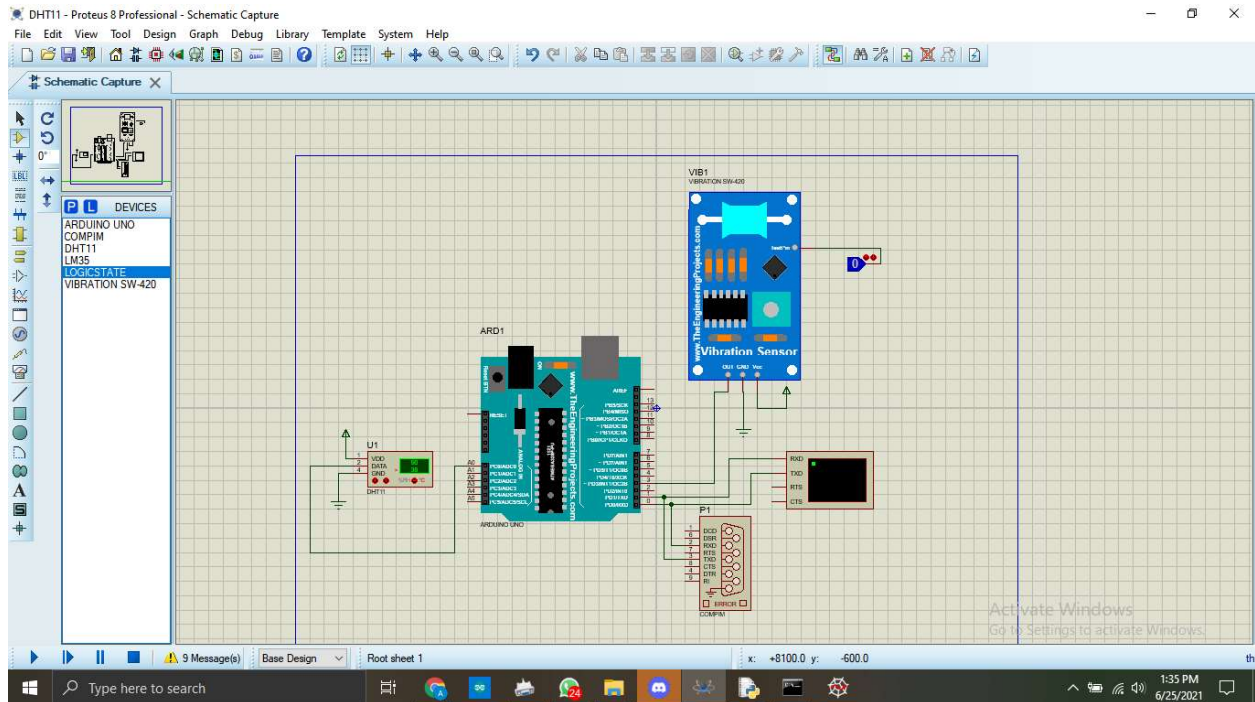
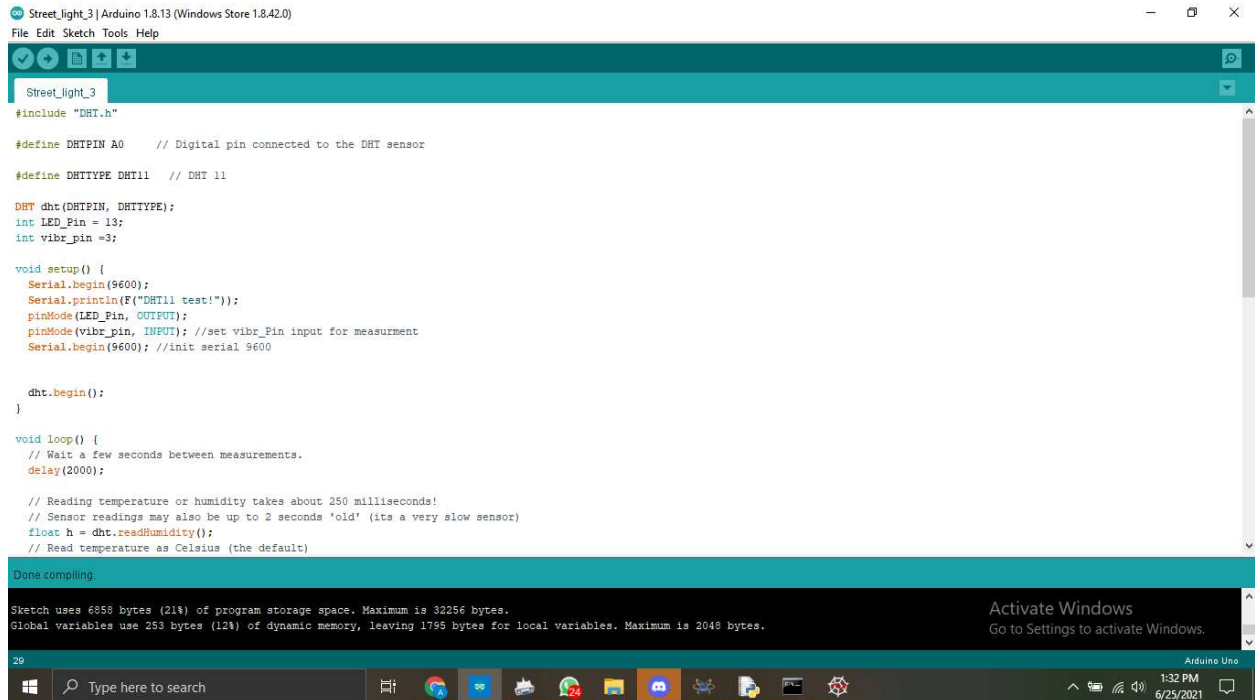


TASK 2&3

A. Fullscreen Screenshot of proteus.



B. Screenshot of complete Arduino code.



Street_light_3 | Arduino 1.8.13 (Windows Store 1.8.42.0)

File Edit Sketch Tools Help

```
#include "DHT.h"

#define DHTPIN A0 // Digital pin connected to the DHT sensor

#define DHTTYPE DHT11 // DHT 11

DHT dht(DHTPIN, DHTTYPE);
int LED_Pin = 13;
int vibr_pin = 3;

void setup() {
  Serial.begin(9600);
  Serial.println(F("DHT11 test"));
  pinMode(LED_Pin, OUTPUT);
  pinMode(vibr_pin, INPUT); //set vibr_Pin input for measurement
  Serial.begin(9600); //init serial 9600

  dht.begin();
}

void loop() {
  // Wait a few seconds between measurements.
  delay(2000);

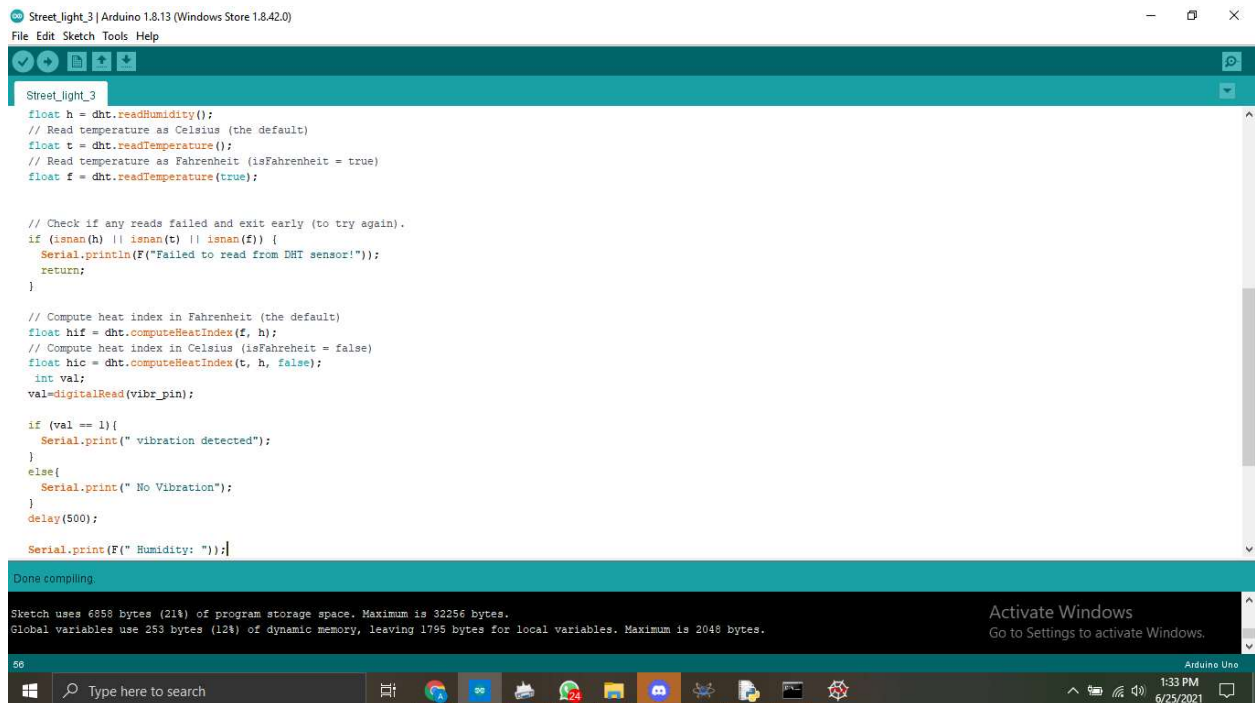
  // Reading temperature or humidity takes about 250 milliseconds!
  // Sensor readings may also be up to 2 seconds 'old' (its a very slow sensor)
  float h = dht.readHumidity();
  // Read temperature as Celsius (the default)
```

Done compiling.

Sketch uses 6858 bytes (21%) of program storage space. Maximum is 32256 bytes.
Global variables use 253 bytes (12%) of dynamic memory, leaving 1795 bytes for local variables. Maximum is 2048 bytes.

29

Windows taskbar: Type here to search, icons for File Explorer, Microsoft Edge, Task View, and others. System tray shows the time as 1:32 PM on 6/25/2021.



Street_light_3 | Arduino 1.8.13 (Windows Store 1.8.42.0)

File Edit Sketch Tools Help

```
float h = dht.readHumidity();
// Read temperature as Celsius (the default)
float t = dht.readTemperature();
// Read temperature as Fahrenheit (isFahrenheit = true)
float f = dht.readTemperature(true);

// Check if any reads failed and exit early (to try again).
if (isnan(h) || isnan(t) || isnan(f)) {
  Serial.println(F("Failed to read from DHT sensor!"));
  return;
}

// Compute heat index in Fahrenheit (the default)
float hif = dht.computeHeatIndex(f, h);
// Compute heat index in Celsius (isFahrenheit = false)
float hic = dht.computeHeatIndex(t, h, false);
int val;
val=digitalRead(vibr_pin);

if (val == 1){
  Serial.print(" vibration detected");
}
else{
  Serial.print(" No Vibration");
}
delay(500);

Serial.print(F(" Humidity: "));|
```

Done compiling.

Sketch uses 6858 bytes (21%) of program storage space. Maximum is 32256 bytes.
Global variables use 253 bytes (12%) of dynamic memory, leaving 1795 bytes for local variables. Maximum is 2048 bytes.

36

Windows taskbar: Type here to search, icons for File Explorer, Microsoft Edge, Task View, and others. System tray shows the time as 1:33 PM on 6/25/2021.

Street_light_3 | Arduino 1.8.13 (Windows Store 1.8.42.0)

File Edit Sketch Tools Help

```
// Compute heat index in Fahrenheit (the default)
float hif = dht.computeHeatIndex(f, h);
// Compute heat index in Celsius (isFahrenheit = false)
float hic = dht.computeHeatIndex(t, h, false);
int val;
val=digitalRead(vibr_pin);

if (val == 1){
  Serial.print(" vibration detected");
}
else{
  Serial.print(" No Vibration");
}
delay(500);

Serial.print(F(" Humidity: "));
Serial.print(h);
Serial.print(F(" Temperature: "));
Serial.print(t);
Serial.print(F("C "));
Serial.print(f);
Serial.print(F("F Heat index: "));
Serial.print(hic);
Serial.print(F("C "));
Serial.print(hif);
Serial.println(F("F"));
}
```

Done compiling.

Sketch uses 6858 bytes (21% of program storage space. Maximum is 32256 bytes.
Global variables use 253 bytes (12% of dynamic memory, leaving 1795 bytes for local variables. Maximum is 2048 bytes.

Activate Windows
Go to Settings to activate Windows.

Arduino Uno

1:33 PM
6/25/2021

C. Data uploaded on firebase.(Firebase Window)

Python sample - Firebase console

console.firebase.google.com/u/0/project/python-sample-4df98/database/python-sample-4df98-default-rtddb/data/~2F

Apps Gmail YouTube Maps

Firebase

- Project Overview
- Build**
 - Authentication
 - Firestore Database
 - Realtime Database
 - Storage
 - Hosting
 - Functions
 - Machine Learning
- Release & Monitor
 - Crashlytics, Performance, Test La...
- Extensions
- Spark
 - Free \$0/month
 - Upgrade

Python sample

Protect your Realtime Database resources from abuse, such as timing fraud or phishing. [Configure App Check](#)

<https://python-sample-4df98-default-rtddb.firebaseio.com/>

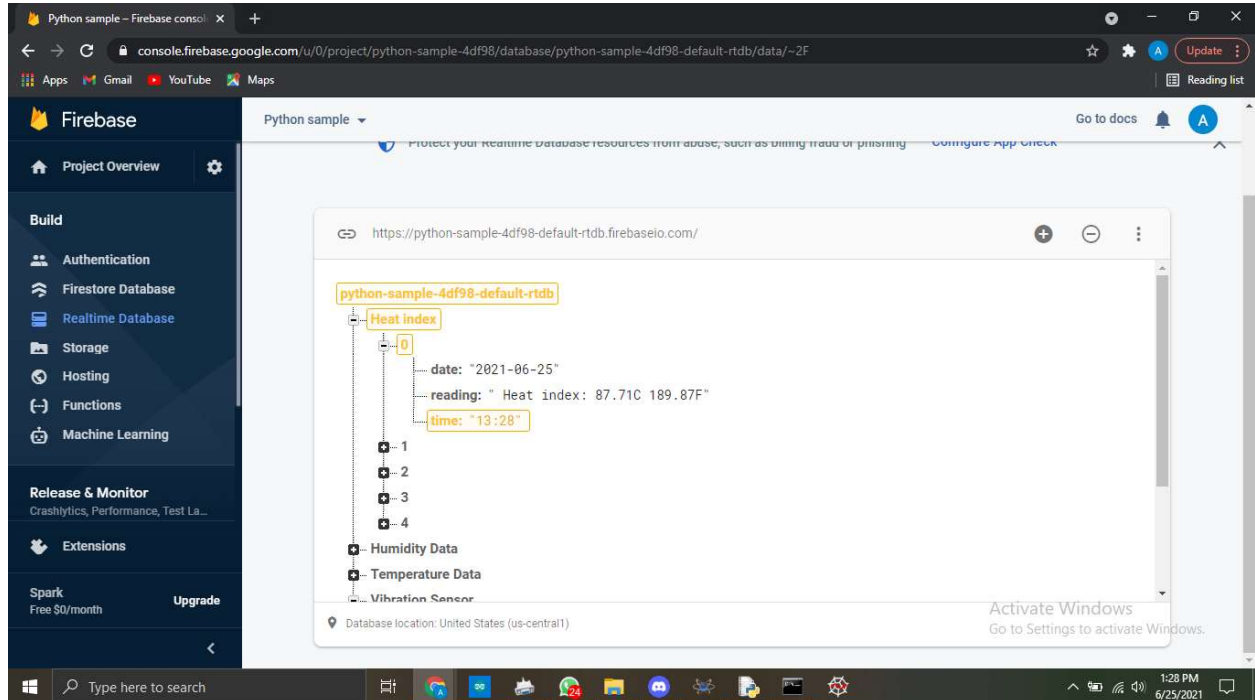
python-sample-4df98-default-rtddb

- Heat index
- Humidity Data
- Temperature Data
- Vibration Sensor
 - 0
 - date: "2021-06-25"
 - reading: " No Vibration"
 - time: "13:27"
 - 1
 - 2
 - 3
 - 4

Database location: United States (us-central1)

Activate Windows
Go to Settings to activate Windows.

1:27 PM
6/25/2021



D. Screenshot of proteus while simulation.

