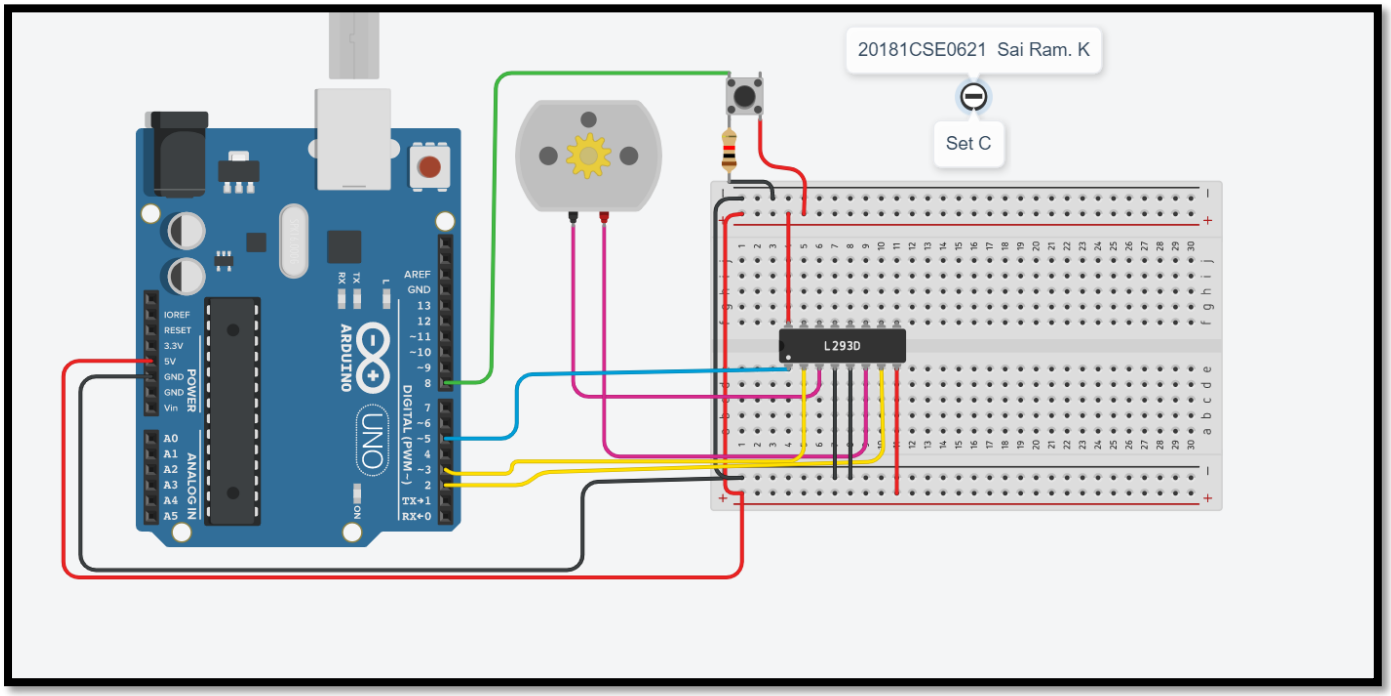
Set – C

Question 1 : Rotating a DC Motor using a push button to control the direction.

Aim : To rotate a DC motor using a push button to control the direction.

Components Required : Arduino, bread board, jumper wires, IC L293D.

Initial Circuit Design :



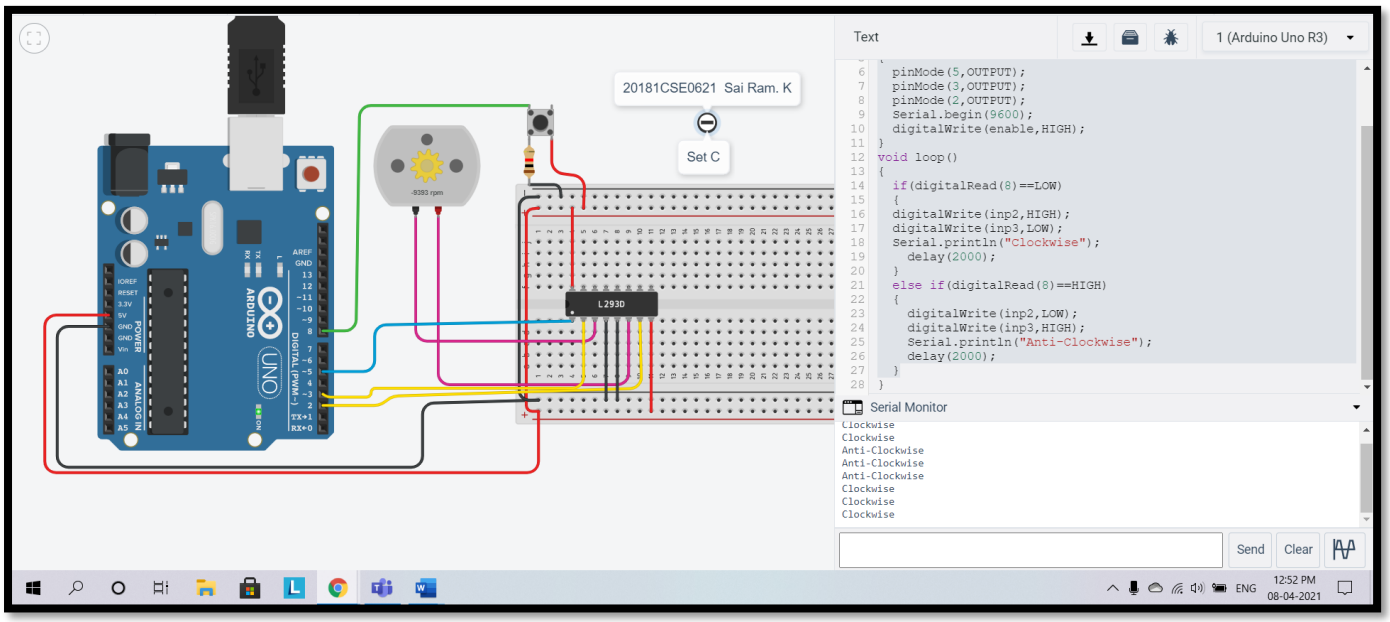
Sketch :

```
int enable=5;
int inp2=3;
int inp3=2;
void setup()
{
  pinMode(5,OUTPUT);
  pinMode(3,OUTPUT);
  pinMode(2,OUTPUT);
```

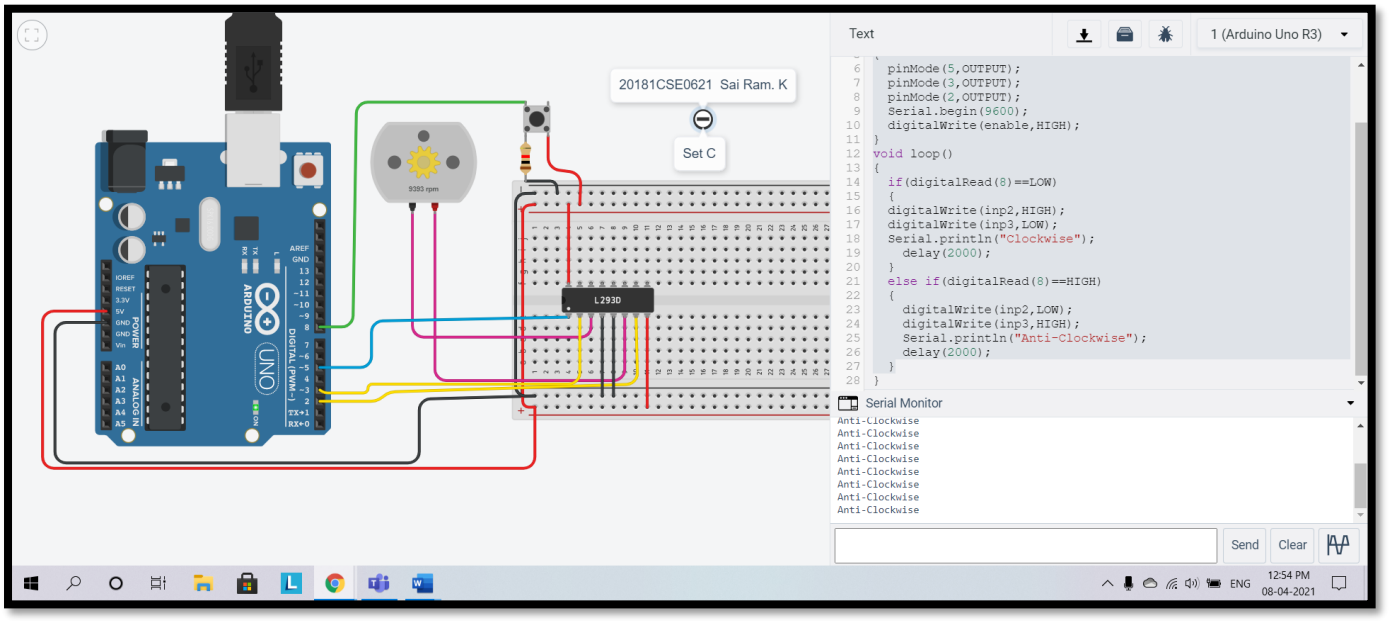
```
 Serial.begin(9600);
 digitalWrite(enable,HIGH);
}
void loop()
{
 if(digitalRead(8)==LOW)
 {
 digitalWrite(inp2,HIGH);
 digitalWrite(inp3,LOW);
 Serial.println("Clockwise");
  delay(2000);
 }
 else if(digitalRead(8)==HIGH)
 {
  digitalWrite(inp2,LOW);
  digitalWrite(inp3,HIGH);
  Serial.println("Anti-Clockwise");
  delay(2000);
 }
```

Output Screenshots :

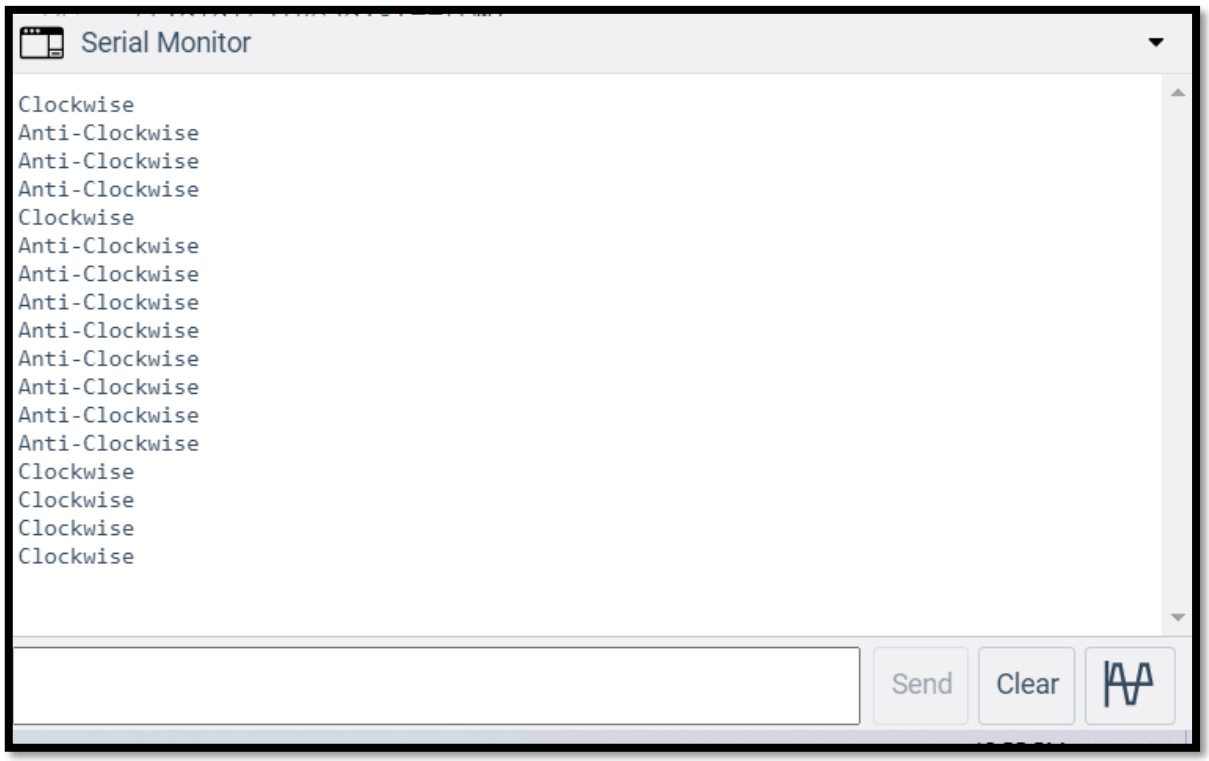
Clockwise



Anti Clockwise :



Serial Monitor :

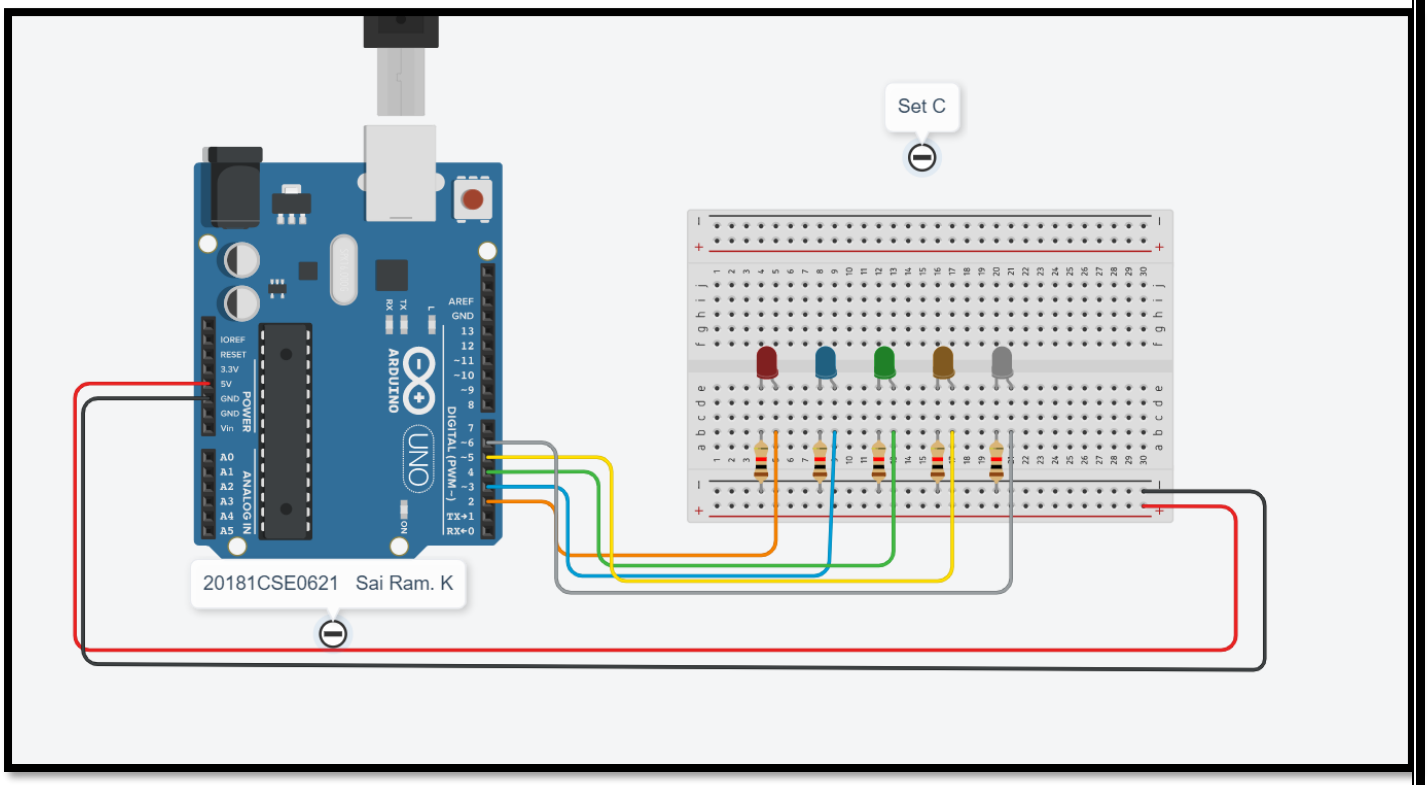

Serial Monitor
Clockwise
Anti-Clockwise
Anti-Clockwise
Anti-Clockwise
Clockwise
Anti-Clockwise
Anti-Clockwise
Anti-Clockwise
Anti-Clockwise
Anti-Clockwise
Anti-Clockwise
Anti-Clockwise
Anti-Clockwise
Clockwise
Clockwise
Clockwise
Clockwise
Send
Clear

Question 2 : Write and execute a program to Scroll 5 LEDs.

Aim : To scroll 5 LED's.

Components Required : Arduino uno, Breadboard, jumper wires, LEDs, resistors.

Initial Circuit Design :

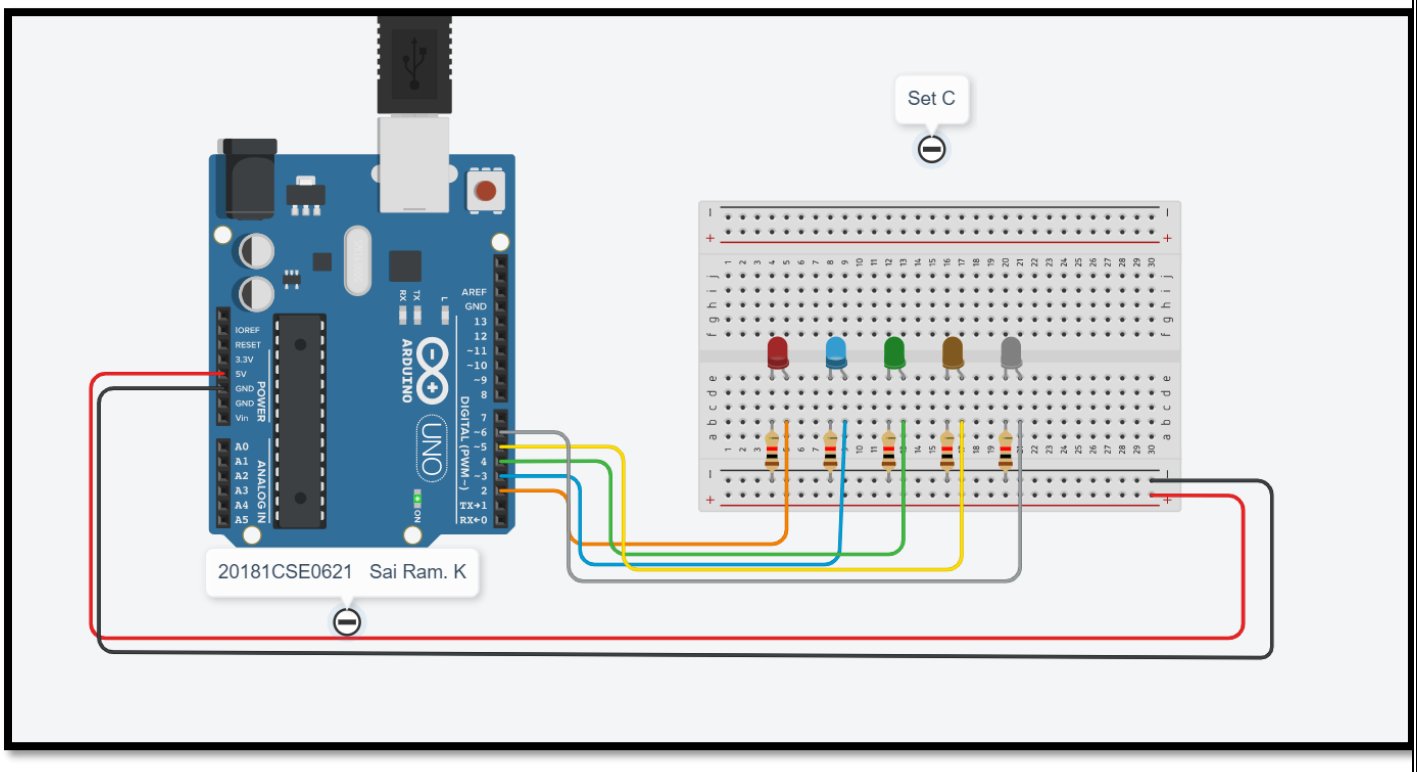


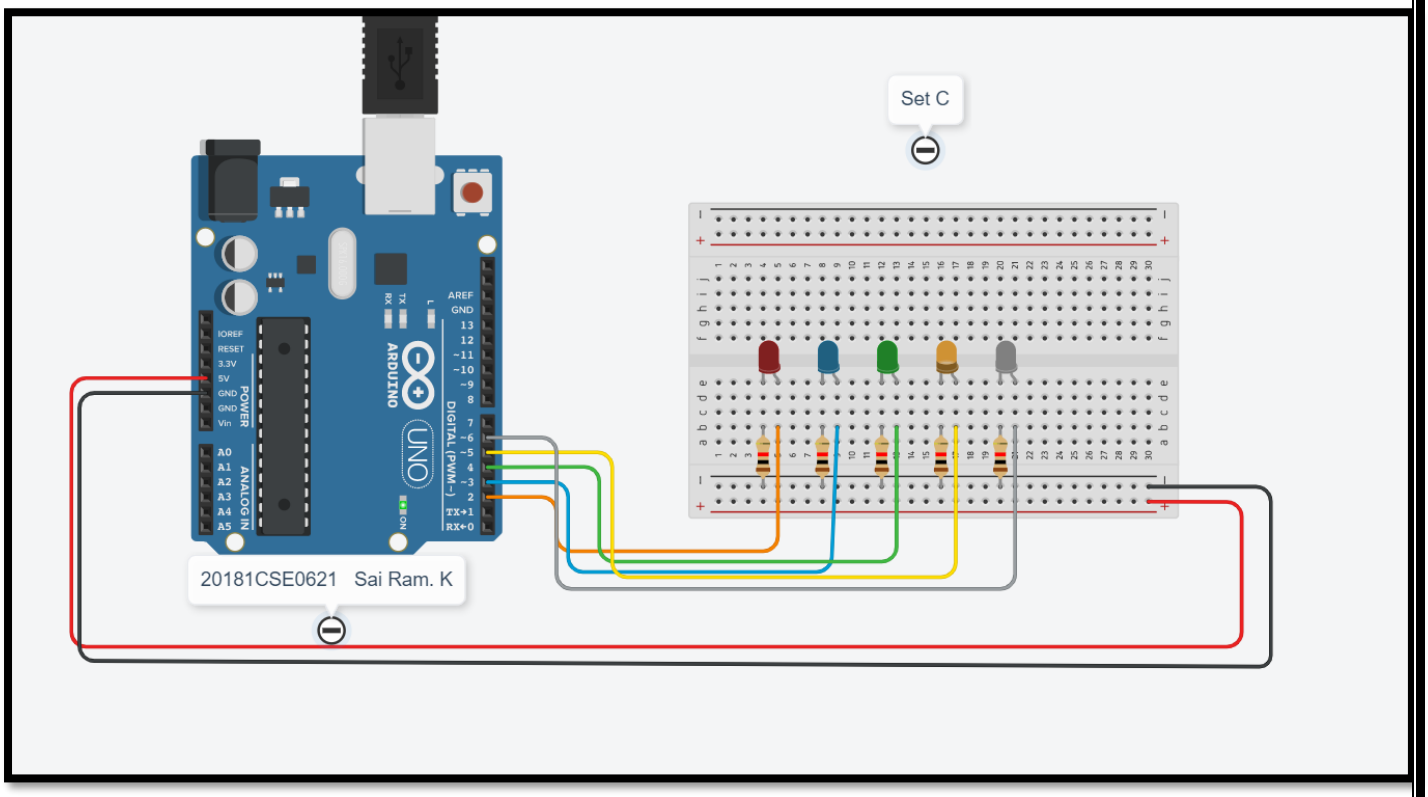
Sketch:

```
 int Pins[]={2,3,4,5,6};
int timer=1000;
void setup()
{
  for(int i=0;i<5;i++)
  {
          pinMode(Pins[i], OUTPUT);
  }
```

```
Serial.begin(9600);
}
void loop()
{
 for(int i=0;i<5;i++)
 {
  digitalWrite(Pins[i],HIGH);
  delay(timer);
  digitalWrite(Pins[i],LOW);
 }
 for(int i=4;i>=0;i--)
 {
  digitalWrite(Pins[i],HIGH);
  delay(timer);
  digitalWrite(Pins[i],LOW);
 }
}
```

Output Screenshots :

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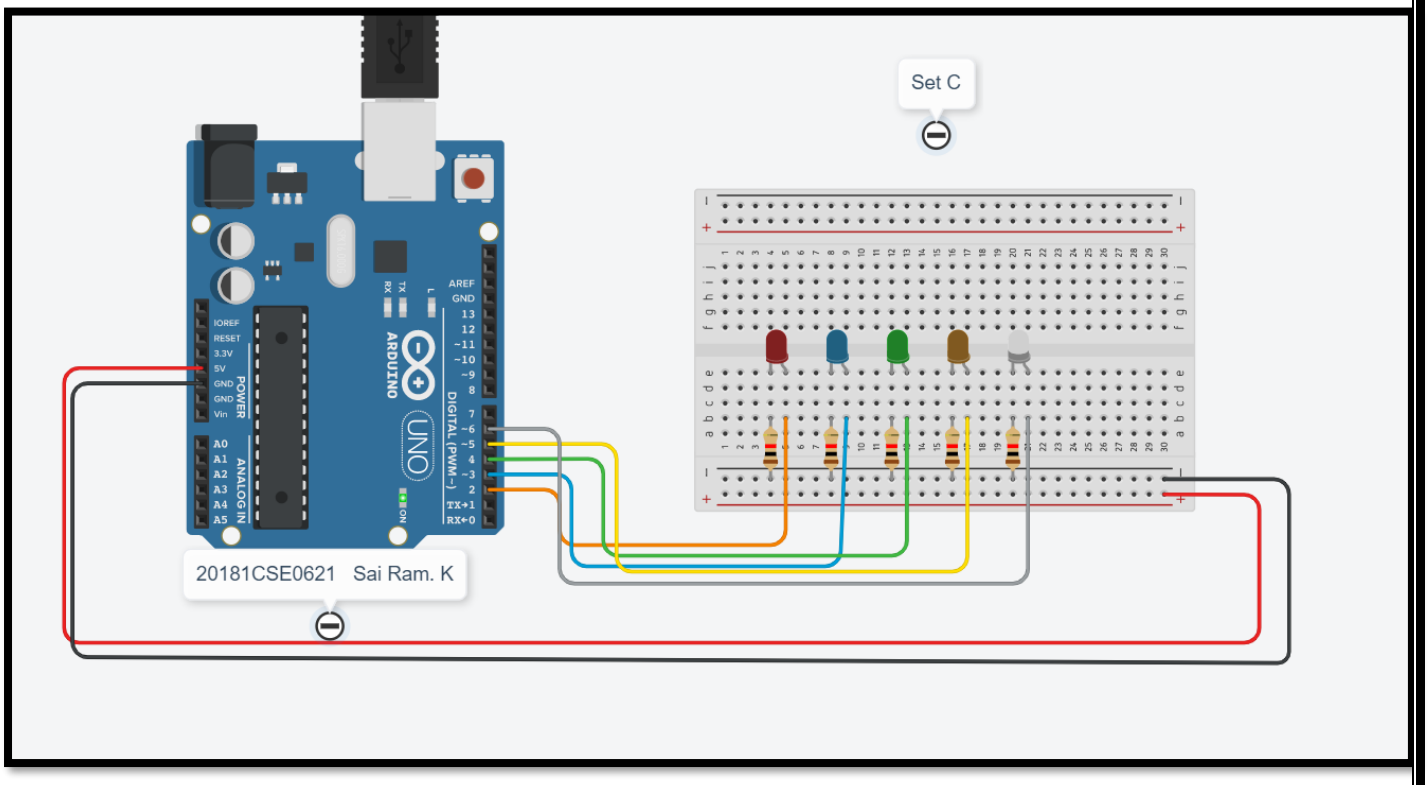
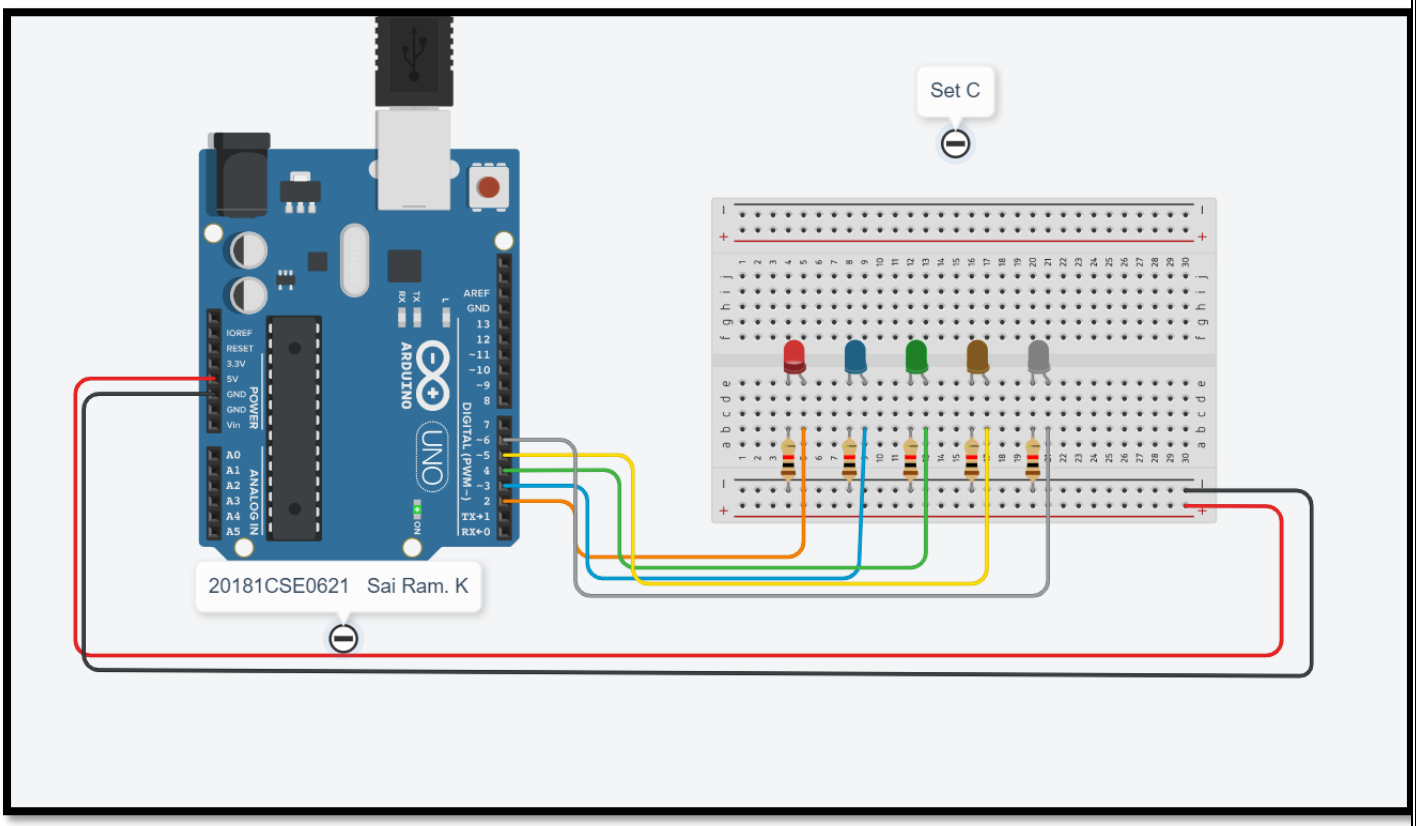

Set C
20181CSE0621 Sai Ram. K


Set C
20181CSE0621 Sai Ram. K
ARDUINO
UNO
POWER
ANALOG IN
DIGITAL (PWM~)