SMART ANALYSIS OF CLASSROOM WITH RENEWABLE BASED IOT DEVICE

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ABSTRACT

In this covid situation every students and staffs body temperature cannot be monitored all the time in educational institution. In order to monitor all those details we need someone's help. Also this process is expensive, so we found the best solution with our project called 'Smart Analysis of classroom with renewable based IOT Device'. If the body temperature is too high t automatically makes alarm or beep sound continuously. This device is fully Powered by renewable energy (solar power) so there is no external electricity required for this project.

In this device we can also view the student's or staff's entering and exiting time and date with real time which can also be used for attendance. We use the RFD module to collect the data from the each individual people and processed by microcontroller and send to the google sheets in Excel format.

I. INTRODUCTION

Classrooms are the most basic component of an educational institution. From the elementary school to the medical colleges or Engineering universities, classroom is the most important infrastructure of an educational institute. Classrooms are found in educational institutions of all kinds, from preschools to universities, and may also be found in other places where education or training is provided, such as corporations and religious and humanitarian organizations. In this age of massive digitalization of our country, classrooms are the most needed structures to be digitalized. If this happens, this would be the biggest evolution of our road to Vision 2021.This device is fully Powered by renewable energy (solar power) so there is no external electricity

required for this project. In night time we can also use this device because inbuilt battery (4000mAh) is kept on this device until one week . If there is no sunlight enter the way in your office or classes we can charge with normal mobile charger. This device is portable and every one can use and also very cheap.In world anywhere you can view this data and it's also so secure so unauthorized. people can't see or edit this data. This module is connect with any local hotspot or routers around you

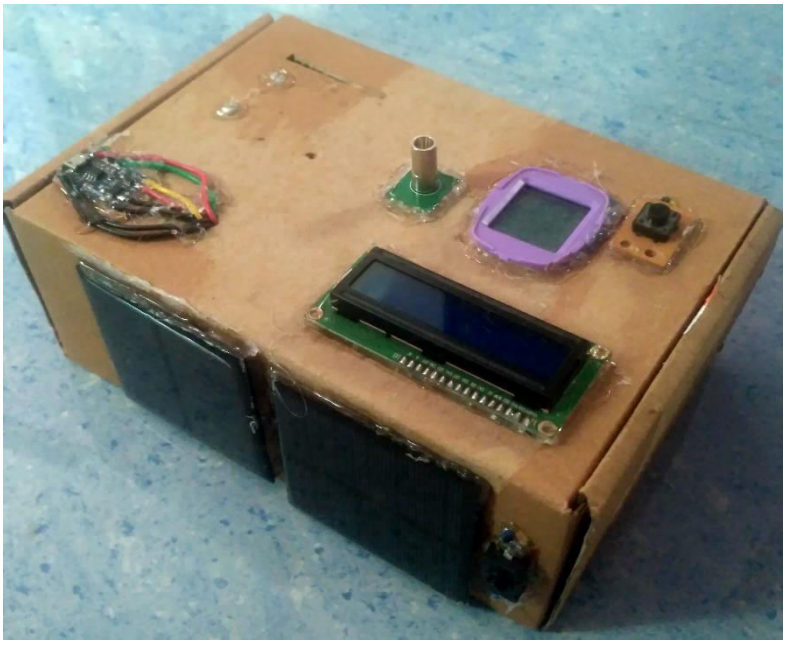
II. METHODOLOGY

The Methodology of the project is when the person keep their RFID card in the sensor it will automatically senses and mark the attendance in the google sheet and it also display the attendance in the display and give the beep sound after marking the attendance.

- After their attendance the person have to keep their hands in the place of temperature sensor after the temperature is sensed it will display the temperature in the display if the temperature is more than 97% it will give the beep sound and it will not allow the person inside the classroom.
- This holl processes is done with the help of solar panel, the power is taken from the solar panel and it stored in the lithium battery for the latter use and it also used in night time and it also can be used for 1 week with the battery and can also easily charged by the normal USB cable charger.

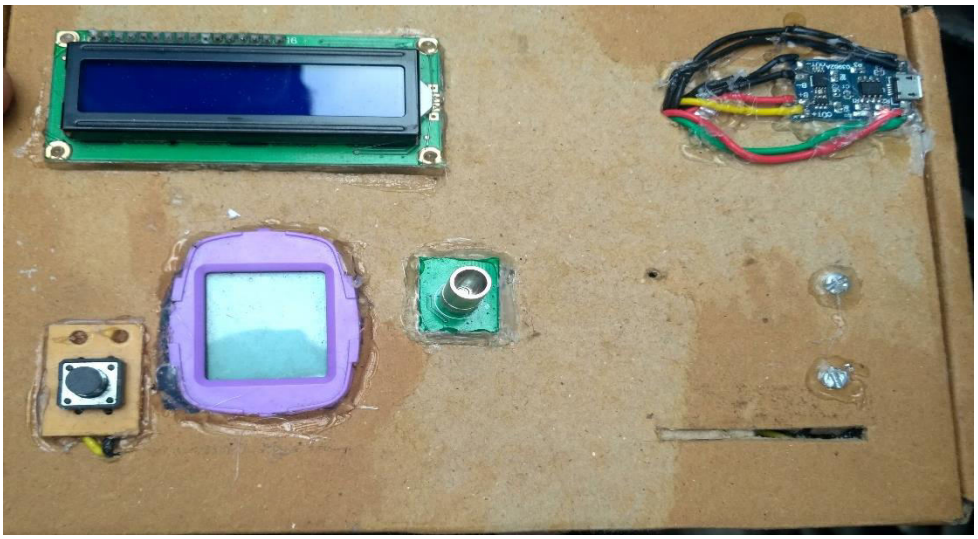
III. MODELLING & ANALYSIS

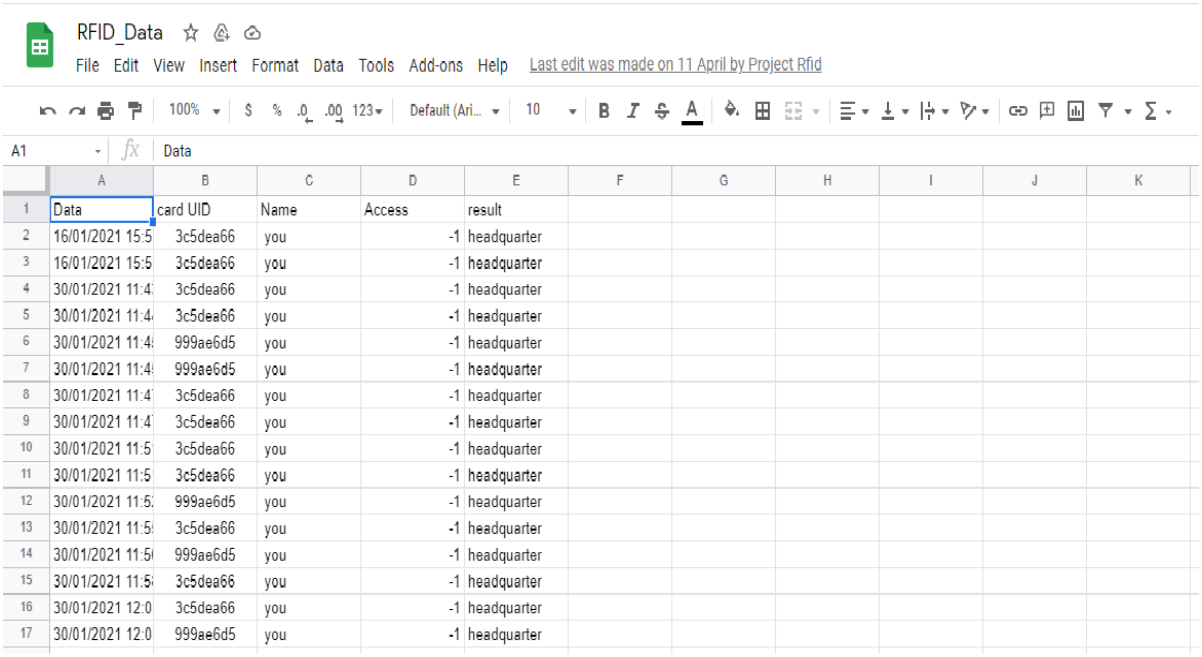
The actual model is shown in this section. Attendance is displaced in display and marked in the google sheet.



IV. RESULTS & DISCUSSION

When the RFID card is detected it will display and mark the attendance in the Goggle sheet . It also detect the temperature of the body.





RFID_Data

File Edit View Insert Format Data Tools Add-ons Help Last edit was made on 11 April by Project Rfid

A1 Data

	A	B	C	D	E
1	Data	card UID	Name	Access	result
2	16/01/2021 15:5	3c5dea66	you	-1	headquarter
3	16/01/2021 15:5	3c5dea66	you	-1	headquarter
4	30/01/2021 11:4	3c5dea66	you	-1	headquarter
5	30/01/2021 11:4	3c5dea66	you	-1	headquarter
6	30/01/2021 11:4	999ae6d5	you	-1	headquarter
7	30/01/2021 11:4	999ae6d5	you	-1	headquarter
8	30/01/2021 11:4	3c5dea66	you	-1	headquarter
9	30/01/2021 11:4	3c5dea66	you	-1	headquarter
10	30/01/2021 11:5	3c5dea66	you	-1	headquarter
11	30/01/2021 11:5	3c5dea66	you	-1	headquarter
12	30/01/2021 11:5	999ae6d5	you	-1	headquarter
13	30/01/2021 11:5	3c5dea66	you	-1	headquarter
14	30/01/2021 11:5	999ae6d5	you	-1	headquarter
15	30/01/2021 11:5	3c5dea66	you	-1	headquarter
16	30/01/2021 12:0	3c5dea66	you	-1	headquarter
17	30/01/2021 12:0	999ae6d5	you	-1	headquarter

V. CONCLUSION

This project presents the prototype design of the classroom management system. The automated attendance system was able to achieve its goal and take the attendance in a way that was both user-friendly and efficient. Also monitoring the body temperature of students and staffs entering the classroom. we can also view the student's or staff entering and exit time date with real time which can also be used for attendance information is computed all through the day and same uploaded in cloud server too. In this device it is fully Powered by renewable energy (solar power) so there is no external electricity required for this project .In night time we can use this device because inbuilt battery (4000mAh) is kept on this device till one week . If there is no sunlight enter way in your office or classes we can charge with normal mobile charger.

VI. REFERENCE

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