Blind Stick

Project Title: Blind Stick

Project Lead: Bhakti Harale

Learning Objective:
• Simulate LDR and Thermistor workings.
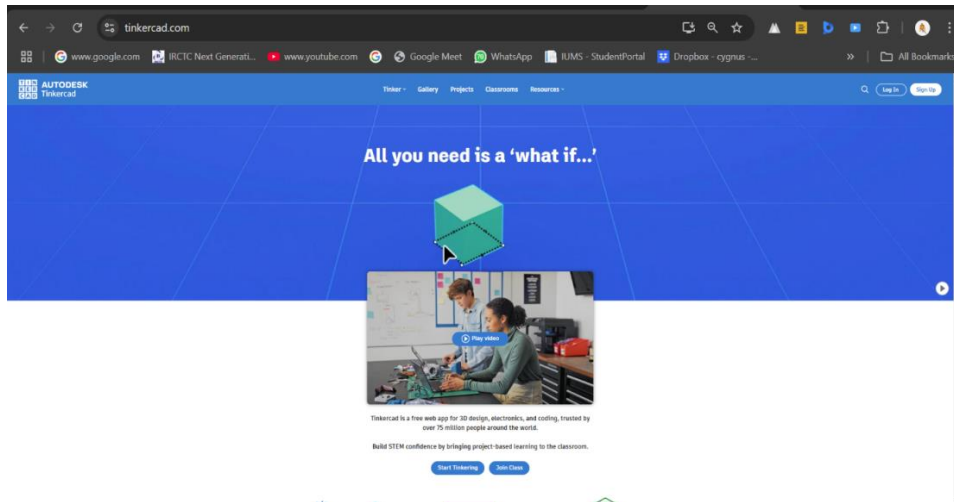• Use Tinkercad for electronics and Arduino projects.

Required Components:

1. Arduino nano(virtual, in Tinkercad)

2. Breadboard (virtual)

3. Connecting Wires

4. Buzzer

5. Ultrasonic sensor

6. Led

7. Servo Motor
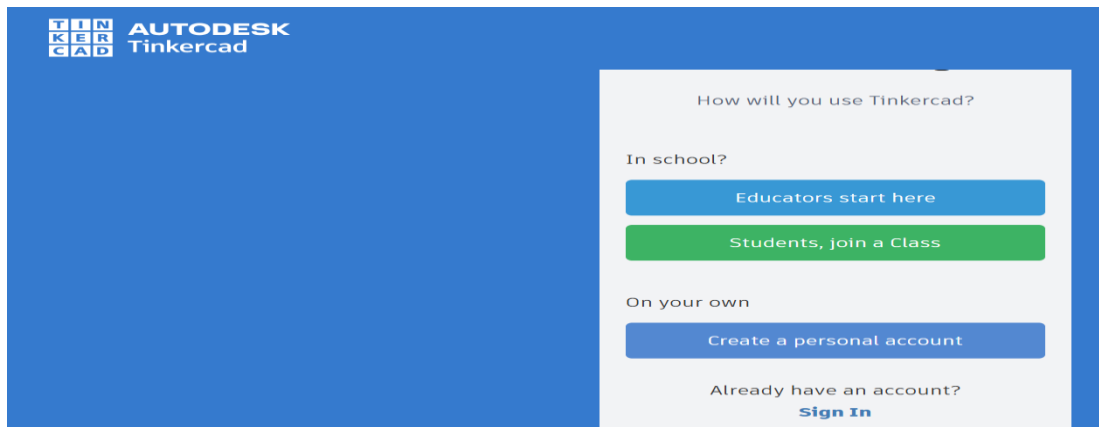
Step-by-Step Guide
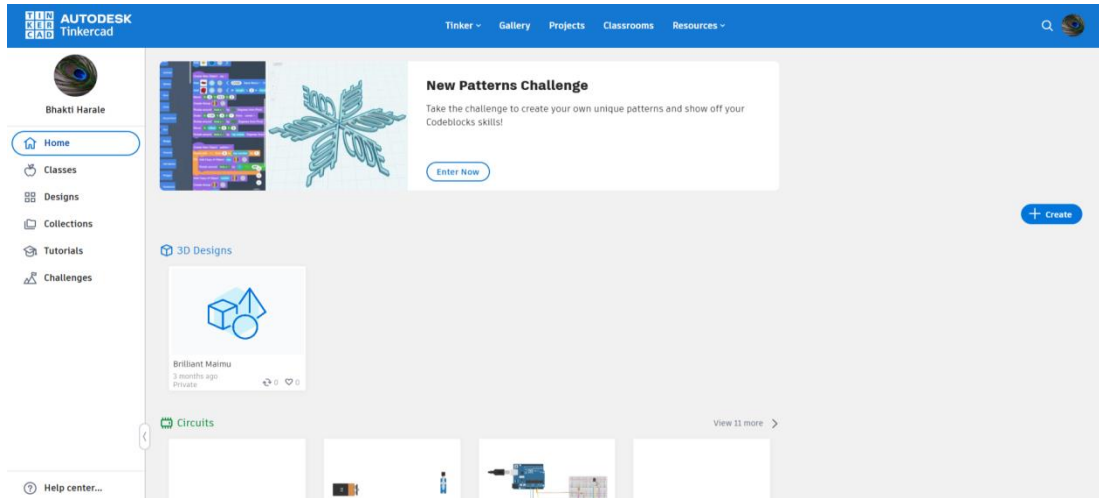
Step 1: Set up Your Tinkercad Project

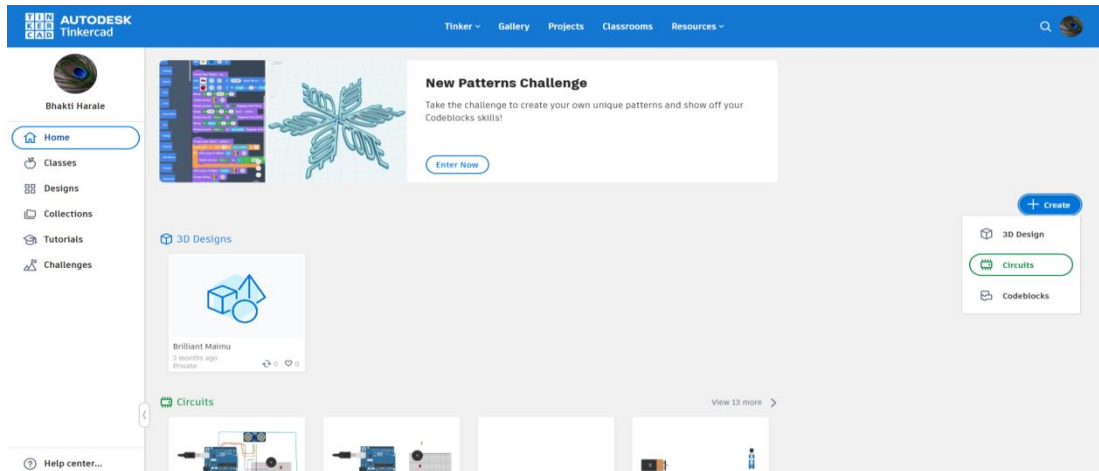1. Open Tinkercad in your web browser. (www.tinkercad.com)

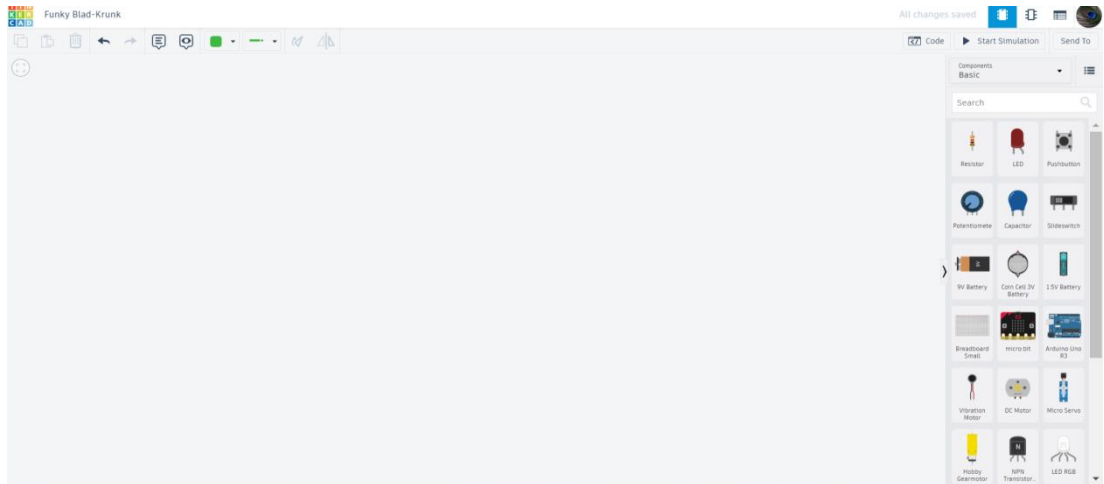2.Create a free account or log in if you already have one.

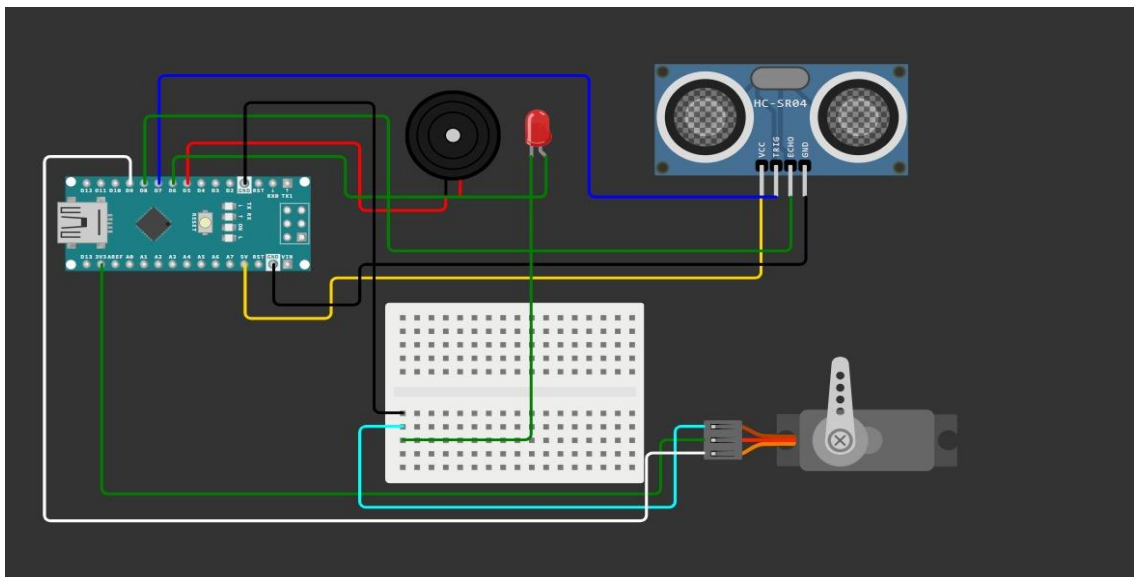3.Select **"Circuits"** from the Tinkercad dashboard

4.Click **"Create New Circuit"** to start a new project.

Circuit Diagram:

Code:

```
#include <Servo.h>
```

```cpp
const int trigPin = 7;

const int echoPin = 8;

const int ledPin = 6;

const int buzzerPin = 5;

const int servoPin = 9;


Servo myServo;


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

   pinMode(echoPin, INPUT);

   pinMode(ledPin, OUTPUT);

   pinMode(buzzerPin, OUTPUT);


   myServo.attach(servoPin);

   Serial.begin(9600);
}

void loop() {
   long duration, distance;
```

```arduino
    digitalWrite(trigPin, LOW);

    delayMicroseconds(2);


    digitalWrite(trigPin, HIGH);

    delayMicroseconds(10);

    digitalWrite(trigPin, LOW);

    duration = pulseIn(echoPin, HIGH);

    distance = (duration * 0.034)


    Serial.print("Distance: ");

    Serial.println(distance);


    if (distance < 20) {

        digitalWrite(ledPin, HIGH);

        digitalWrite(buzzerPin, HIGH);

        myServo.write(90);

    }
Else
{

        digitalWrite(ledPin, LOW);
```

```
      digitalWrite(buzzerPin, LOW);

      myServo.write(0);

   }


  delay(500);

}
```

Output:


```
Distance:20 397
Distance:20 396
Distance:20 397
Distance:20 397
Distance:20 397
Distance:20 397
Distance:20 396
```