Question-1:

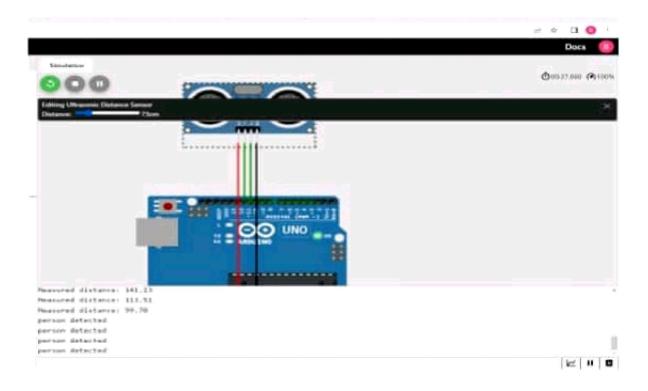
Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cms send "alert" to ibm cloud and display in device recent events.

Solution:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization ="e03g10"
#define deviceType=" Arduino"
#define deviceld ="2502"
#define authMethod ="use-token-auth"
#define authToken ="12345678"
void setup() {
Serial.begin(9600);
 pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
float readDistanceCM() {
 digitalWrite(TRIG_PIN, LOW);
 delayMicroseconds(2);
 digitalWrite(TRIG_PIN, HIGH);
 delayMicroseconds(10);
 digitalWrite(TRIG_PIN, LOW);
 int duration = pulseIn(ECHO_PIN, HIGH);
 return duration * 0.034 / 2;
```

```
void loop() {
  float distance = readDistanceCM();
  if(distance <= 100)
  {
    Serial.println("person detected ");
  }
  else{
    Serial.print("Measured distance: ");
    Serial.println(readDistanceCM());
  }
  delay(1000);
}</pre>
```

}



Wokwi Link: https://wokwi.com/projects/346567349532361298