Assignment 02

1. Turn LED on / off with 500ms pause


```
1  //19000936
2
3  void setup()
4  {
5    pinMode(13, OUTPUT);
6  }
7
8  void loop()
9  {
10   // turn the LED on (HIGH is the voltage level)
11   digitalWrite(13, HIGH);
12   delay(500); // Wait for 500 millisecond(s)
13
14 }
```



```
1  //19000936
2
3  void setup()
4  {
5    pinMode(13, OUTPUT);
6  }
7
8  void loop()
9  {
10
11   digitalWrite(13, HIGH);
12   delay(500); // Wait for 500 millisecond(s)
13
14   digitalWrite(13, LOW);
15   delay(500); // Wait for 500 millisecond(s)
16
17 }
```
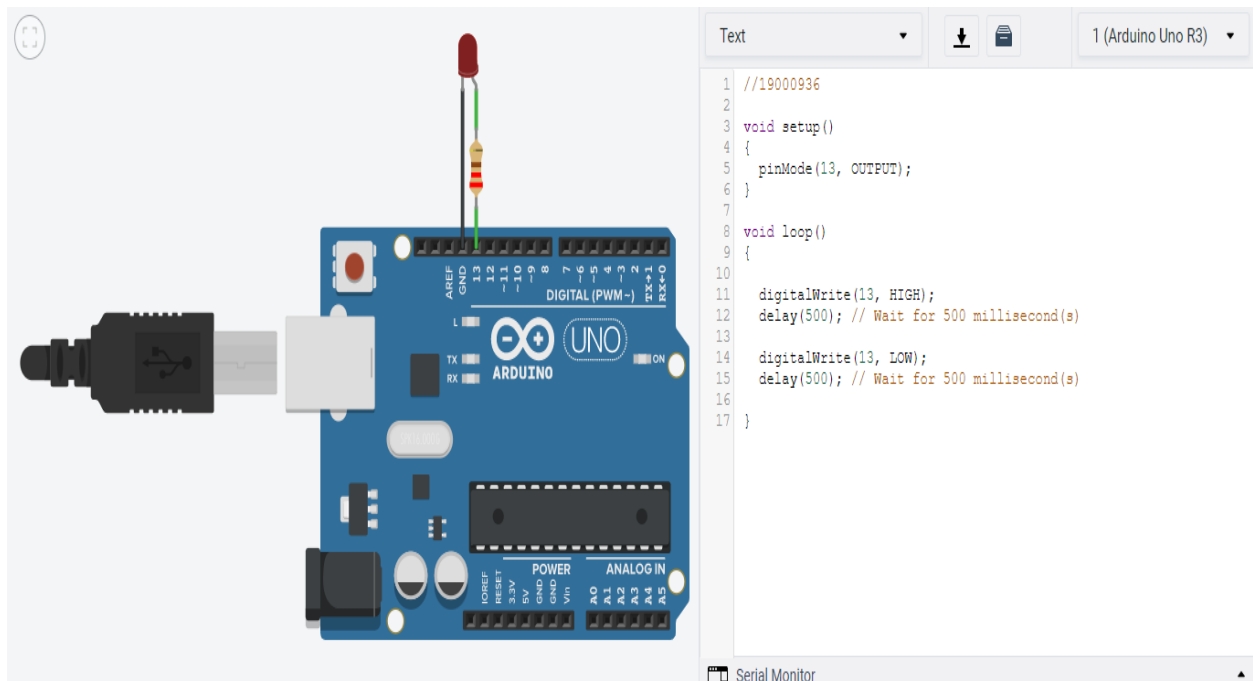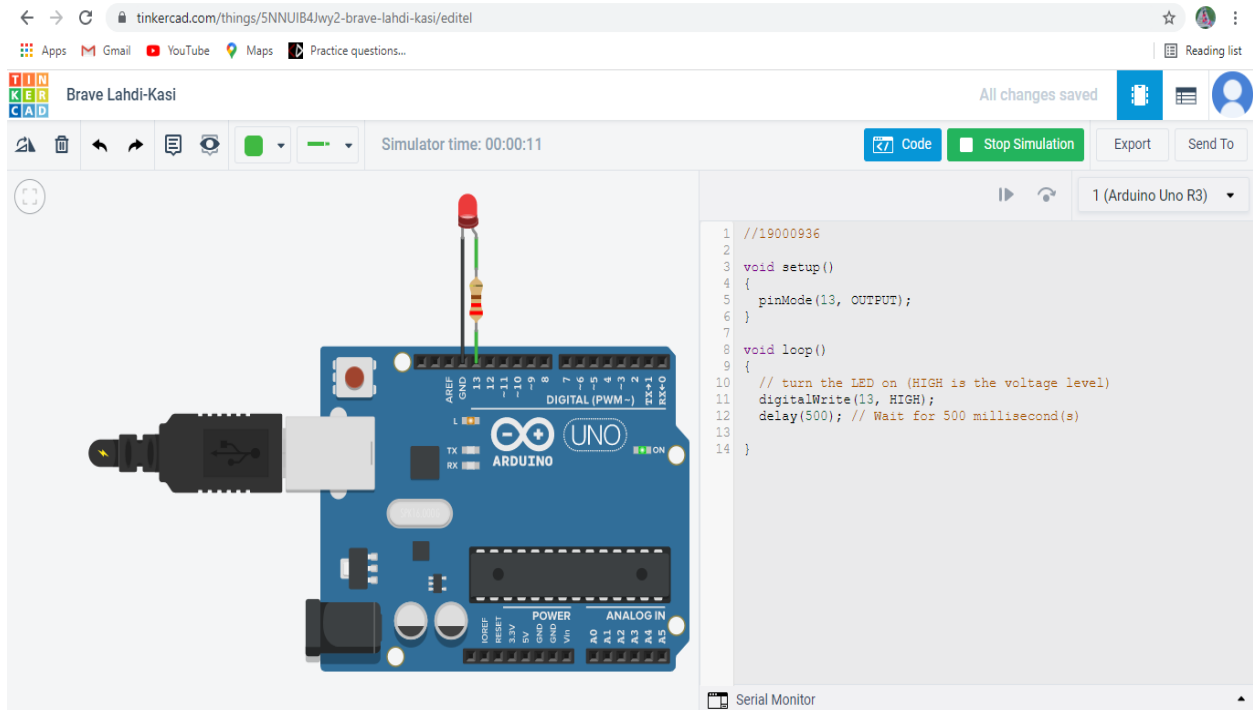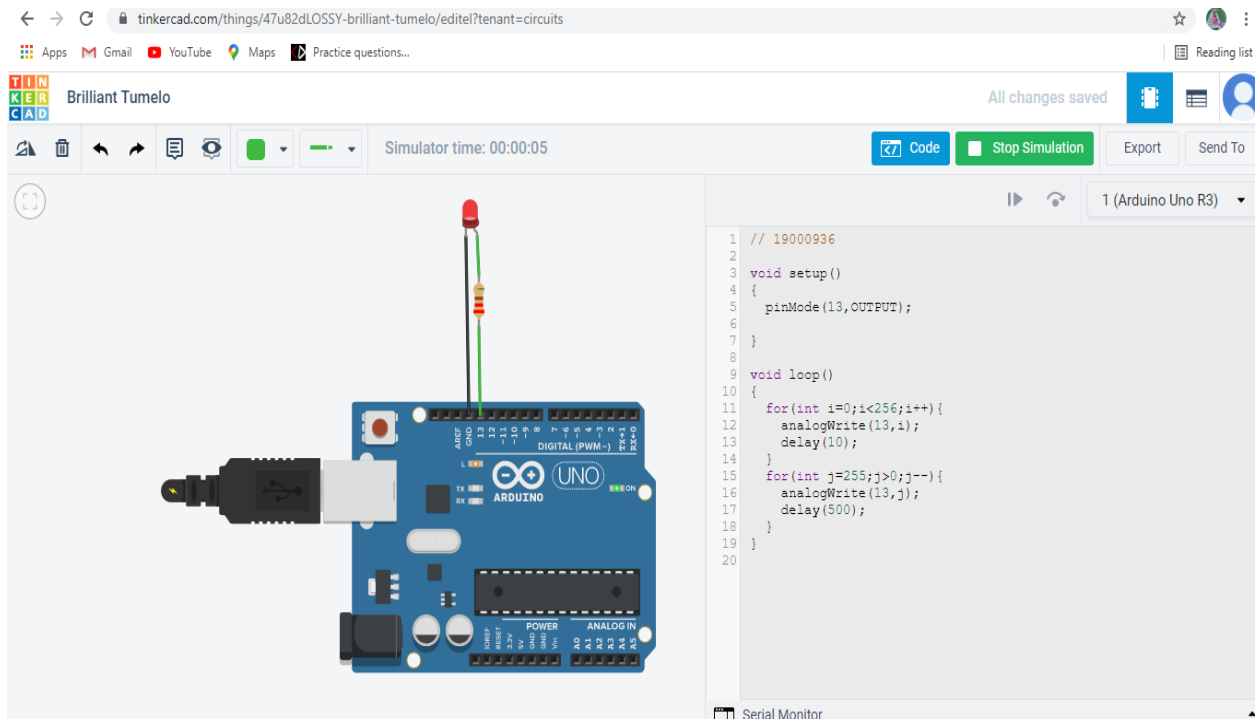
//19000936

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

void loop()
{
  digitalWrite(13, HIGH);
  delay(500); // Wait for 500 millisecond(s)
  digitalWrite(13, LOW);
  delay(500); // Wait for 500 millisecond(s)
}
```

2. Tune LED on / off by gradually changing the led brightness

```
// 19000936

void setup()
{
  pinMode(13,OUTPUT);

}

void loop()
{
  for(int i=0;i<256;i++){
    analogWrite(13,i);
    delay(10);
  }
  for(int j=255;j>0;j--){
    analogWrite(13,j);
    delay(500);
  }
}
```
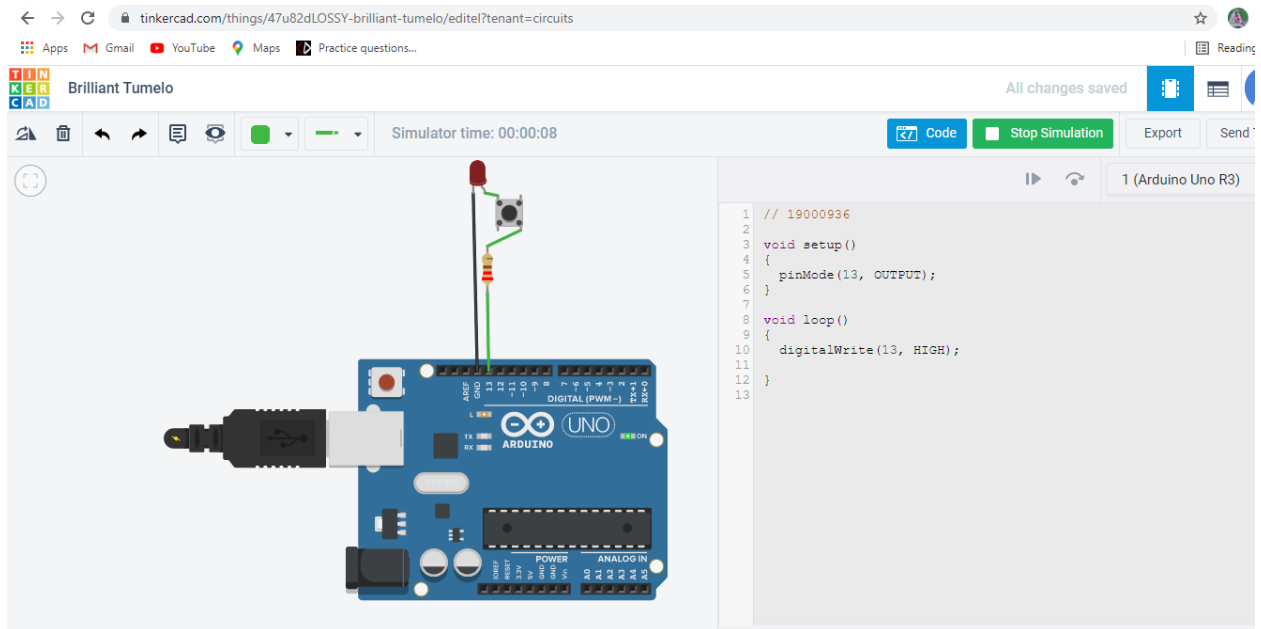
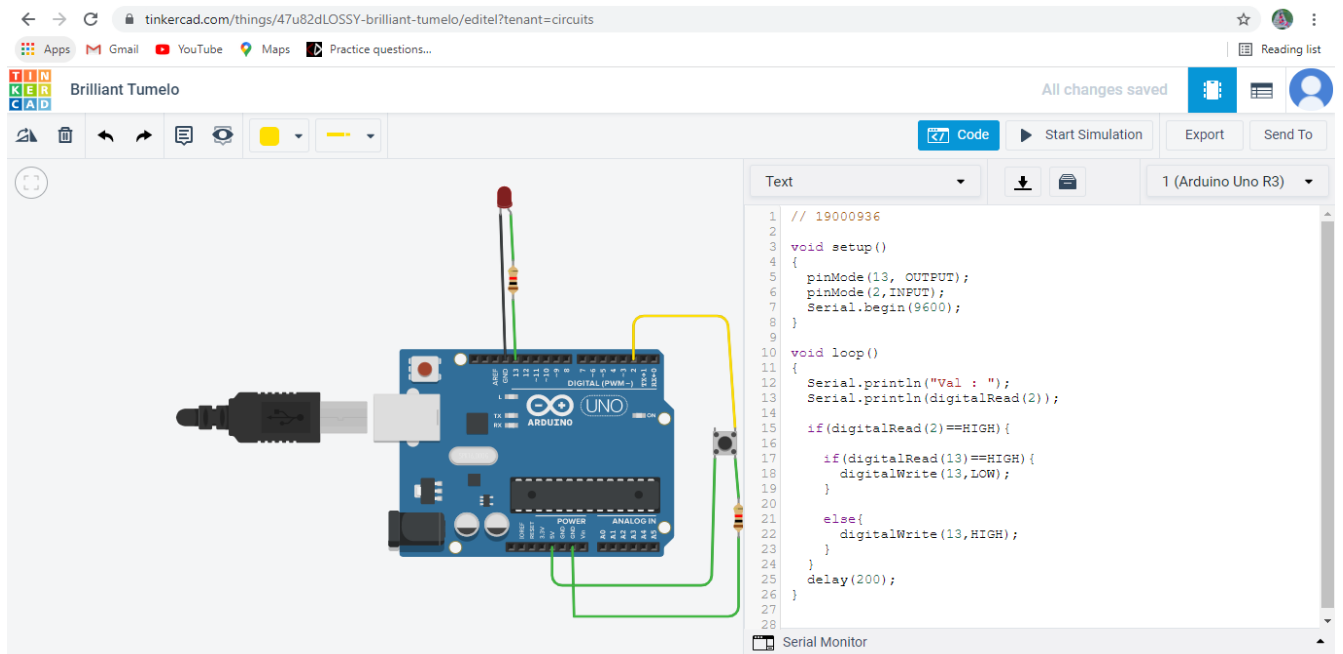## 3. Turn LED on / off by pressing a pushdown button (pressed = led on, released = led off)

// 19000936

void setup()

{

  pinMode(13, OUTPUT);

}

void loop()

{

  digitalWrite(13, HIGH);

}

4. Toggle LED on / off by pressing a pushdown button

// 19000936

```
void setup()

{

  pinMode(13, OUTPUT);

  pinMode(2,INPUT);

  Serial.begin(9600);

}

void loop()

{

  Serial.println("Val : ");

  Serial.println(digitalRead(2));


  if(digitalRead(2)==HIGH){
```
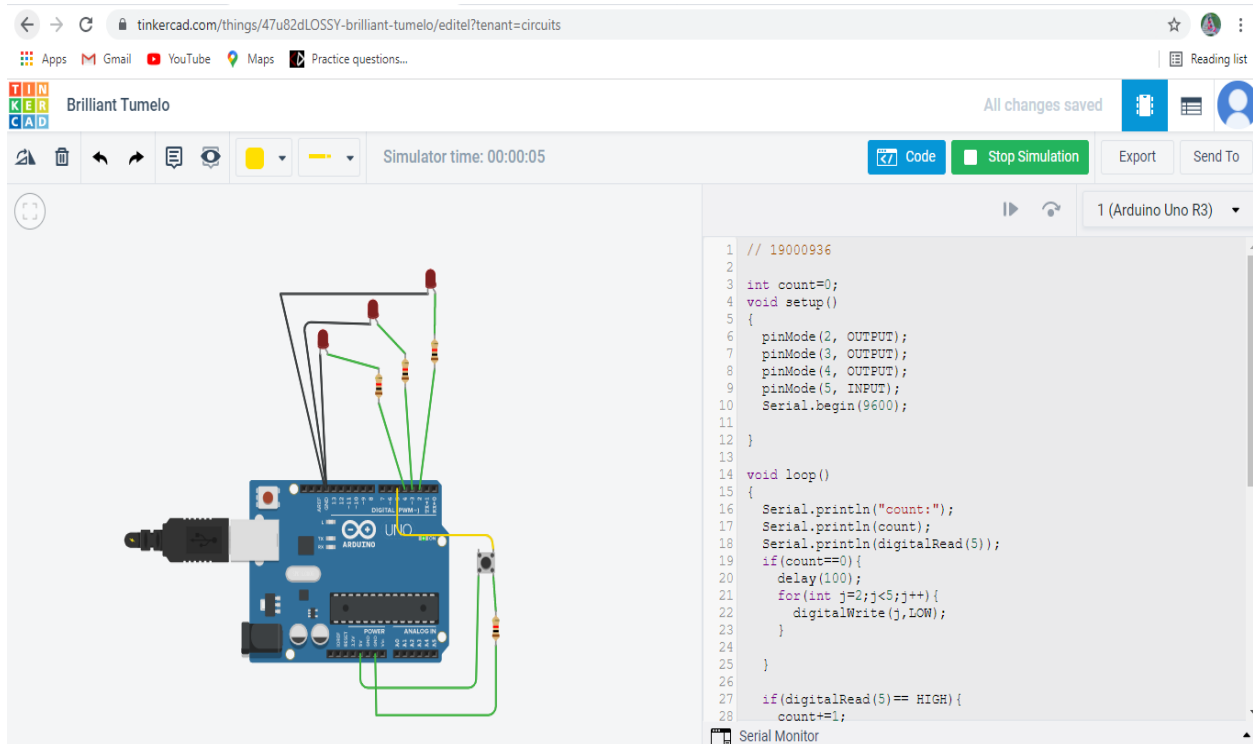
```
    if(digitalRead(13)==HIGH){

      digitalWrite(13,LOW);

    }


    else{

      digitalWrite(13,HIGH);

    }

  }

  delay(200);

}
```

5. Create 3 LED bit counter by pressing a pushdown button (each button press should increment the counter)

```
// 19000936

int count=0;
void setup()
{
  pinMode(2, OUTPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
  pinMode(5, INPUT);
  Serial.begin(9600);

}

void loop()
{
  Serial.println("count:");
  Serial.println(count);
  Serial.println(digitalRead(5));
  if(count==0){
    delay(100);
    for(int j=2;j<5;j++){
      digitalWrite(j,LOW);
    }

  }

  if(digitalRead(5)== HIGH){
    count+=1;

    if(count<8){
```

```
   int c=count;
  for(int i=2;i<5;i++){


   if(c%2==1){
    digitalWrite(i, HIGH);
   }


   else{
    digitalWrite(i,LOW);
   }
   c/=2;


  }
  delay(500);


 }
 else{
  count=0;
 }



 }
}
```
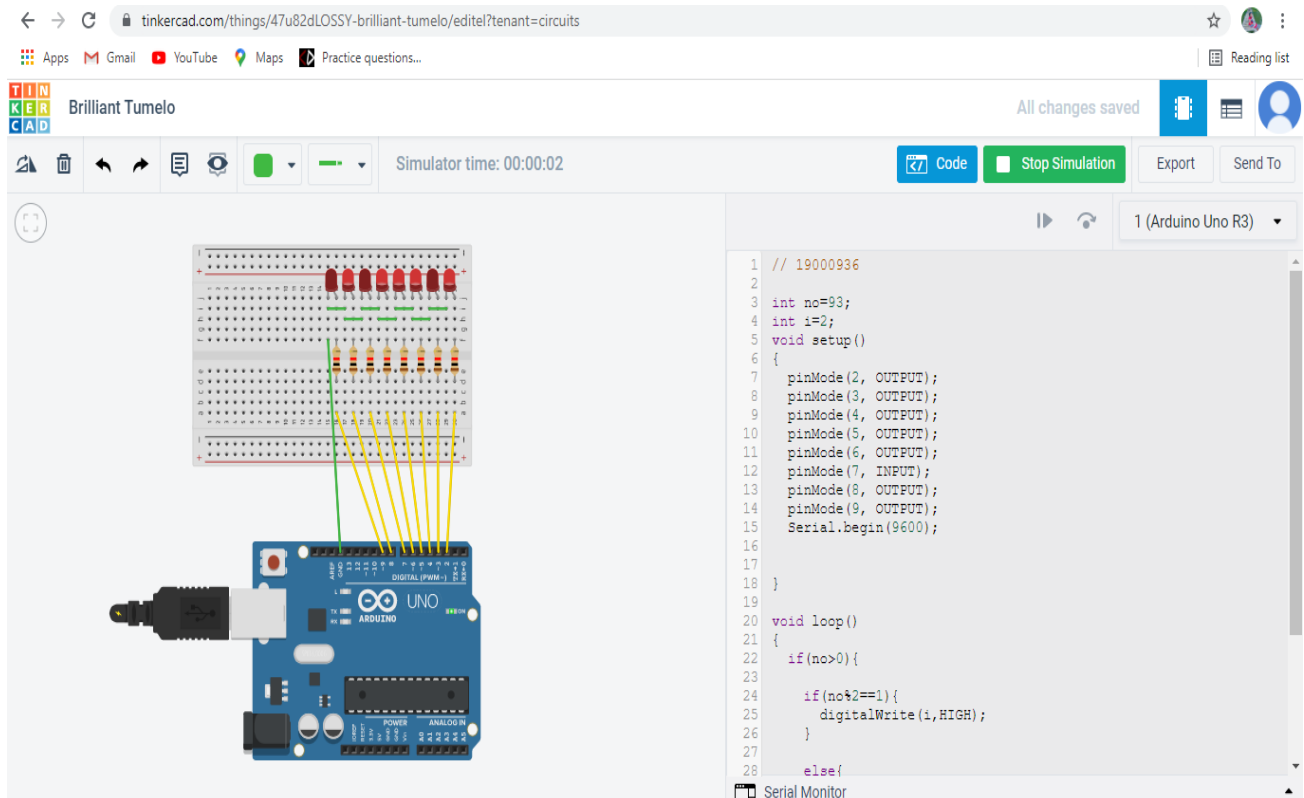
6. Show the binary pattern of your registration number using LEDs (1s by led on and 0s by led off) (higher marks will be given if you didn't use any loops)

2019/CS/093

93 - 01011101

// 19000936

int no=93;

int i=2;

void setup()

{

 pinMode(2, OUTPUT);

 pinMode(3, OUTPUT);

 pinMode(4, OUTPUT);

 pinMode(5, OUTPUT);

 pinMode(6, OUTPUT);

```
  pinMode(7, INPUT);

  pinMode(8, OUTPUT);

  pinMode(9, OUTPUT);

  Serial.begin(9600);



}


void loop()
{
 if(no>0){


   if(no%2==1){
     digitalWrite(i,HIGH);
   }


   else{
     digitalWrite(i,LOW);
   }


   no/=2;
  i++;
 }


}
```