Sou. Sriram.V
1BMJ8CS140

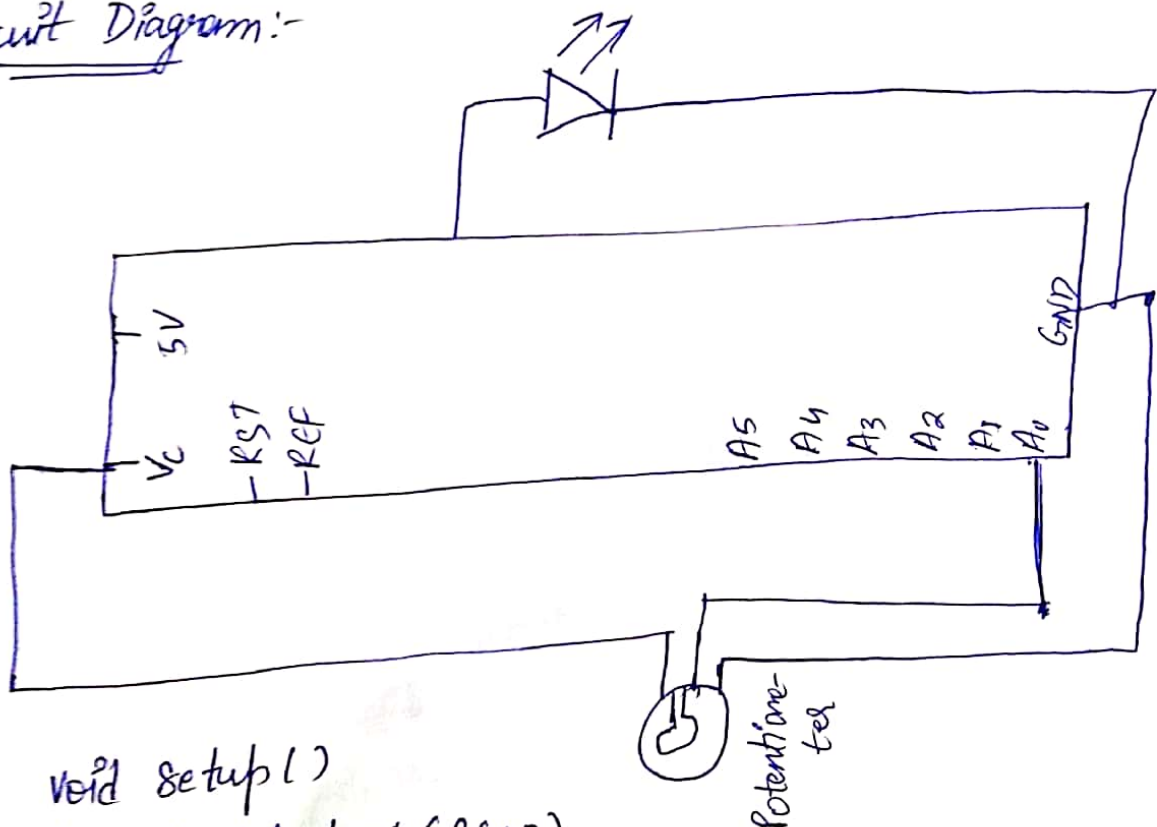PROGRAM No :- 3

PROGRAM TITLE :- FADING LED USING POTENTIOMETER

AIM :- Demonstrate to show LED fading (Analog output)

Hardware Requirements :- ARDUINO Board, LED, connecting wire, Resistor.

Circuit Diagram :-

Code :-

```
void setup()
{
    Serial.begin(9600);
    pinMode(9, OUTPUT);
}

void loop()
{
    int analog = analogRead(A0);
    int brightness = map(analog, 0, 1023, 0, 255);
    analogWrite(9, brightness);
    Serial.print("\n Analog value");
    Serial.print(analog);
    Serial.print("\n Brightness value");
    Serial.print(brightness);
}
```
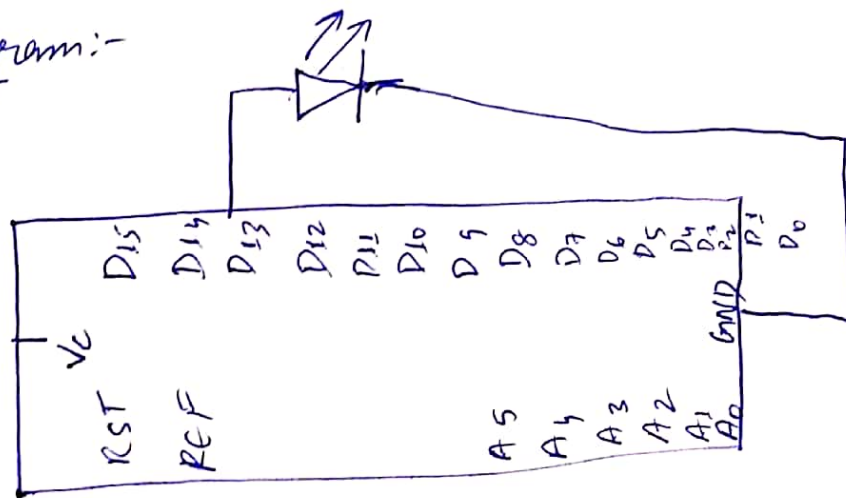
③

Sai Sriram. V
1BM18CS140

Program No. 4

Program Title : Fading LED

AIM :- Demonstrate to show Fading LED.

HARDWARE REQUIRED:- Arduino Board, LED, Connecting wire, Resistor.

Circuit Diagram :-

CODE :-

```
int brightness=0;
void setup()
    {    pinMode(11, OUTPUT); }

void loop()
    {    for( brightness=0; brightness<=255; brightness+=5)
         {    analogWrite(11, brightness);
              delay(30);
         }
         for( brightness=255; brightness>=0; brightness-=5)
         {    analogWrite(11, brightness);
              delay(30);
         }
    }
```
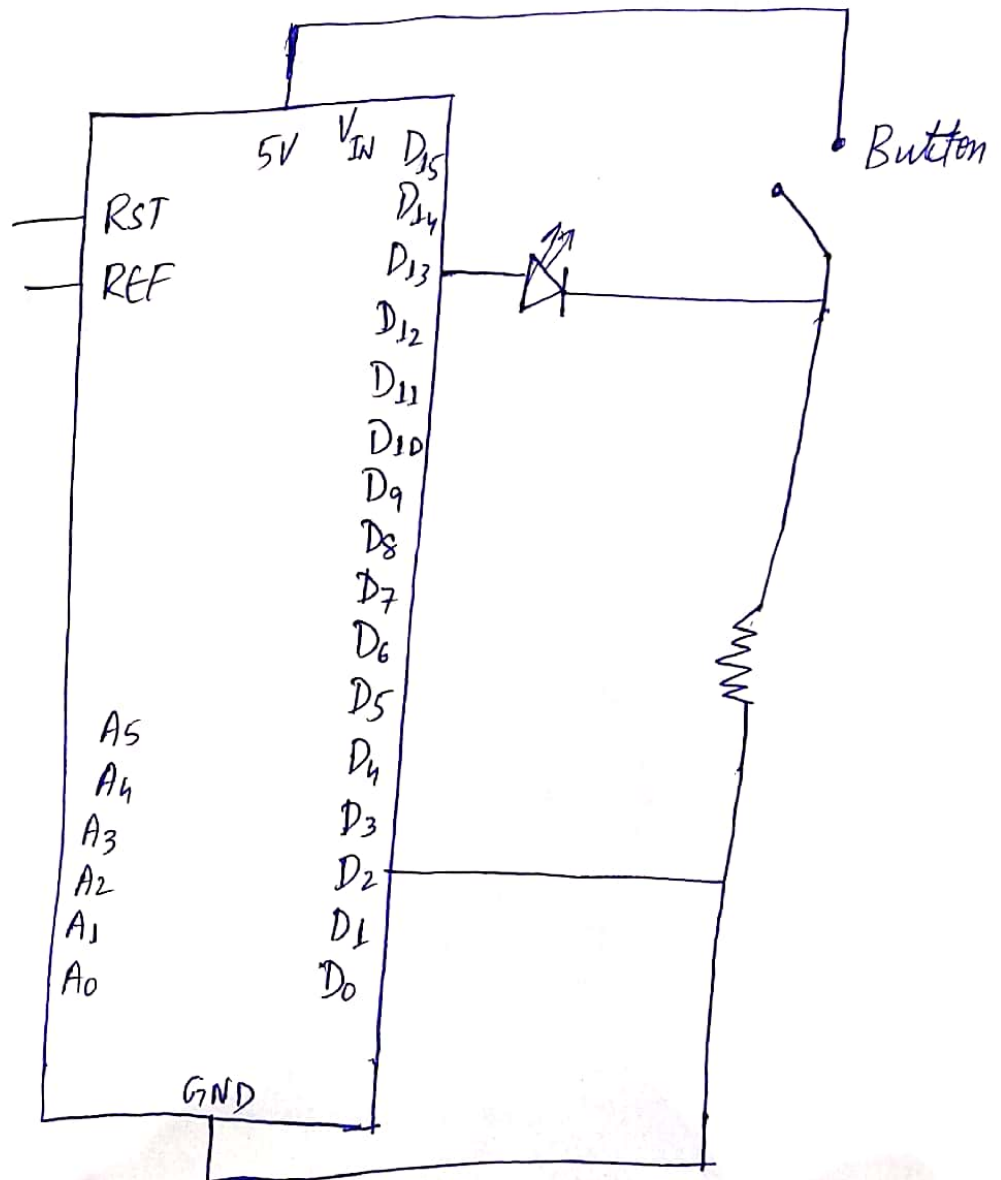
Program No: 5

Sai Shriram·V
1BM18CS140

Program Title: LED using Push Button

AIM :- Demonstrate to show ON/OFF of a LED using push button (Digital Output)

Hardware Requirement:- ARDUINO Board , LED, Push Button, Resistor.

Circuit Diagram :-

5V V_{IN} D_{15}
D_{14}
RST D_{13}
REF D_{12}
D_{11}
D_{10}
D_9
D_8
D_7
D_6
D_5
A5 D_4
A4 D_3
A3 D_2
A2 D_1
A1 D_0
A0

Button

GND

⑤

CODE:-

```
int buttonstate = 0;
void setup()
{   pinmode (13, OUTPUT);
    pinmode (2, INPUT);
}
void loop()
{       buttonstate = digitalRead (2);
        if ( buttonstate == HIGH)
    {       digitalWrite (13, HIGH);
    }
    else
    {       digitalWrite (13, Low);
    }
}
```