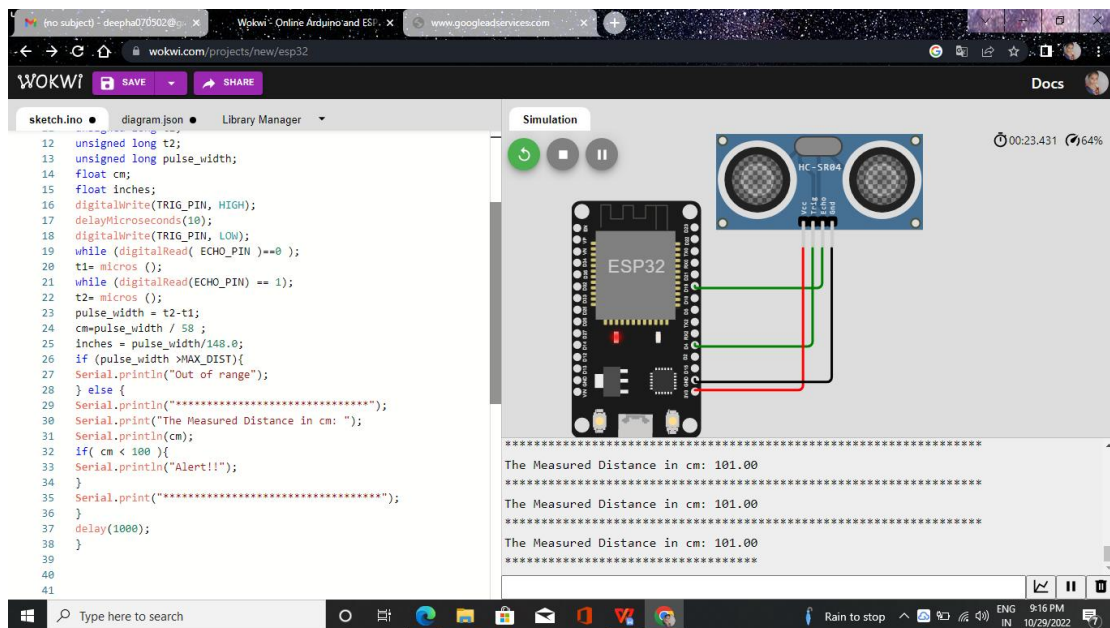
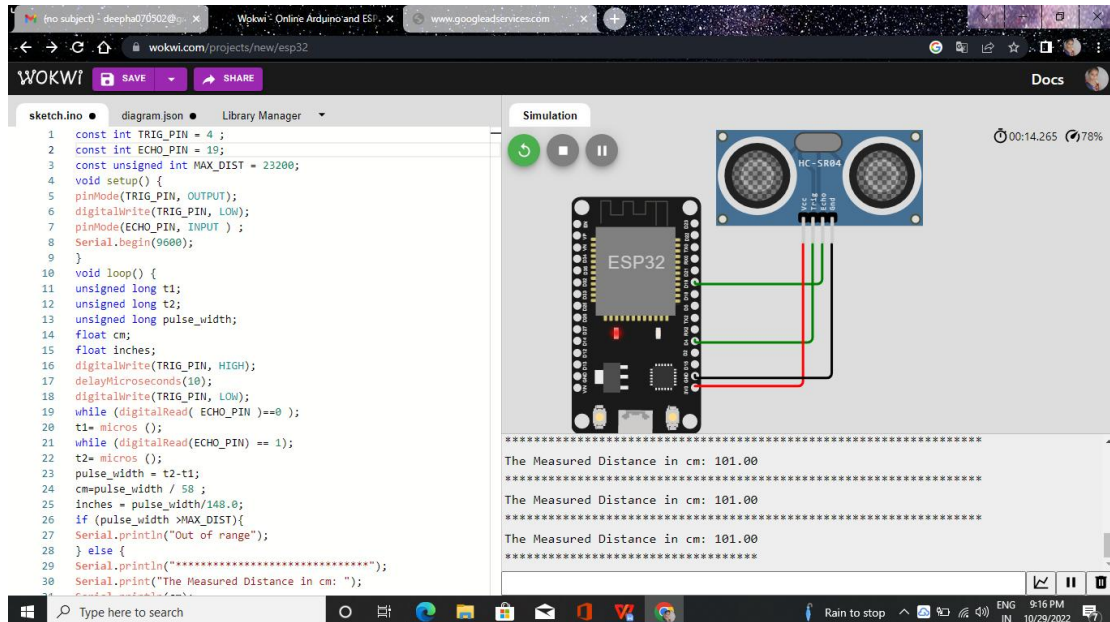


ASSIGNMENT - 4

CONNECTION IN WOKWI FOR ULTRASONIC SENSOR



LINK FOR WOKWI

<https://wokwi.com/projects/new/esp32>

CODE FOR ASSIGNMENT

```
const int TRIG_PIN = 4 ;
const int ECHO_PIN = 19;
const unsigned int MAX_DIST = 23200;
void setup() {
  pinMode(TRIG_PIN, OUTPUT);
  digitalWrite(TRIG_PIN, LOW);
  pinMode(ECHO_PIN, INPUT ) ;
  Serial.begin(9600);
}
void loop() {
  unsigned long t1;
  unsigned long t2;
  unsigned long pulse_width;
  float cm;
  float inches;
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  while (digitalRead( ECHO_PIN )==0 );
  t1= micros ();
  while (digitalRead(ECHO_PIN) == 1);
  t2= micros ();
  pulse_width = t2-t1;
  cm=pulse_width / 58 ;
  inches = pulse_width/148.0;
  if (pulse_width >MAX_DIST){
    Serial.println("Out of range");
  } else {
    Serial.println("*****");
    Serial.print("The Measured Distance in cm: ");
    Serial.println(cm);
    if( cm < 100 ){
      Serial.println("Alert!!");
    }
    Serial.print("*****");
  }
  delay(1000);
}
```

IBM CLOUD

The screenshot shows the IBM Cloud dashboard interface. At the top, the browser address bar displays 'cloud.ibm.com'. The dashboard header includes the IBM Cloud logo, a search bar, and navigation links for 'Catalog', 'Manage', and the user's account 'Deepha Manoharan's A...'. A dropdown menu for the account shows options: 'Edit dashboard', 'Upgrade account', and 'Create resource'.

The main section is titled 'Dashboard' and features a 'For you' row with six cards:

- Build**: Explore IBM Cloud with this selection of easy starter tutorials and services. (Getting started, 5 min)
- Monitor your resources**: Get visibility into the performance and health of your resources. (Getting started, 5 min)
- Create and deploy an application**: Browse our starter kits, and then select one to jump start the process to create and deploy your app. (Getting started, 5 min)
- Get started with machine learning + Watson Studio**: Build, run and manage AI models. Prepare data and build models anywhere using open source code or visual modeling. Predict and optimize your outcomes. (Getting Started, 10 min)
- Build with Watson**: Chatbots, insights, recognizers, and more. Explore the AI platform for business. (Popular, 3 min)
- Build a Watson**: Deploy interfaces for any API channel. (Getting started, 5 min)

Below the 'For you' row, there are three sections:

- User access**: Includes a 'Manage users' link and a prompt to 'Enter email addresses below to jump directly into the invite user setup:'.
- News**: Features a 'View all' link and a highlighted article: 'Announcing IBM Cloud Pak for Network Automation Version 2.4'. Below it, a link reads 'No Prerequisites for IBM Cloud Certifications'.
- Planned maintenance**: Includes a 'View all' link and a blue chat icon.

The bottom of the image shows a Windows taskbar with the search bar 'Type here to search' and various application icons. The system tray on the right indicates 'Rain to stop', 'ENG IN', and the date '10/29/2022'.