NORTH SOUTH UNIVERSITY

Center Of Excellence in Higher Education

Department of Electrical and Computer Engineering

Project Progress Report

"Protisruti"

Junior Design (CSE299)

Section: 16

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1. PROGRESS & ACHIEVEMENTS

As per the project proposal's stage one, where all the analysis and planning have been done. We have collected all the necessary equipment so far, initially what we needed. The whole team is working equally here.

We have set the PI, and now it is working with the wifi connection. Even PI has been able to read the sensors. YL-69 Soil Hygrometer, DS18B20 Digital Temperature Humidity Sensor Module, and Light Dependent Resistor(LDR) the three sensors we have read so far. MQ-4 Methane Natural Gas Sensor and MQ-5 Smoke Gas Detector Sensor were supposed to use, but we are not using these because these sensors are analog which is pretty challenging to add with PI. It can be, but the convertor to use it is so expensive and out of the market. So it will be our future challenge to add those, but we are not working with those for the time being.

The significant part for us now is that we have sent sensors reading data to the Firebase. Each sensor reading data is storing within 10 to 5 minutes timestamps. So, this is so far we could go until now since we started working from the very beginning of this semester.

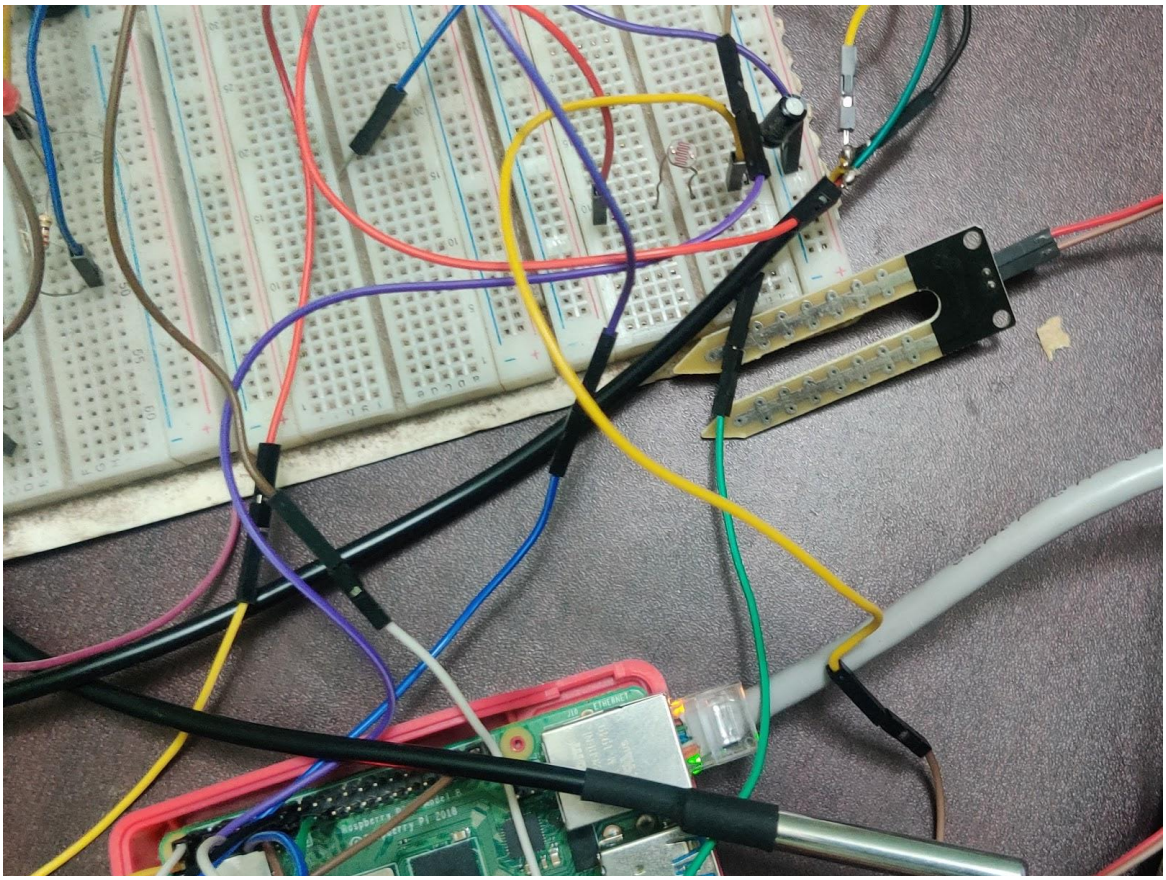


Fig: The whole device.

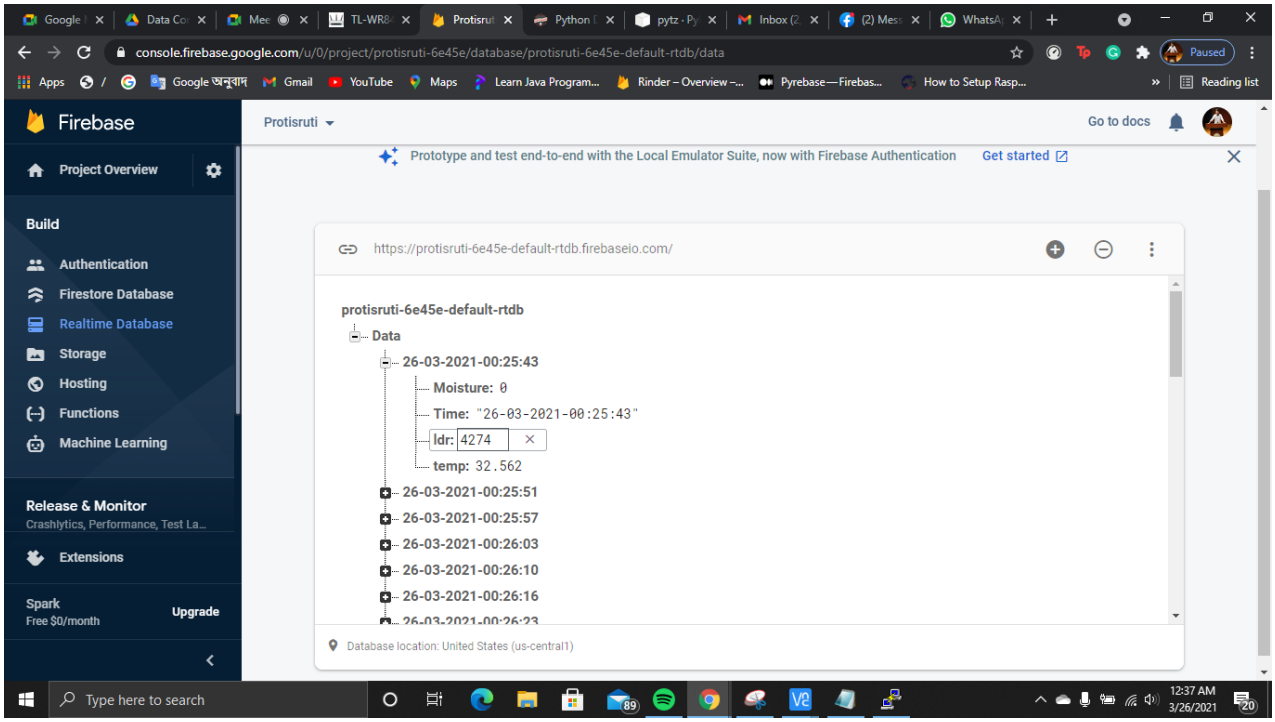


Fig: Data storing within 10 to 5 minutes timestamps

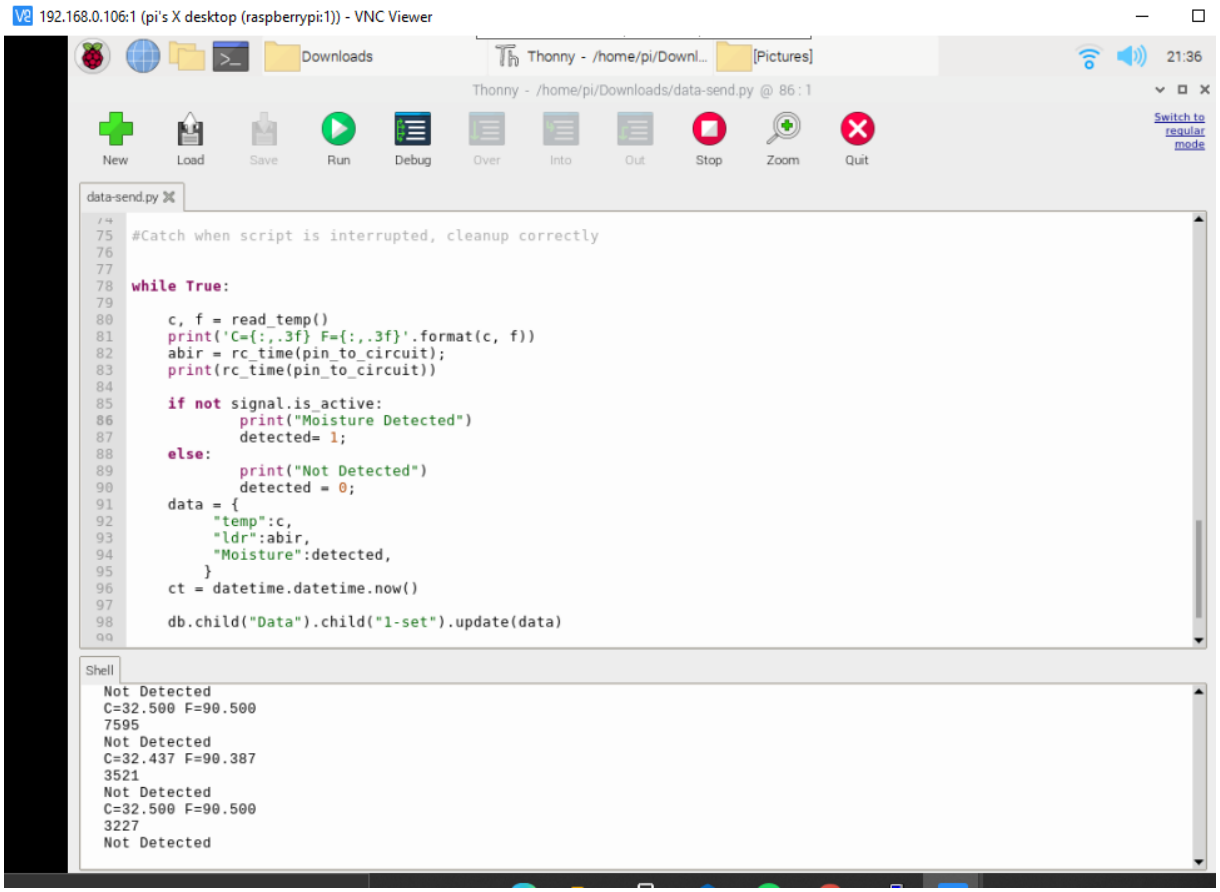


Fig: Thonny IDE

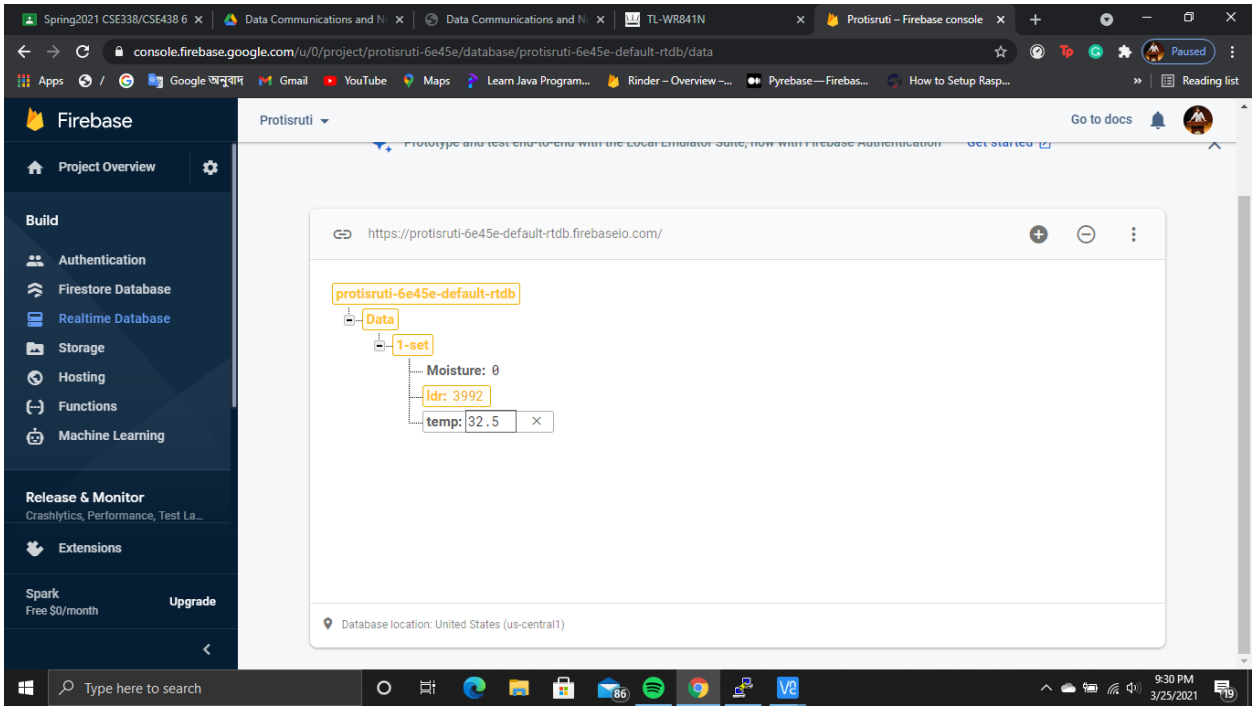
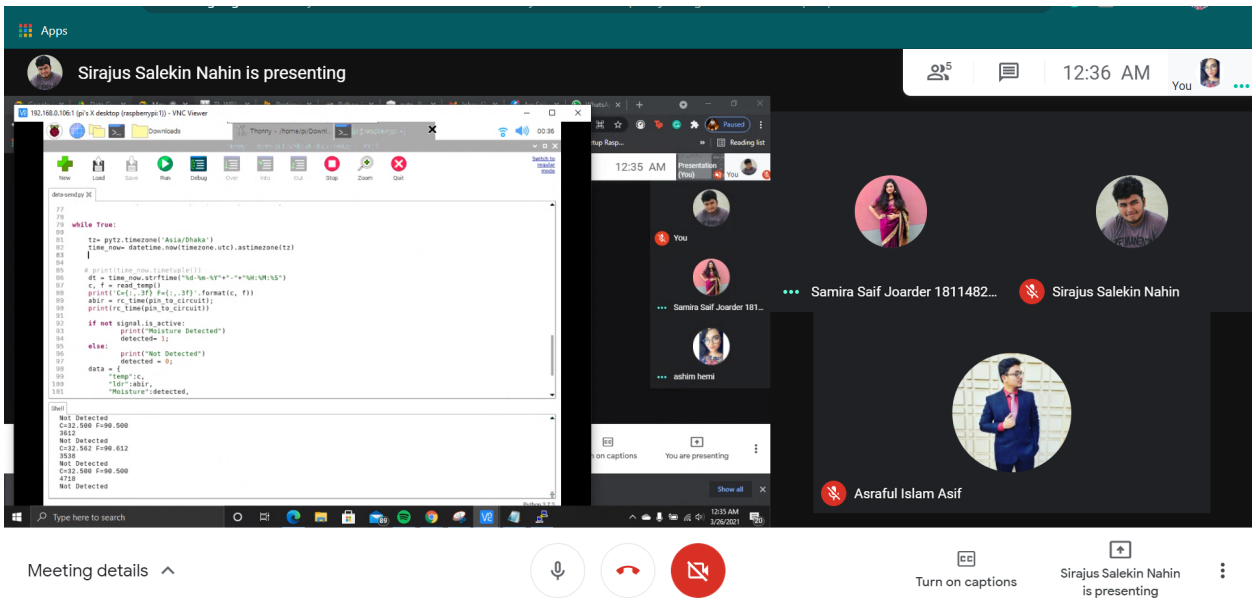


Fig: Realtime database showing changes of data



Sirajus Salekin Nahin(Group leader), Samira Saif Joarder, and Ummay Ashim Laila collected all types of equipment and started to build the device by getting into one place, but Sirajus Salekin Nahin did lead Samira Saif Joarder, and Ummay Ashim Laila to help him out since we all are new this field so getting along with these things is quite time-consuming because of our learning process and resource. Md. Asraful Islam Asif is working for the software applications and PI's coding with Sirajus Salekin Nahin. The whole team always sits for the project at least five times a week until now.

2. OBSTACLES

The main problem of dealing with Raspberry pi was that it was often disconnected from the wifi, and setting this up with wifi was a matter of trouble because of the IP addresses; PI couldn't find the wifi, and so on. We had to suffer a lot for this particular reason, and this was annoying for us sometimes. After that take, the reading of multiple sensors was trouble, but we got through it. And also, the database making the database and sending the data took a lot of time. One thing has to be added: the expenses, as the raspberry pi is expensive and other components, so here we had to rethink all the processes to carry on with minimum expenditure.

3. MILESTONES AND REPORTING

[Tentative week counts from assigning date]

MILESTONE	TASKS	DATE
Week-1	Analysis and design stage(before assigning), gather equipment and create a work plan, start implementing	06/03/2021
Week-2	..……Do…….	
Week-3	Work for real-time database	
Week-4	Progress Report Due	26/03/2021

Week-6	IoT based work start and Android (Mobile Application)	
Week-7	...……Do…….	
Week-8	...……Do…….	
Week-9	...……Do…….	
Week-10	Testing and Bug fixing	
Week-11	Present the final Project	