Microprocessor and Computer Architecture Laboratory

UE19CS256

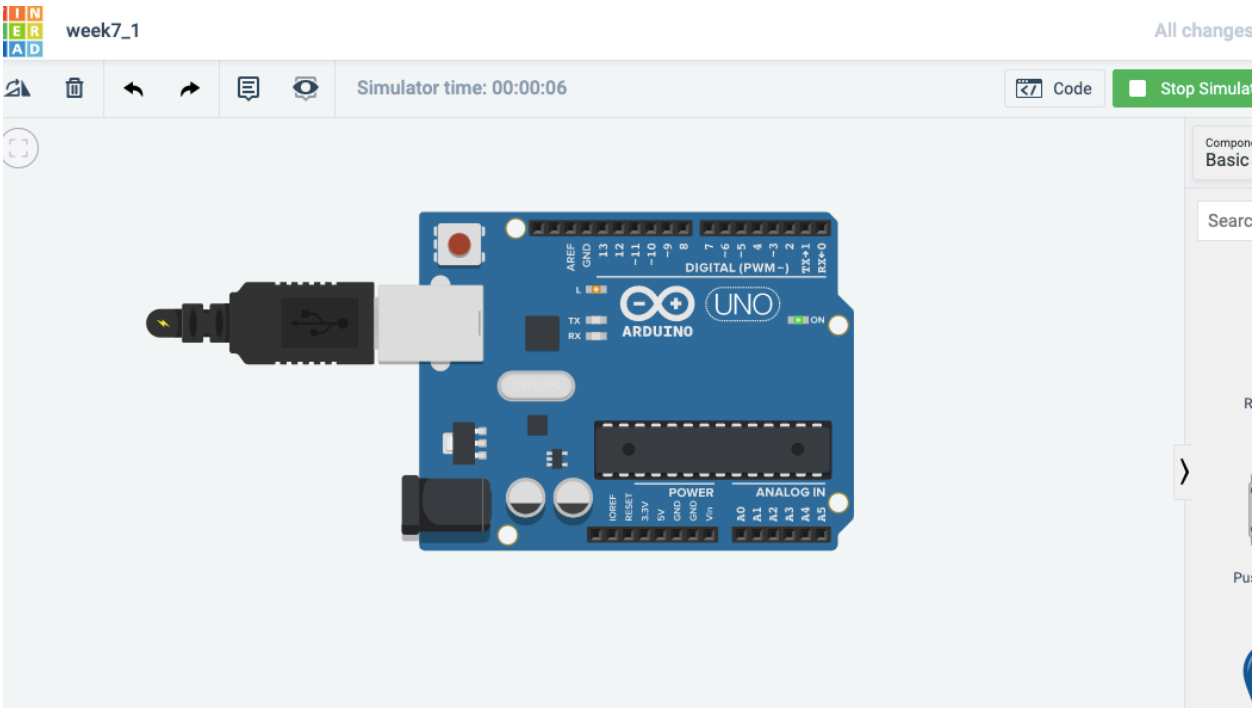
4th Semester, Academic Year 2020-21

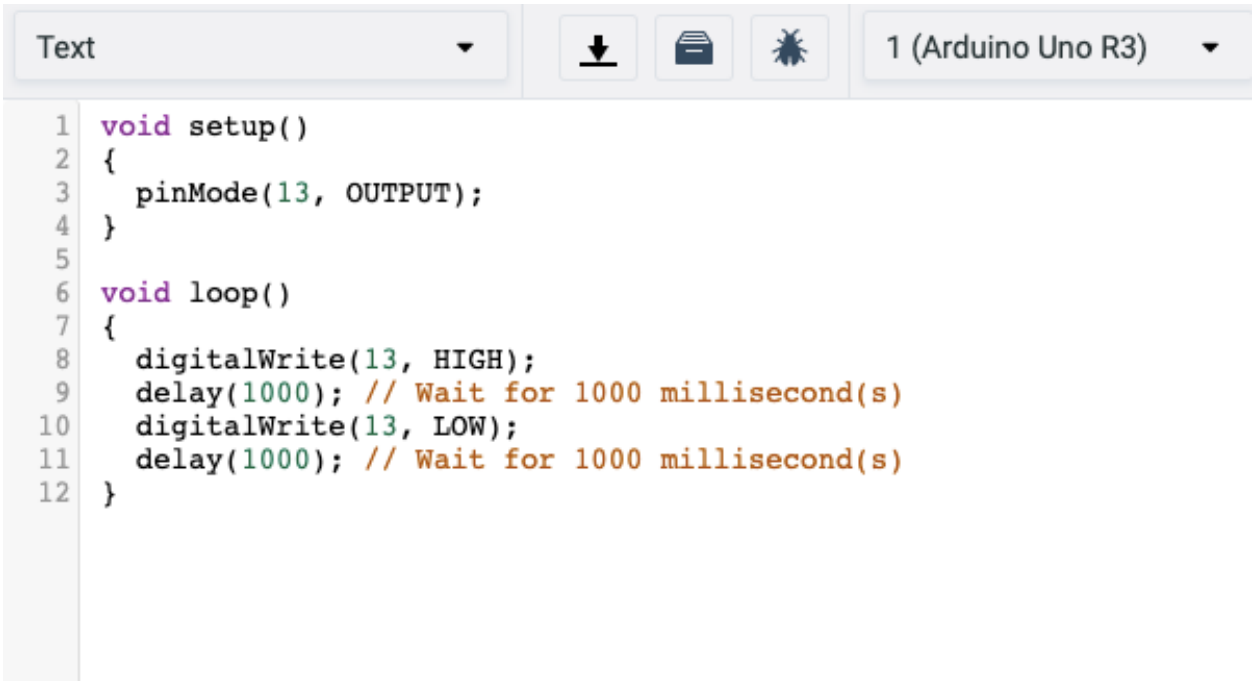
Date:

Name: Achyut Jagini	SRN:PES2UG19CS013	Section A

Week#____7_____ Program Number: ____1__

1. A) Implement a Tinkercad simulation to turn on and off the Arduino's on-board LED.



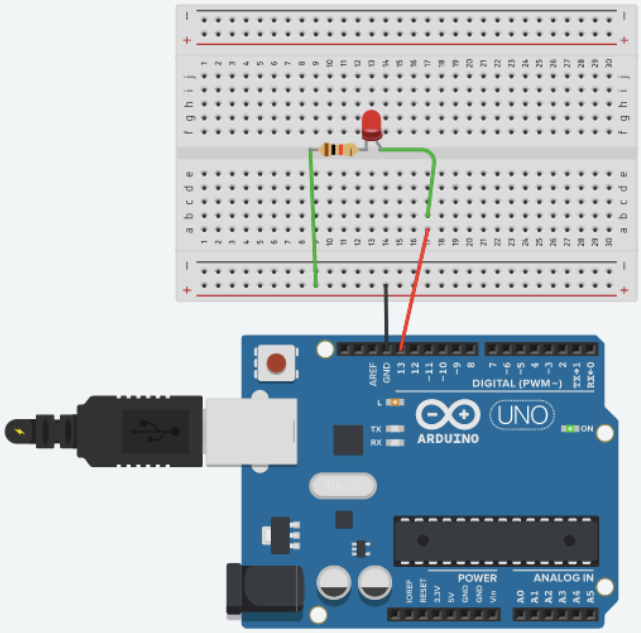


B) Implement a Tinkercad simulation to turn on and off an external LED connected to the Arduino board

week7_2

Simulator time: 00:00:04

Code



Text

1 (Arduino Uno R3)

```
1  void setup()
2  {
3    pinMode(13, OUTPUT);
4  }
5
6  void loop()
7  {
8    digitalWrite(13, HIGH);
9    delay(1000); // Wait for 1000 millisecond(s)
10   digitalWrite(13, LOW);
11   delay(1000); // Wait for 1000 millisecond(s)
12 }
```

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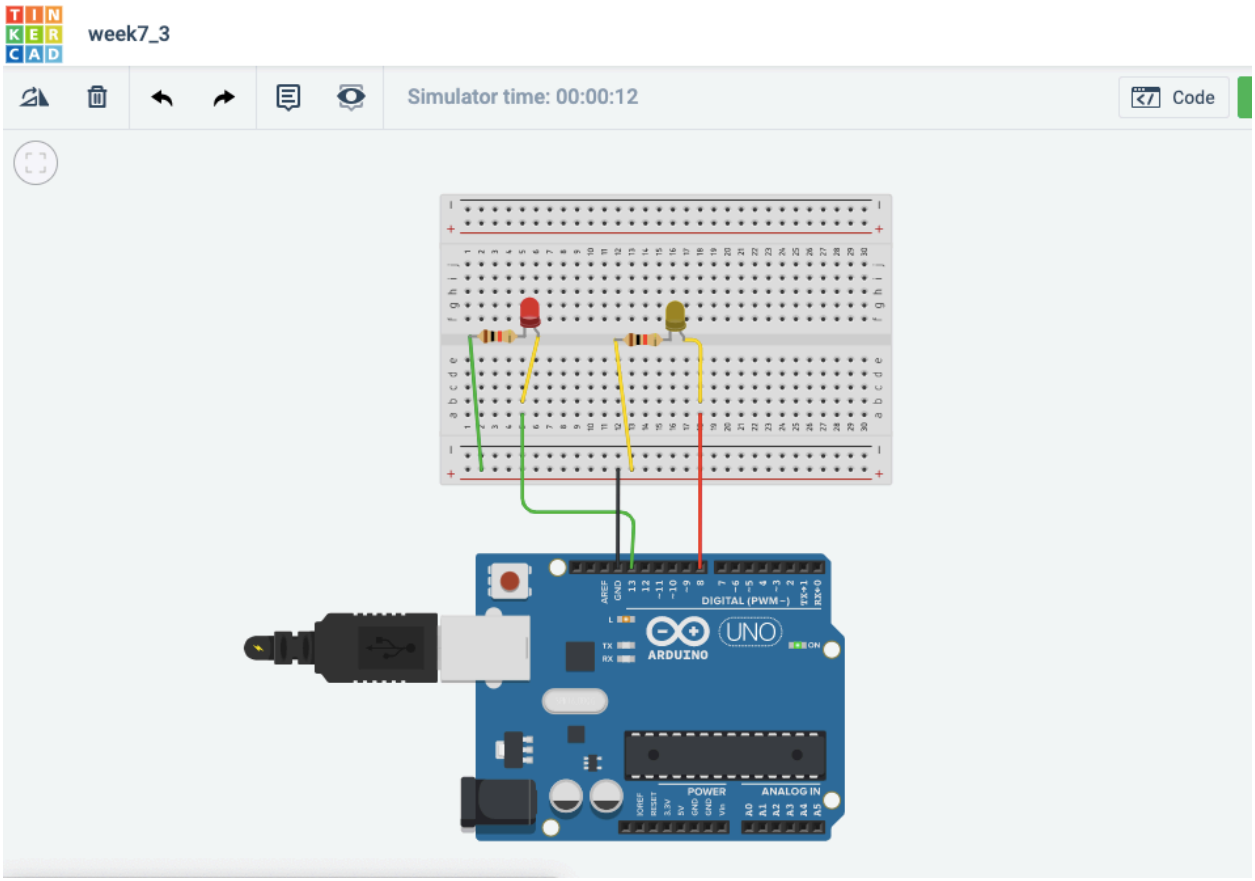
Date:

Name:	SRN:	Section

Week#____7_____ Program Number: ____2__

Implement a Tinkercad simulation to alternately turn on and off two external LEDs connected to the Arduino board


week7_3
Simulator time: 00:00:12
Code
DIGITAL (PWM~)
UNO
ARDUINO
POWER
ANALOG IN

Text

1 (Arduino Uno R3)

```
int red_led=13;
int yellow_led=8;
int delay_time=1000;
int flag=1;
void setup()
{
   pinMode(red_led, OUTPUT);
  pinMode(yellow_led, OUTPUT);
}

void loop()
{
  if (flag == 1){
     digitalWrite(red_led, HIGH);
      digitalWrite(yellow_led, LOW);
      flag=0;
     }
  else
  {
    digitalWrite(yellow_led, HIGH);

  digitalWrite(red_led, LOW);
    flag=1;
  }


  delay(delay_time);
}
```

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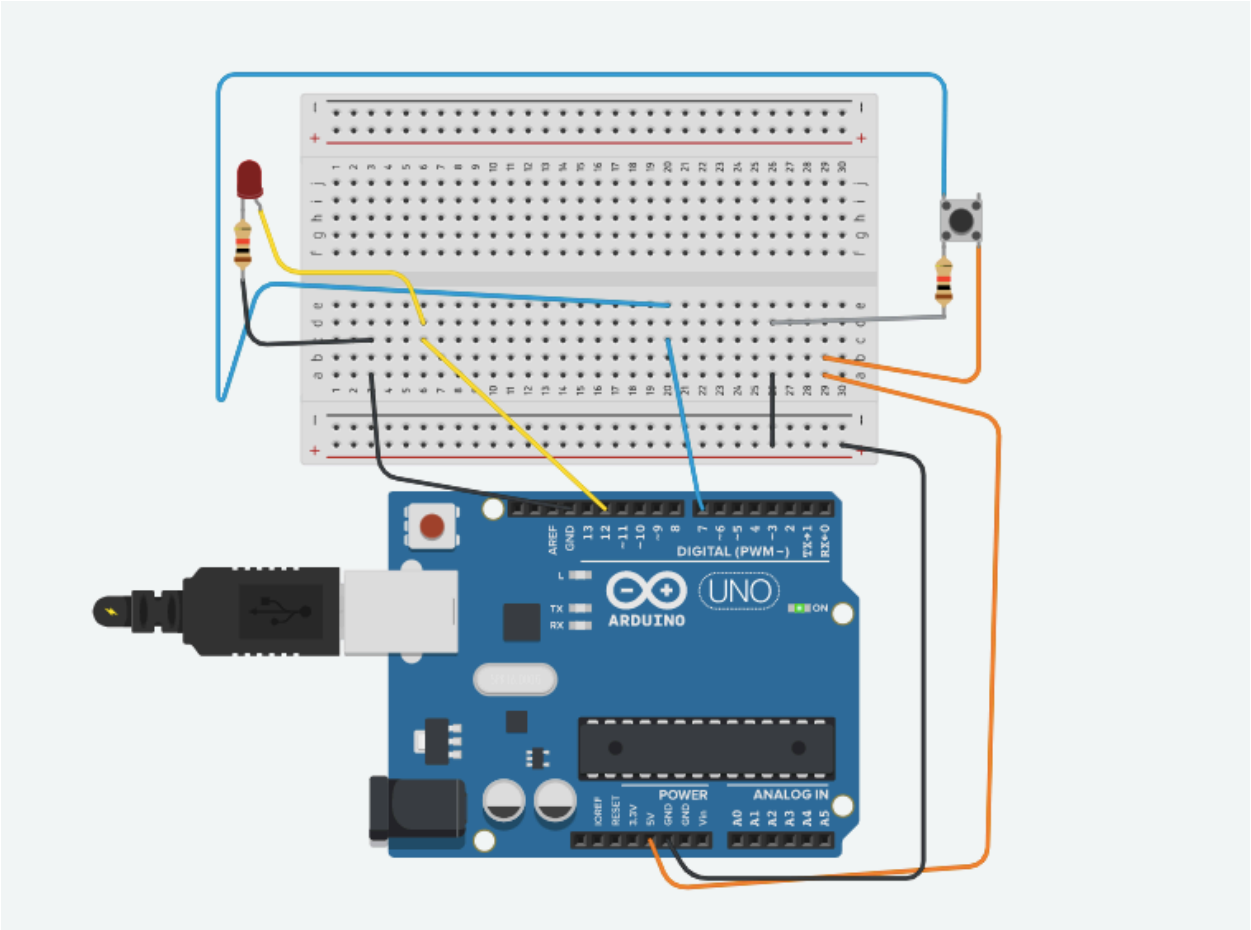
Date:

Name:	SRN:	Section

Week#____7_____ Program Number: ____3__

Implement a Tinkercad simulation to use a pushbutton to control an LED.


DIGITAL (PWM~)
UNO
ARDUINO
POWER
ANALOG IN

Text

1 (Arduino Uno R3)

```
int button_state;
int led=12;
int push_btn=7;

void setup()
{
  pinMode(led,OUTPUT);

}

void loop()
{
  button_state=digitalRead(push_btn);

  if(button_state==1)
    digitalWrite(led,HIGH);
  else
       digitalWrite(led,LOW);
  delay(20);
}
```

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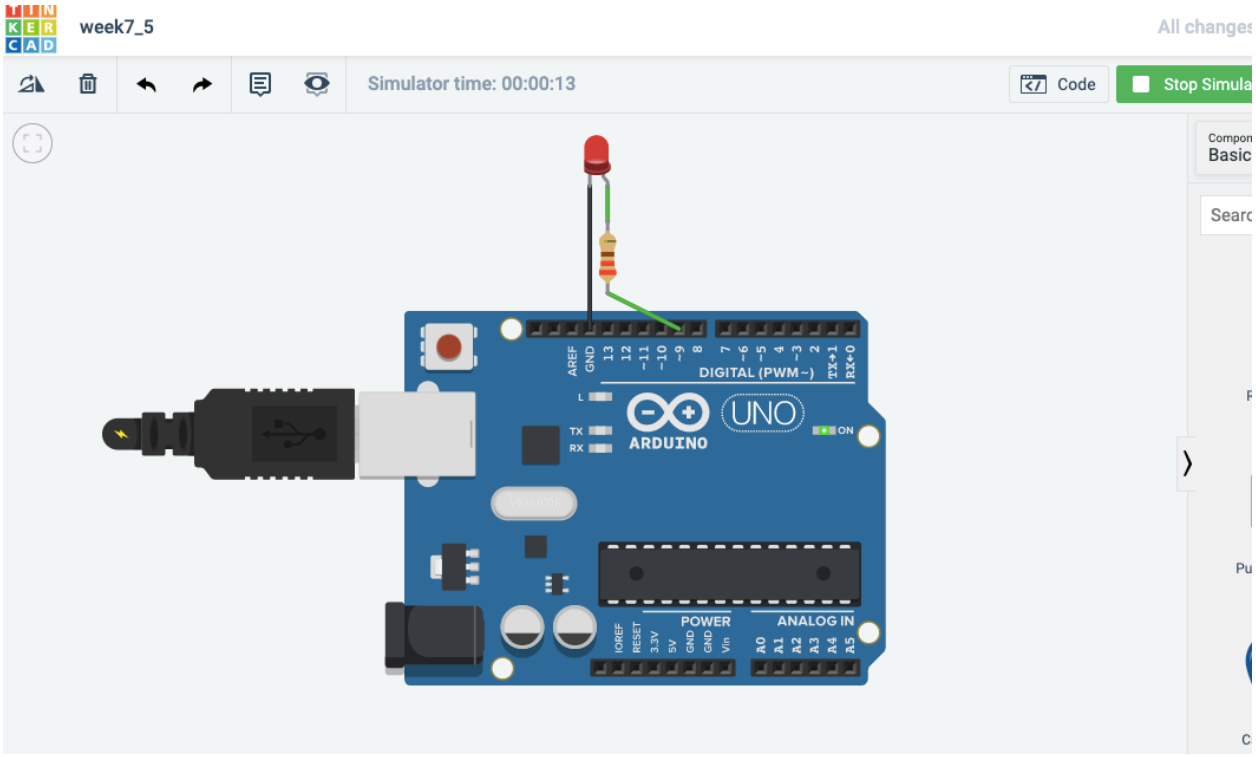
Date:

Name:	SRN:	Section

Week#____7_____ Program Number: ___4__

Implement a Tinkercad simulation to demonstrate fading of an LED (zero to maximum brightness slowly)


week7_5
All changes
Simulator time: 00:00:13
Code
Stop Simula
DIGITAL (PWM~)
ARDUINO
UNO
POWER
ANALOG IN