Assignment -4

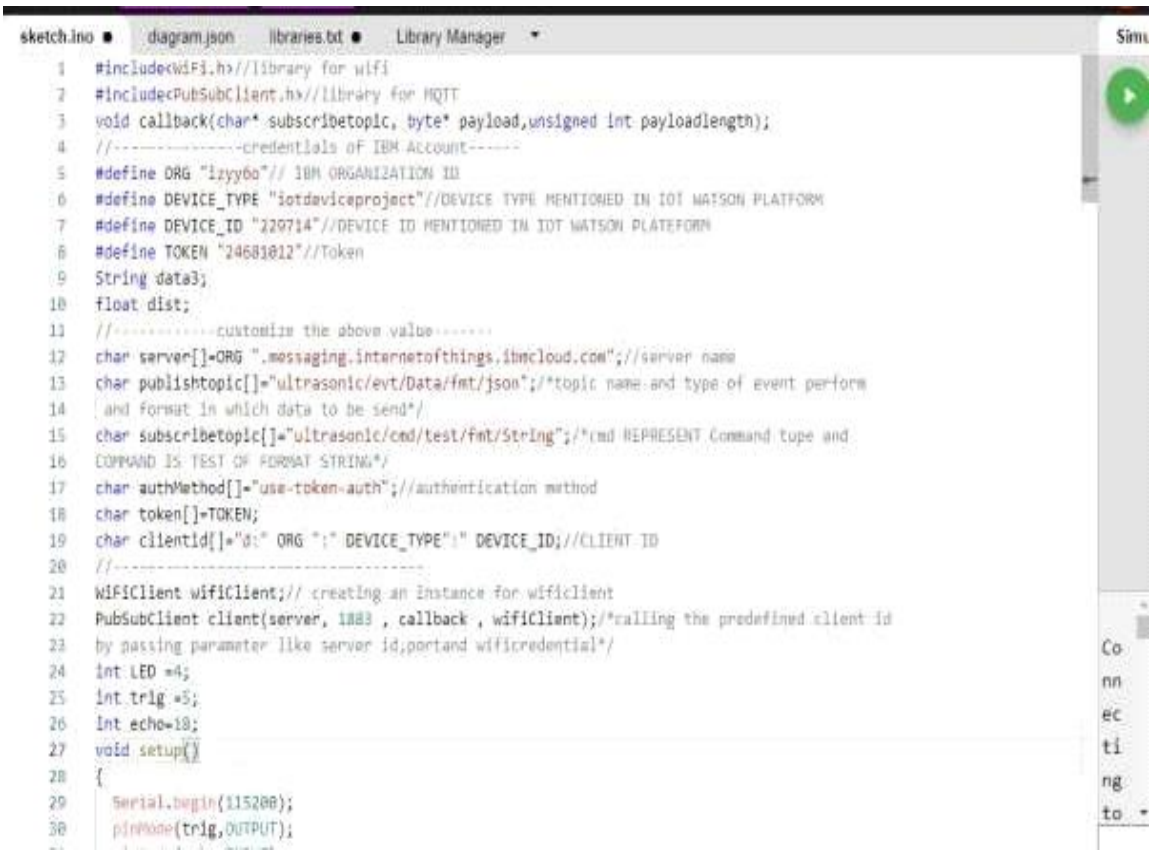
Python Programming

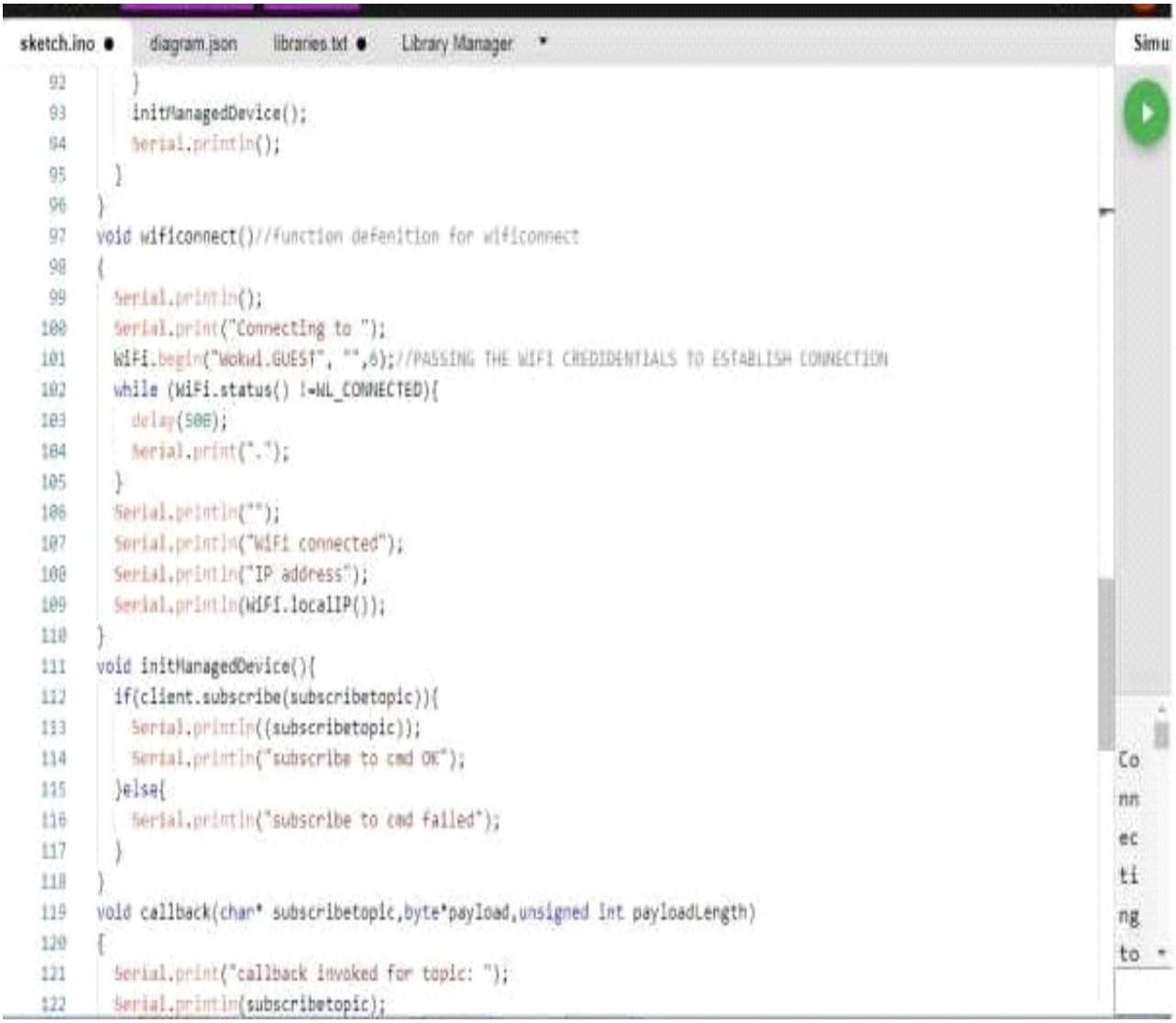
Assignment Date	26 October 2022
Student Name	Vidyalakshmi.S
Student Roll Number	951219106086
Maximum Marks	2 Marks

Question-1:

Write code and connections in WOKWi for ultrasonic sensor.
Whenever distance is less than 100 cms send "alert" to IBM cloud and display in devicerecentevents.
Upload document with WOKWi share link and images of IBM cloud.

Solution:




sketch.ino
diagram.json
libraries.txt
Library Manager
Simu
}
initManagedDevice();
Serial.println();
}
}
void wificonnect()//function defenition for wificonnect
{
Serial.println();
Serial.print("Connecting to ");
WiFi.begin("Wokwi-GUEST", "",6);//PASSING THE WIFI CREDIDENTIALS TO ESTABLISH CONNECTION
while (WiFi.status() !=WL_CONNECTED){
delay(500);
Serial.print(".");
}
Serial.println("");
Serial.println("WiFi connected");
Serial.println("IP address");
Serial.println(WiFi.localIP());
}
void initManagedDevice(){
if(client.subscribe(subscribetopic)){
Serial.println((subscribetopic));
Serial.println("subscribe to cmd OK");
}else{
Serial.println("subscribe to cmd failed");
}
}
void callback(char* subscribetopic,byte*payload,unsigned int payloadLength)
{
Serial.print("callback invoked for topic: ");
Serial.println(subscribetopic);
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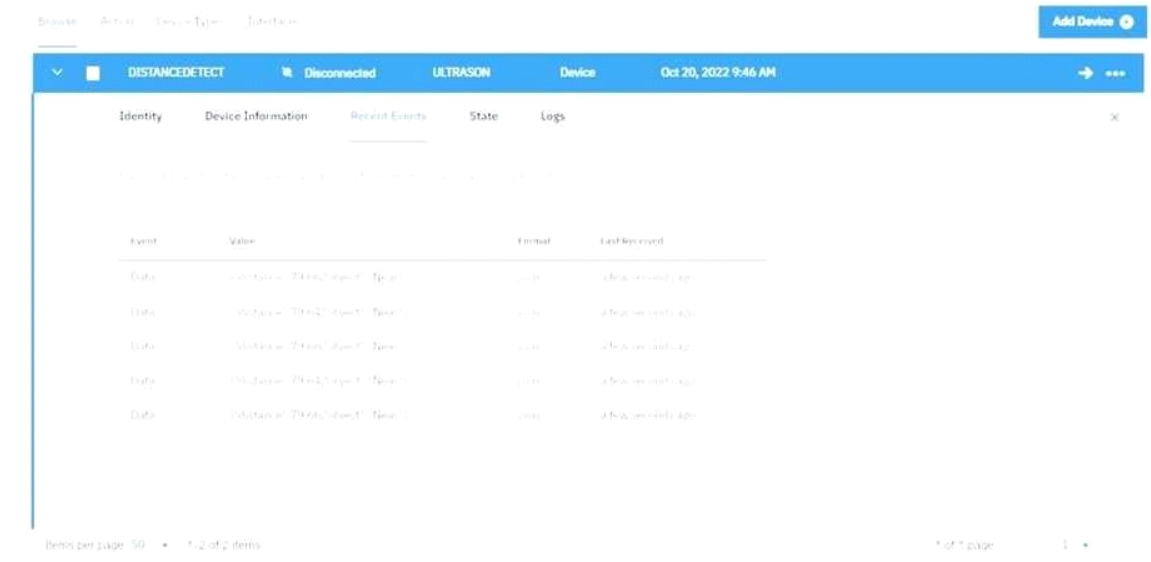
to

sketch.ino ● diagram.json libraries.txt ● Library Manager

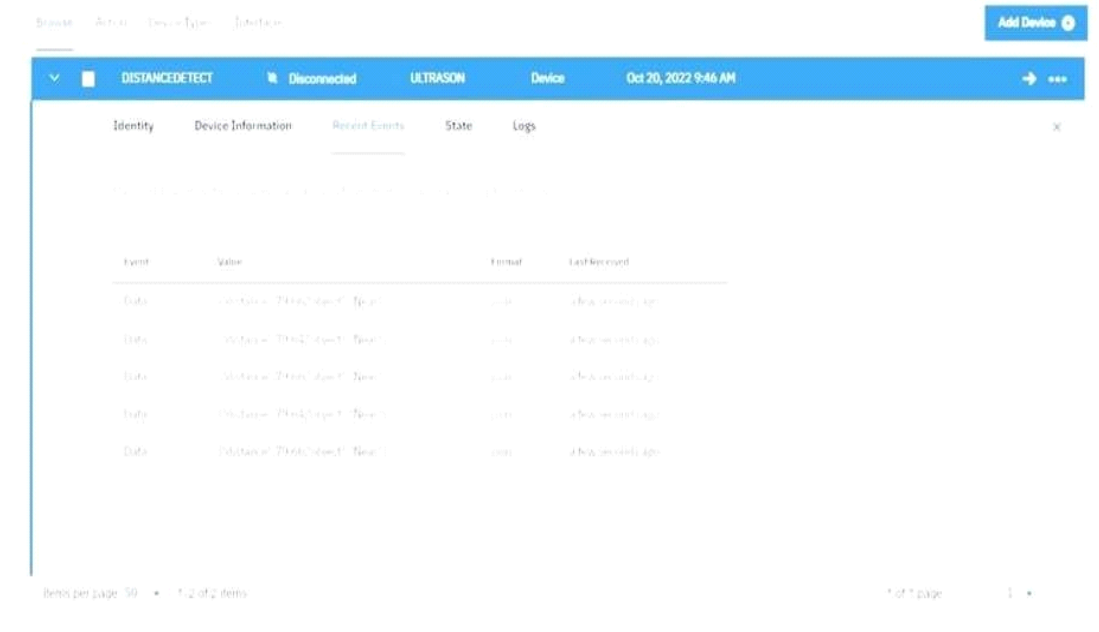
```
for(int i=0; i< payloadLength; i++){
  //Serial.print((char)payload[i]);
  data3 +=(char)payload[i];
}
//Serial.println("dta: "+ data3);
//if(data3=="Hear")
//{
//Serial.println(data3);
//digitalWrite(LED,HIGH);
//}
//else
//{
//Serial.println(data3);
//digitalWrite(LED,LOW);
//}
data3="";
}
```

OUTPUT:

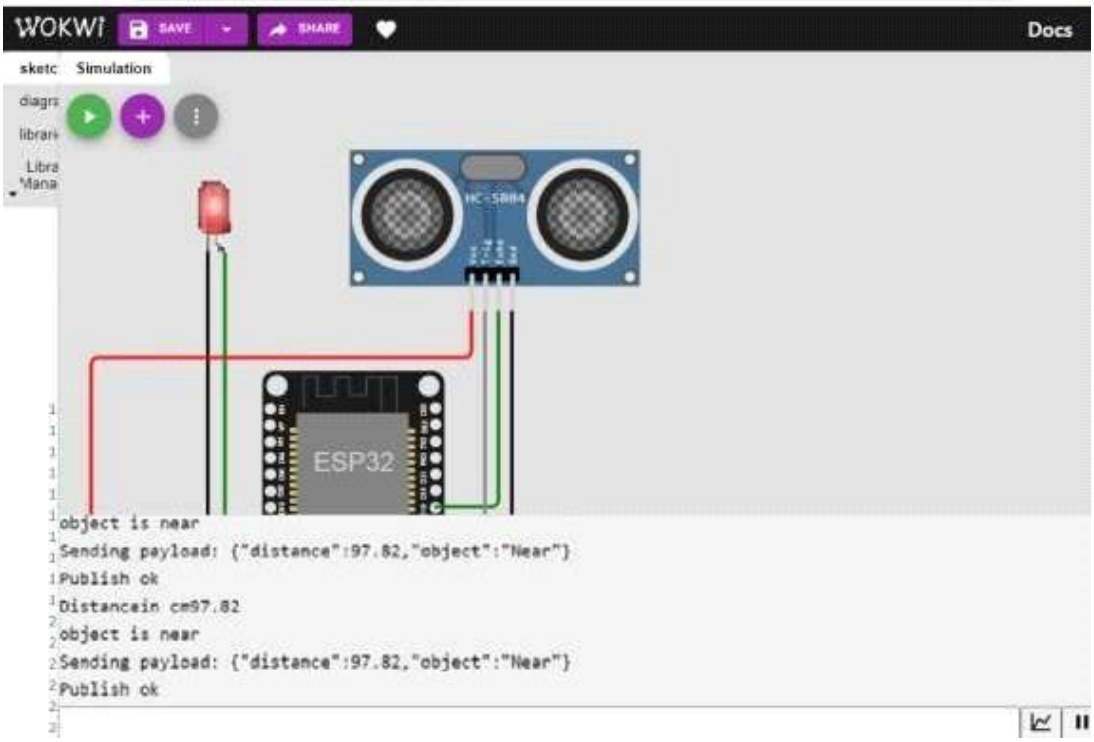
DATA IS SENT TO IBM CLOUD WHEN NO OBJECT IS DETECTED



When no object is detected



When object is detected in ultrasonic detector


WOKWI
SAVE
SHARE
Docs
sketc
Simulation
HC-SR04
ESP32
object is near
Sending payload: {"distance":97.82,"object":"Near"}
Publish ok
Distancein cm97.82
object is near
Sending payload: {"distance":97.82,"object":"Near"}
Publish ok