial Monitor

Start
Clockwise
Counter Clockwise

Output-7:

