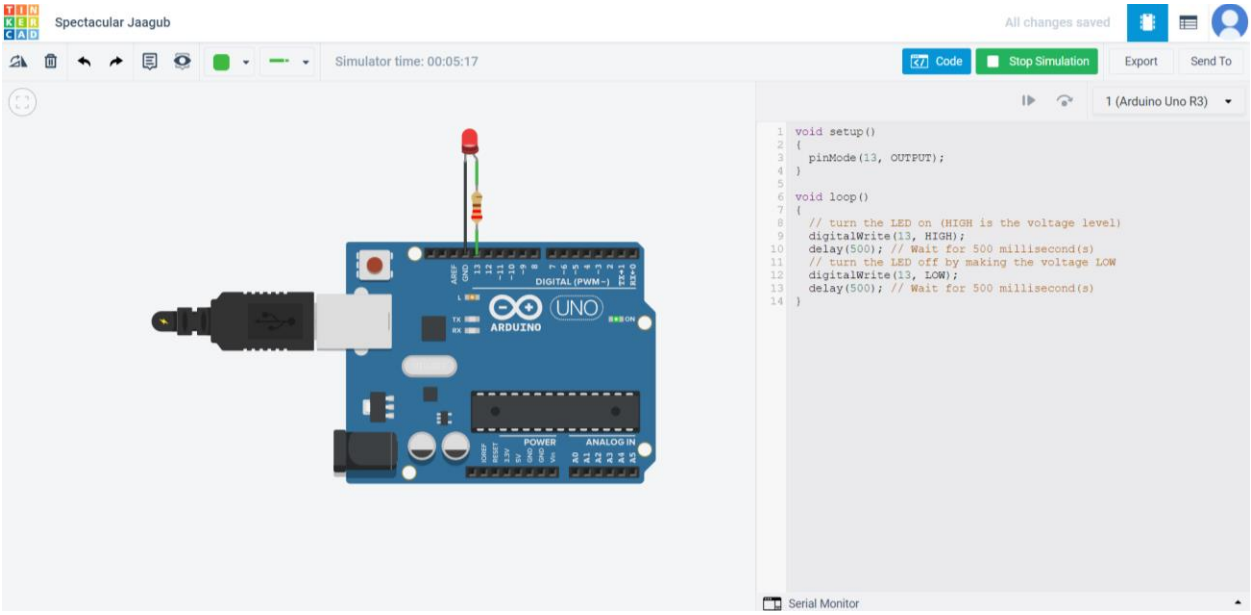
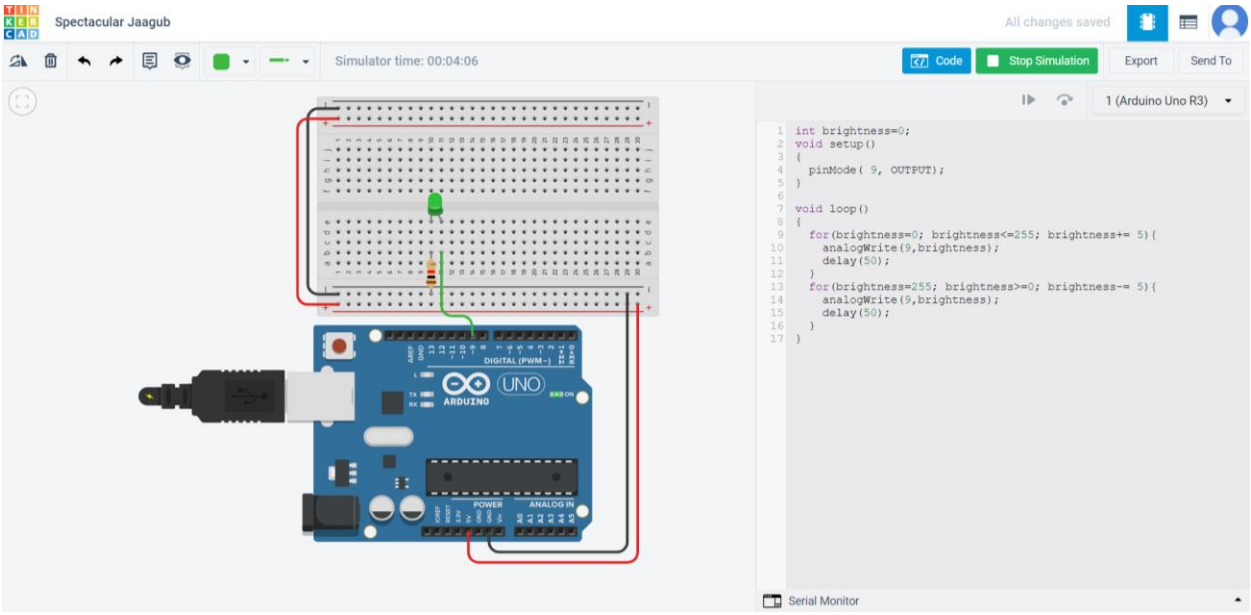
Index no: 19000482

Electronic and Physical Computing - Assignment 02

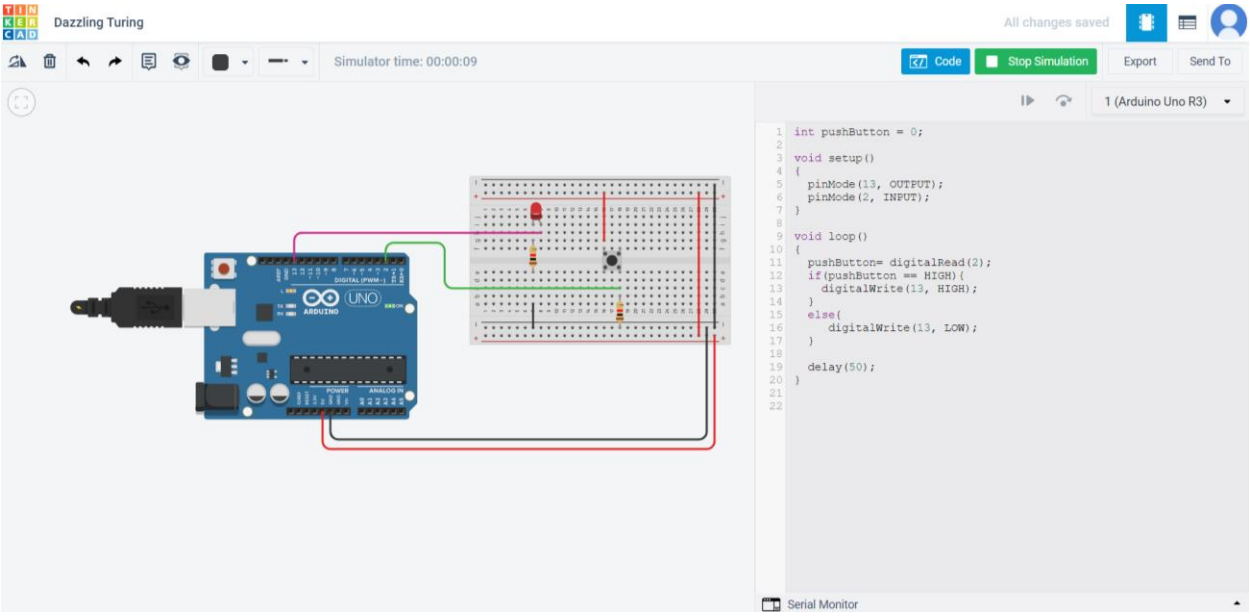
01.



02.



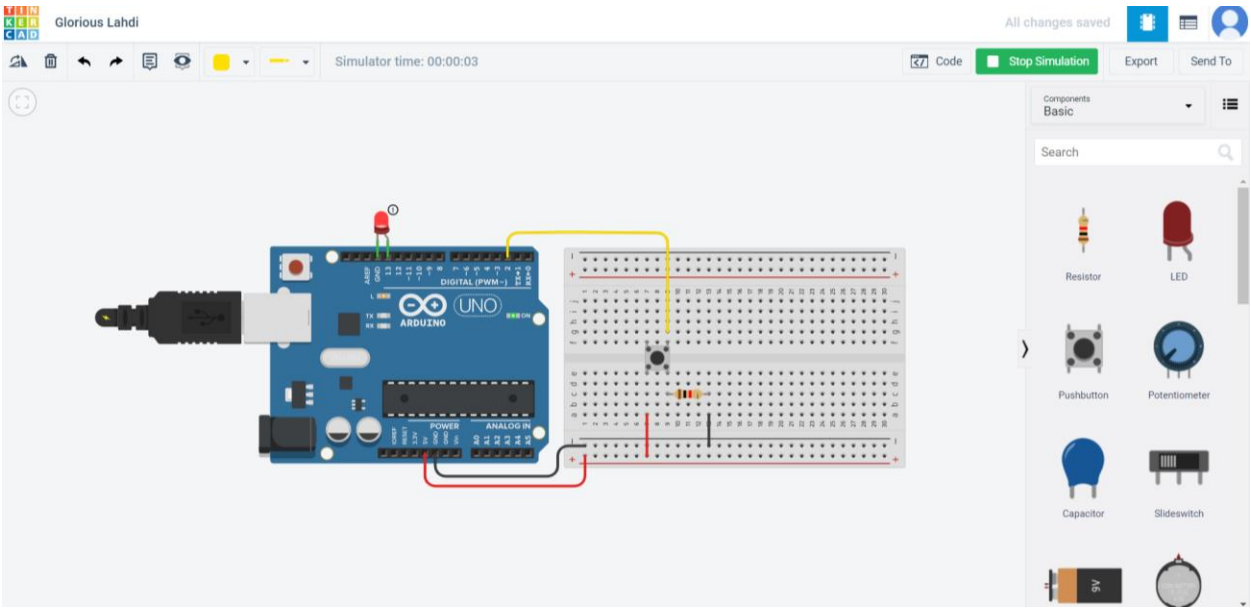
03.



04.

```
void setup(){
          pinMode(2, INPUT);
          pinMode(13, OUTPUT);
}

void loop(){
         if(digitalRead(2) ==1){
           digitalWrite(13,HIGH);
         }
         else{
            digitalWrite(13,LOW);
          }
}
```



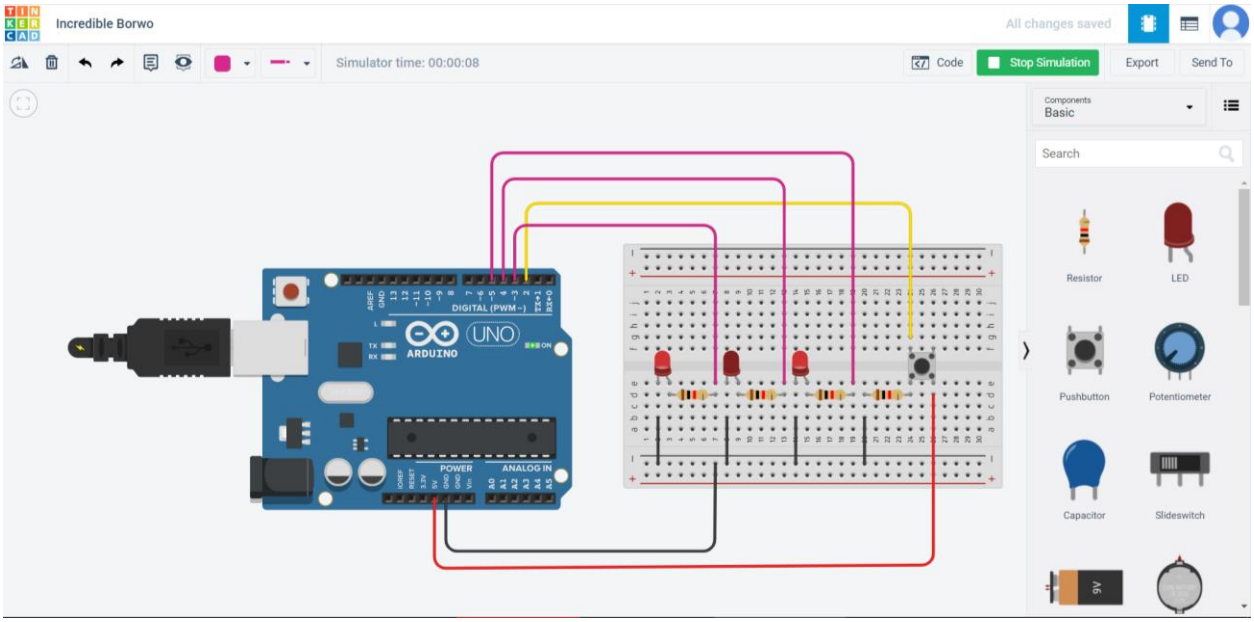
05.

```
int pin1 = 3;
int pin2 = 4;
int pin3 = 5;
int i=0;
int last_State; // the previous state of button
int current_State; // the current state of button

void setup() {
   pinMode(2, INPUT);
   pinMode(pin1, OUTPUT);
   pinMode(pin2, OUTPUT);
   pinMode(pin3, OUTPUT);
   current_State = digitalRead(2);
}
```

```
void loop() {
   last_State = current_State;
   current_State = digitalRead(2);

   if (last_State == HIGH && current_State == LOW) {
     if(i>7){i=0;}
       if (i == 2 || i == 4 || i == 6 || i == 0) {
          digitalWrite(pin1, LOW); // 3rd bulb off(PIN 3)
       } else {
          digitalWrite(pin1, HIGH);
       }
       if (i == 2 || i == 3 || i == 6 || i == 7) {
          digitalWrite(pin2, HIGH); //2nd bulb on(PIN 4)
       } else {
          digitalWrite(pin2, LOW);
       }
       if (i > 3) {
          digitalWrite(pin3, HIGH); //1st bulb on(PIN 5)
       } else {
          digitalWrite(pin3, LOW);
       }
     i++;
   }
}
```



06.

Last two digits of registration number: 48

Binary number: 110000

Code

```
int registration_no = 48;
int LEDpin_no = 3;
int pin_limit = 9;

void setup(){
 pinMode( 3 , OUTPUT );
 pinMode( 4 , OUTPUT );
 pinMode( 5 , OUTPUT );
 pinMode( 6 , OUTPUT );
 pinMode( 7 , OUTPUT );
 pinMode( 8 , OUTPUT );
}
```

```
void loop(){
 if( LEDpin_no < pin_limit ){
   if( registration_no % 2 == 1 ){
     digitalWrite( LEDpin_no , HIGH );
   }
   else{
     digitalWrite( LEDpin_no , LOW );
   }
  registration_no /= 2;
 LEDpin_no++;
 }
}
```