SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

ASSIGNMENT – 1

SUBMITTED BY:

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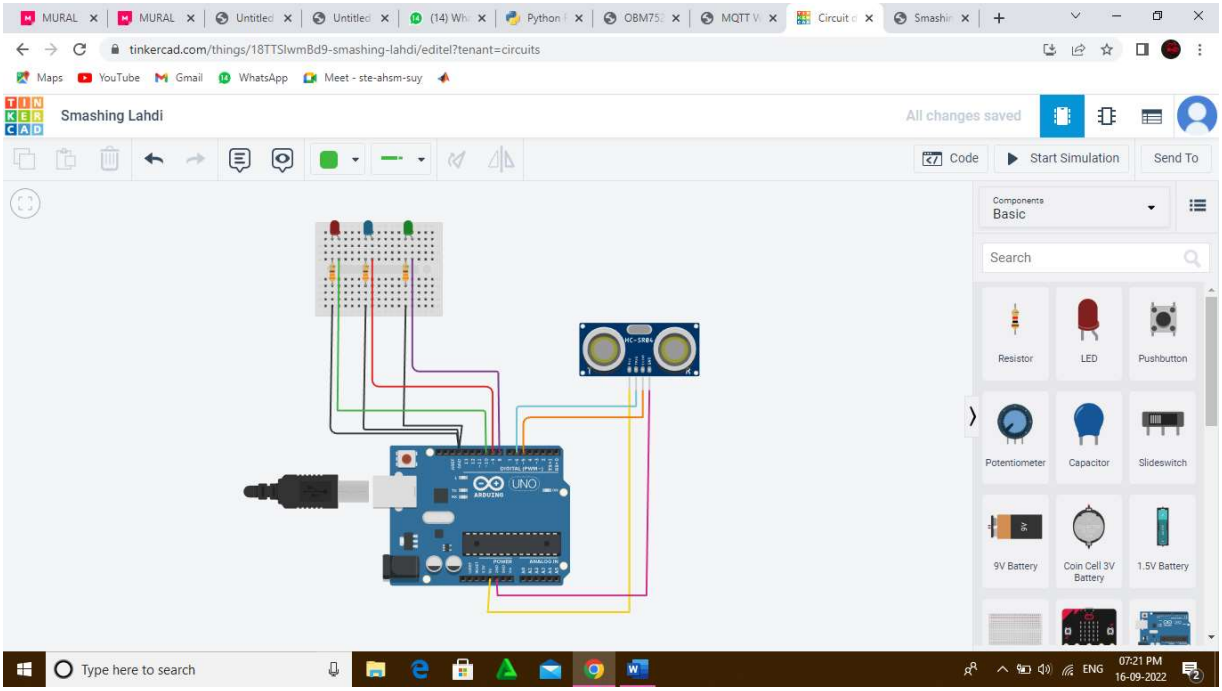
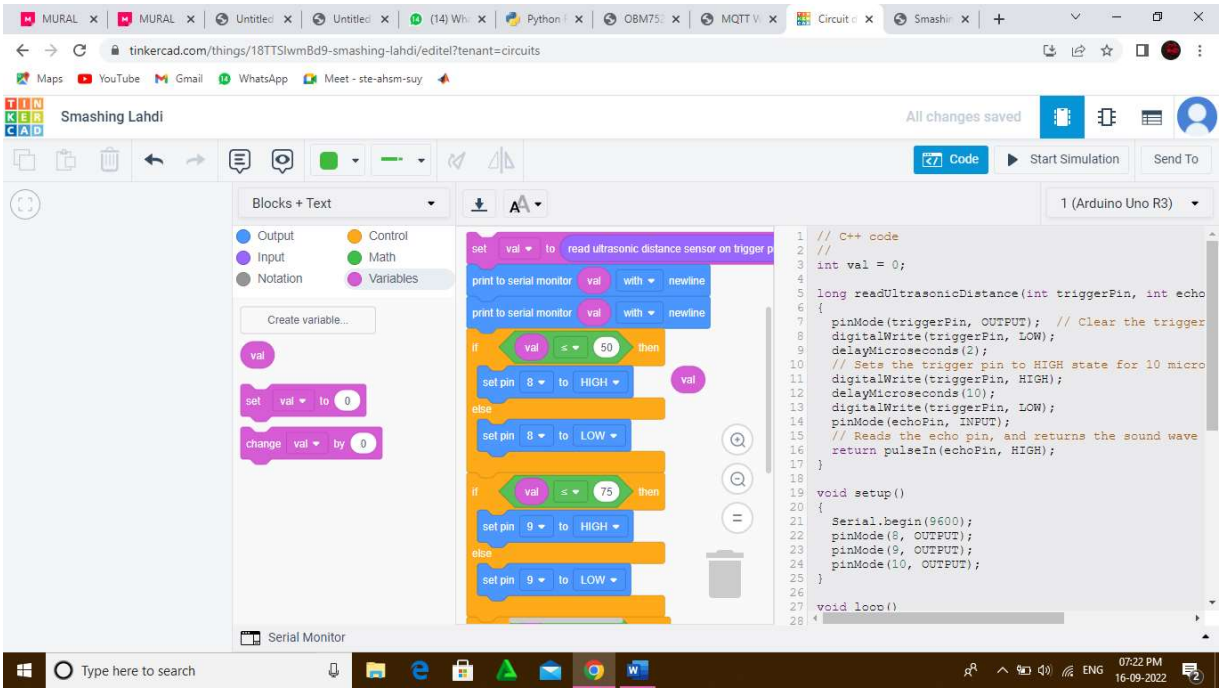
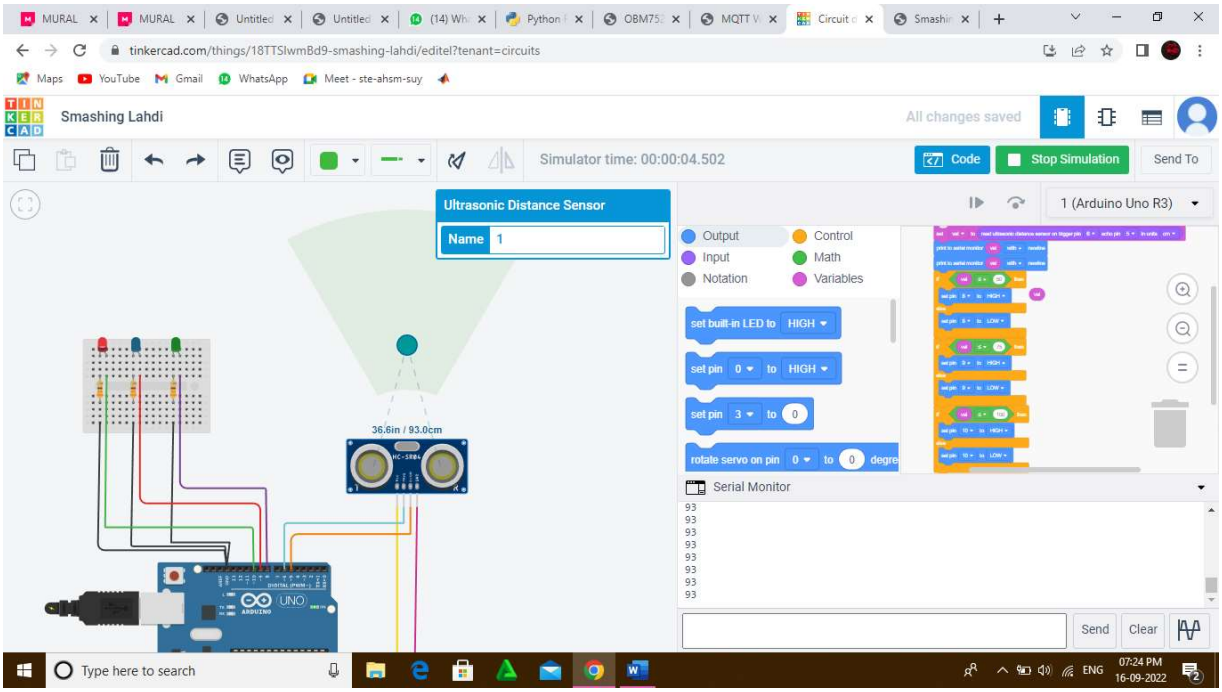
DISTANCE MEASUREMENT







Program

```
// C++ code
//
int val = 0;


long readUltrasonicDistance(int triggerPin, int echoPin)
{
  pinMode(triggerPin, OUTPUT);  // Clear the trigger
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  // Sets the trigger pin to HIGH state for 10 microseconds
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
```

```
  pinMode(echoPin, INPUT);
  // Reads the echo pin, and returns the sound wave travel time in microseconds
  return pulseIn(echoPin, HIGH);
}

void setup()
{
  Serial.begin(9600);
  pinMode(8, OUTPUT);
  pinMode(9, OUTPUT);
  pinMode(10, OUTPUT);
}

void loop()
{
  val = 0.01723 * readUltrasonicDistance(6, 5);
  Serial.println(val);
  Serial.print(val);
  if (val <= 50) {
    digitalWrite(8, HIGH);
  } else {
    digitalWrite(8, LOW);
  }
  if (val <= 75) {
    digitalWrite(9, HIGH);
  } else {
    digitalWrite(9, LOW);
  }
```

```
  if (val <= 100) {
    digitalWrite(10, HIGH);
  } else {
    digitalWrite(10, LOW);
  }
  delay(10); // Delay a little bit to improve simulation performance
}
```