Task6 3.2C Arduino Multi-LED Sequencer

Summary

- ✓ A circuit that utilizes resistors and digital pins was necessary for this project to bring light to eight LEDs. The Arduino IDE improved all aspects of bread boarding, fundamental electronics, and beginner programming by programming the LEDs. The possibility to manage digital outputs using easy code is important for detailed projects that involve sensors and actuators, as this experience pointed out.

Reflection

1. **How do you know you have achieved the learning goals?**

- ✓ In this circuit, the LEDs were flashed as required and I was able to fully grasp the concept of timing and control in the Arduino by increasing the delay time.

2. **What is the most important thing you learned from this and why?**

- ✓ The most important thing that was learned was the use of digital Write() for controlling pins and timing which is critical in any Arduino based project that requires time or input dependent output control.

3. **How does the content or skills learned here relate to things you already know?**

- ✓ This assignment helped me learn more about circuits and how they interact with programming to the extent that software can actively manipulate the hardware through LEDs.

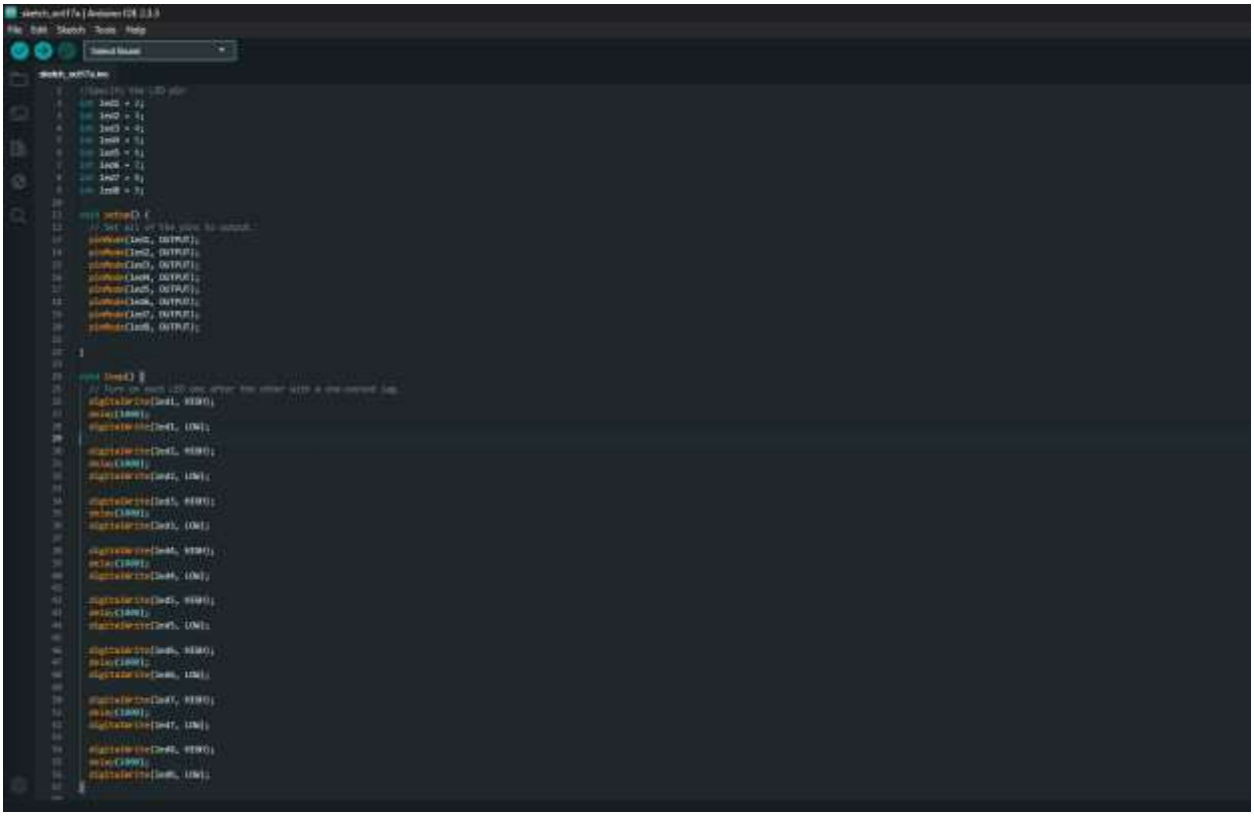
4. **Where or when do you think it will be useful?**

- ✓ This information is crucial for advanced microcontroller-based systems, automation, robotics, IoT projects, and complex device projects as it enhances the understanding of timing and control output.

Arduino Code

```
//Specify the LED pin
int led1 = 2;
int led2 = 3;
int led3 = 4;
int led4 = 5;
int led5 = 6;
int led6 = 7;
int led7 = 8;
int led8 = 9;

void setup() {
  // Set all of the pins to output.
  pinMode(led1, OUTPUT);
  pinMode(led2, OUTPUT);
  pinMode(led3, OUTPUT);
  pinMode(led4, OUTPUT);
  pinMode(led5, OUTPUT);
  pinMode(led6, OUTPUT);
  pinMode(led7, OUTPUT);
  pinMode(led8, OUTPUT);
}
void loop() {
  // Turn on each LED one after the other with a one-second lag.
  digitalWrite(led1, HIGH);
  delay(1000);
  digitalWrite(led1, LOW);
```

```
 digitalWrite(led2, HIGH);
 delay(1000);
 digitalWrite(led2, LOW);

 digitalWrite(led3, HIGH);
 delay(1000);
 digitalWrite(led3, LOW);

 digitalWrite(led4, HIGH);
 delay(1000);
 digitalWrite(led4, LOW);

 digitalWrite(led5, HIGH);
 delay(1000);
 digitalWrite(led5, LOW);

 digitalWrite(led6, HIGH);
 delay(1000);
 digitalWrite(led6, LOW);

 digitalWrite(led7, HIGH);
 delay(1000);
 digitalWrite(led7, LOW);

 digitalWrite(led8, HIGH);
 delay(1000);
 digitalWrite(led8, LOW);
}
```



Drive Link

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