Ganpat University
॥ विद्यया समाजोत्कर्षः ॥
Institute of Computer Technology

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Branch: CBA

Batch:71

----------PRACTICAL 01----------

1. Interfacing of LED with Arduino and write a code for LED blinking.

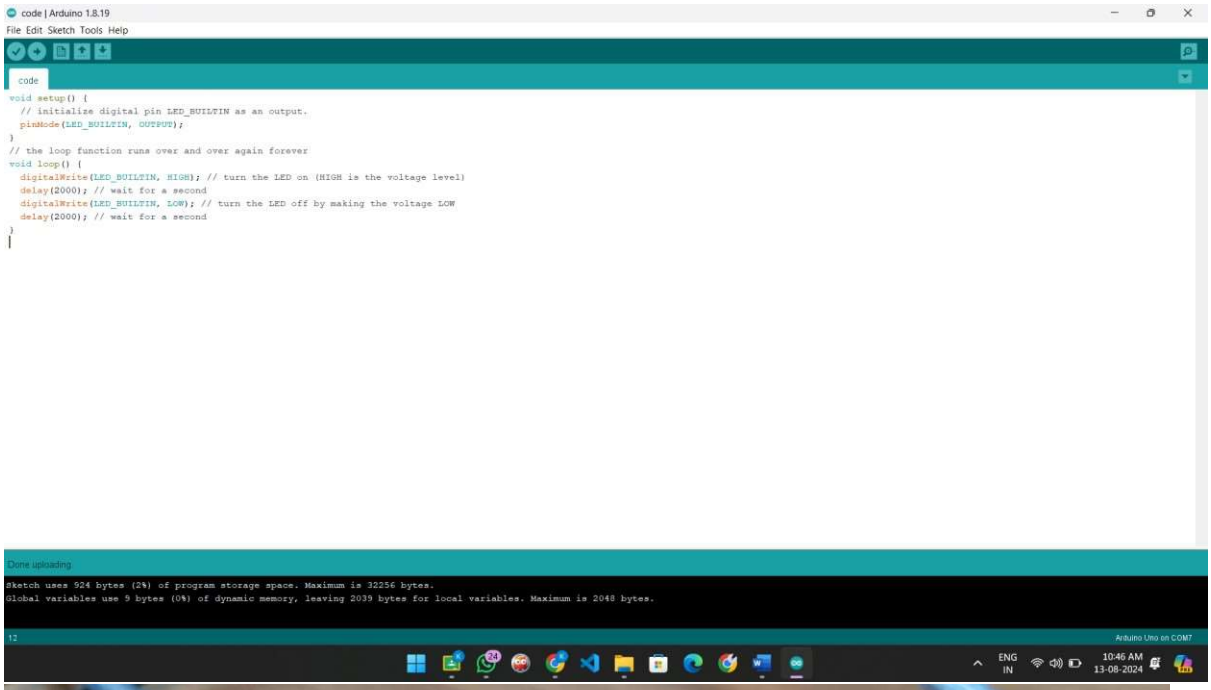
Parts Needed:

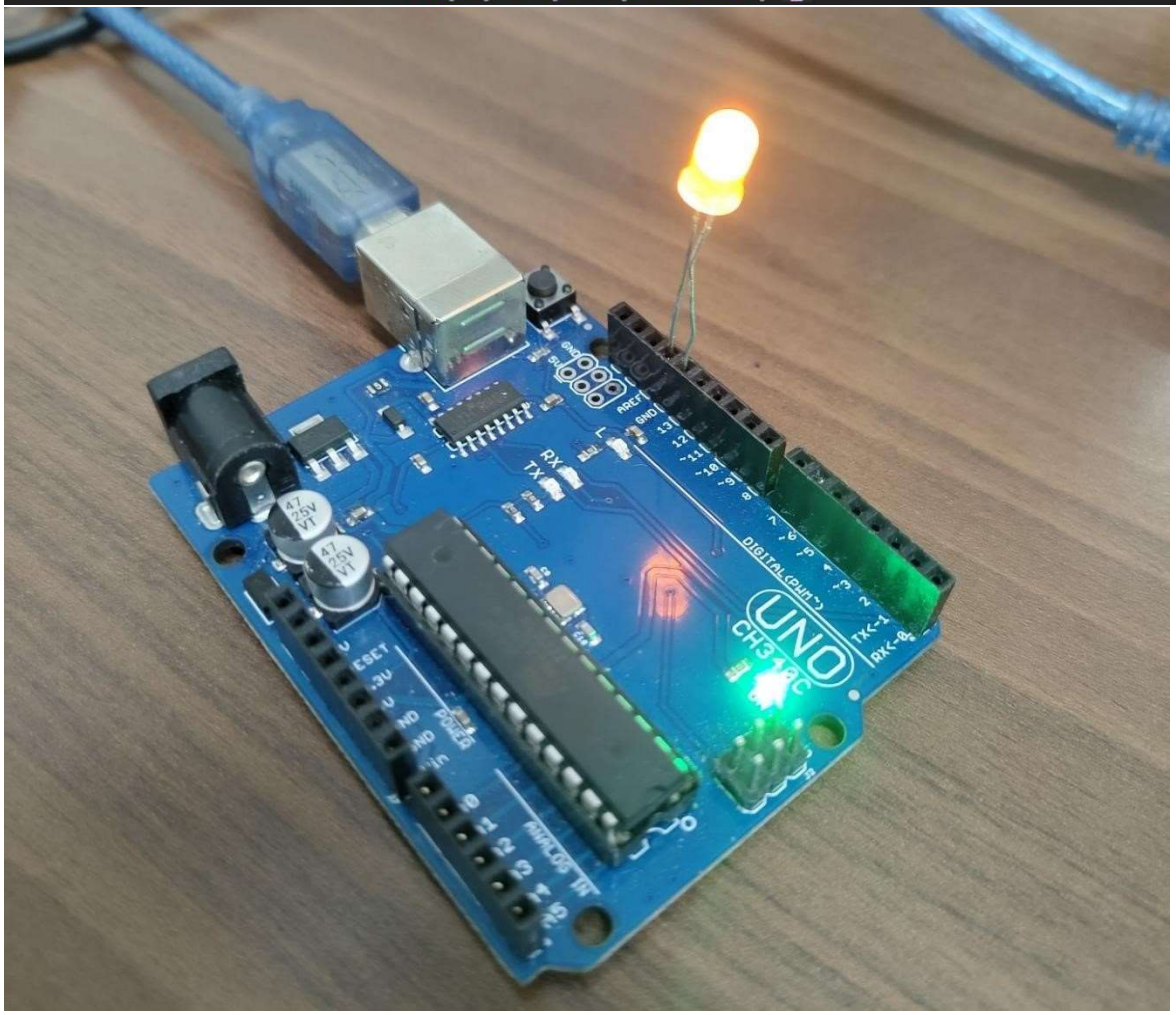
(1) Arduino Uno

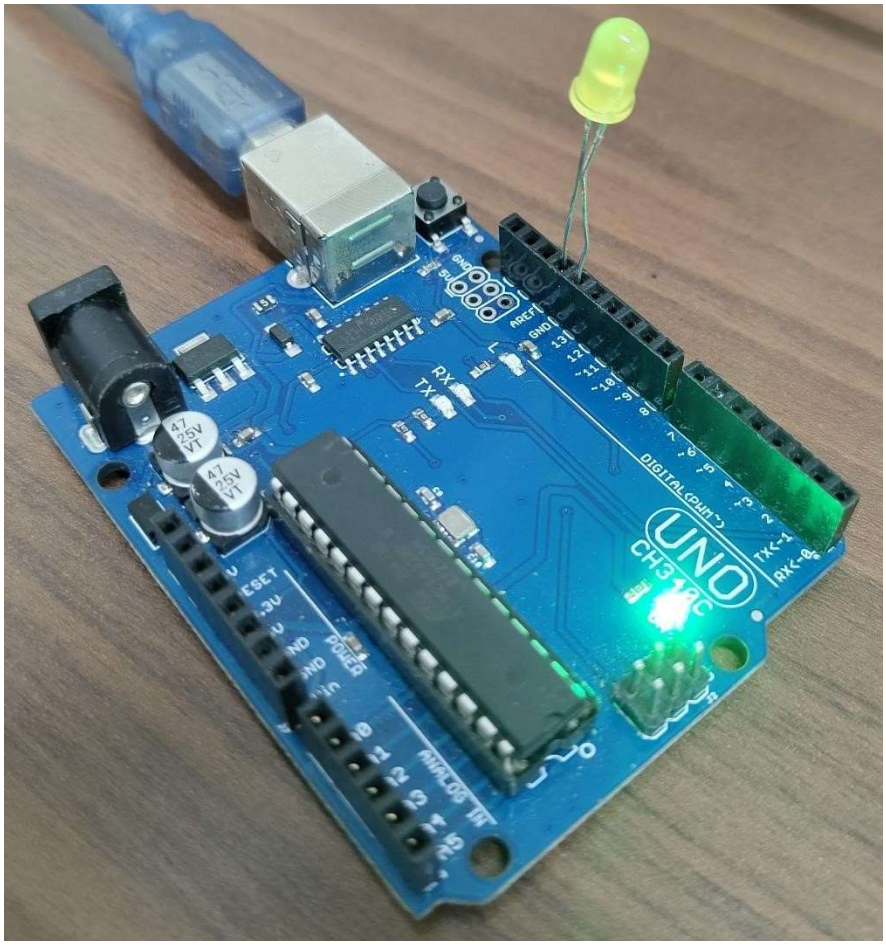
(1) USB A-to-B Cable

(1) LED 5mm CODE:

```
void setup() {

  pinMode(LED_BUILTIN, OUTPUT);

}

void loop() {   digitalWrite(LED_BUILTIN, HIGH);    delay(2000);
digitalWrite(LED_BUILTIN, LOW);    delay(2000);

}
```


code | Arduino 1.8.19
File Edit Sketch Tools Help
code
void setup() {
// initialize digital pin LED_BUILTIN as an output.
pinMode(LED_BUILTIN, OUTPUT);
}
// the loop function runs over and over again forever
void loop() {
digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)
delay(2000); // wait for a second
digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the voltage LOW
delay(2000); // wait for a second
}
Done uploading.
Sketch uses 924 bytes (2%) of program storage space. Maximum is 32256 bytes.
Global variables use 9 bytes (0%) of dynamic memory, leaving 2039 bytes for local variables. Maximum is 2048 bytes.
12
Arduino Uno on COM7
ENG
IN
10:46 AM
13-08-2024


UNO
DIGITAL(PWM~)
ANALOG IN
POWER
RESET
AREF
RX
TX


RX
TX
UNO
CH340C
POWER
ANALOG IN
DIGITAL (PWM~)

2. Interfacing 3 LED's with Arduino and write a code for traffic signals.

Parts Needed:

(1) Arduino Uno

(1) USB A-to-B Cable

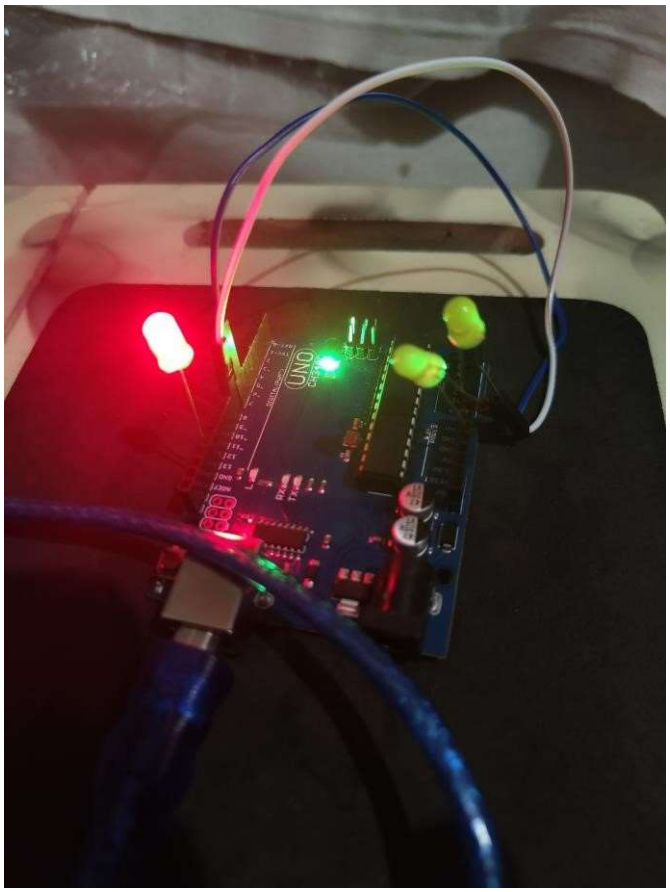
(1) Breadboard – Half Size

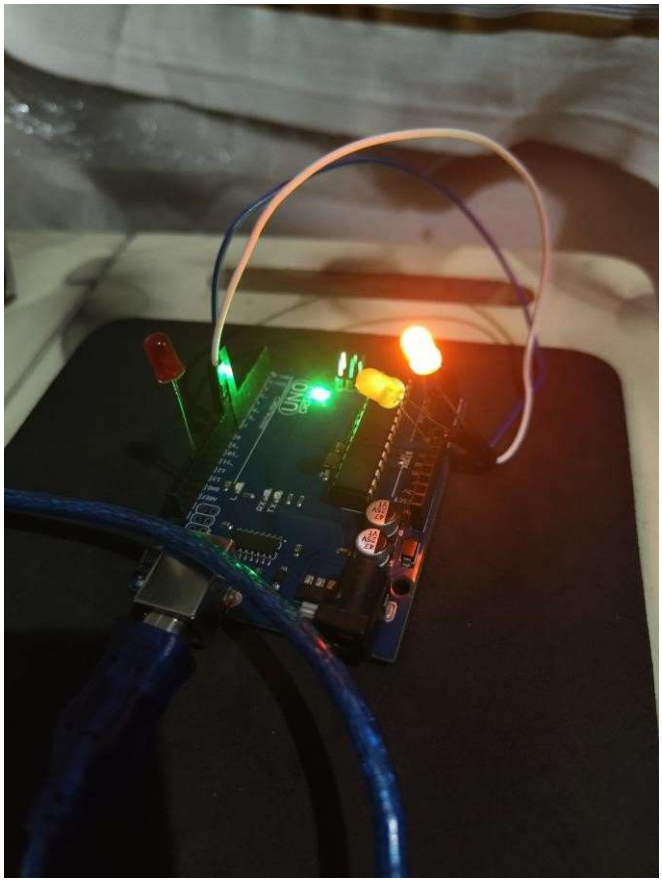
(3) LED 5mm (2) Jumper Wires **CODE:**

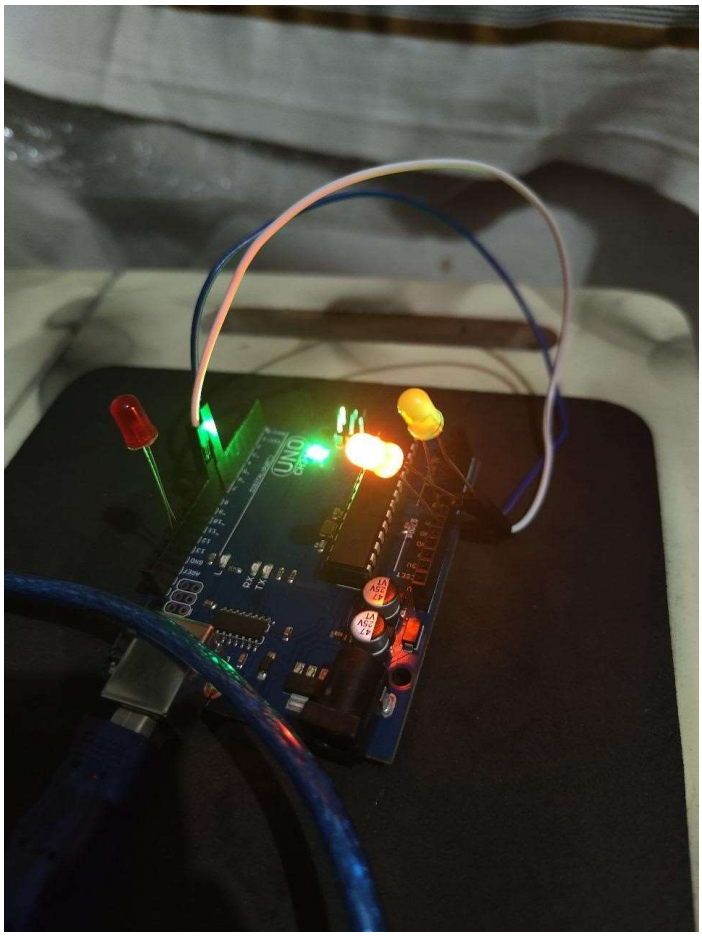
```
int redLight = 13; int yellowLight = 7; int greenLight = 8; void setup() {

  pinMode(redLight, OUTPUT);   pinMode(yellowLight, OUTPUT);
pinMode(greenLight, OUTPUT);

}

void loop() {   digitalWrite(redLight, HIGH);  // Turn on red light   delay(500);
// Wait for 5 seconds   digitalWrite(redLight, LOW);   // Turn off red light
digitalWrite(yellowLight, HIGH); // Turn on yellow light

  delay(2000);                  // Wait for 2 seconds   digitalWrite(yellowLight,
LOW);  // Turn off yellow light digitalWrite(greenLight, HIGH); // Turn on
green light

 delay(500);                  // Wait for 5 seconds  digitalWrite(greenLight, LOW);
// Turn off green light

}
```


sketch_aug21a | Arduino IDE 2.3.2
File Edit Sketch Tools Help
Arduino Uno
sketch_aug21a.ino
int redLight = 13;
int yellowLight = 7;
int greenLight = 8;
void setup() {
pinMode(redLight, OUTPUT);
pinMode(yellowLight, OUTPUT);
pinMode(greenLight, OUTPUT);
}
void loop() {
digitalWrite(redLight, HIGH); // Turn on red light
delay(500); // Wait for 5 seconds
digitalWrite(redLight, LOW); // Turn off red light
digitalWrite(yellowLight, HIGH); // Turn on yellow light
delay(2000); // Wait for 2 seconds
digitalWrite(yellowLight, LOW); // Turn off yellow light
digitalWrite(greenLight, HIGH); // Turn on green light
delay(500); // Wait for 5 seconds
digitalWrite(greenLight, LOW); // Turn off green light
}
Ln 20, Col 1 Arduino Uno [not connected]

OUTPUT:







- **Step 1 :** navigate cloudant and Create cloudant service I created by name Cloudant-Tushar-Practical8 and after created lunch dashboard.