

Detection of an empty room

and following covid protocol

THE CHOSEN ONES

Team:

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Components used:

PIR Sensors(2)

Buzzer

LEDs

ESP32

Jumper wires

OBJECTIVE

To provide the following information to authority of a public place:

- >When the room is completely unoccupied
- >When the capacity exceeds the limit by covid protocol

And allowing the people to know when they could enter the room



WHY OUR PROJECT?

- ▶ In many public places irrespective of occupancy of room, electrical appliances will often be working
- ▶ With the help of our project, concerned authority of room can know when the room is completely unoccupied and they can turn OFF the list of electrical appliances provided to them through mail. This really avoids the unnecessary wastage of electricity.
- ▶ In recent times, it's necessary that a place won't get overcrowded i.e., it is necessary to maintain covid protocol in a public place and hence this is included in our project.
- ▶ when the room's capacity exceeds the fixed limit, the authority of the place could know that



Electrical appliances working in an empty room



Public places being overcrowded

WHAT MORE?

- ▶ When the people were about to enter room, they could know whether the room's capacity permits them to do so
- ▶ Any person can see the count of people inside room through webserver

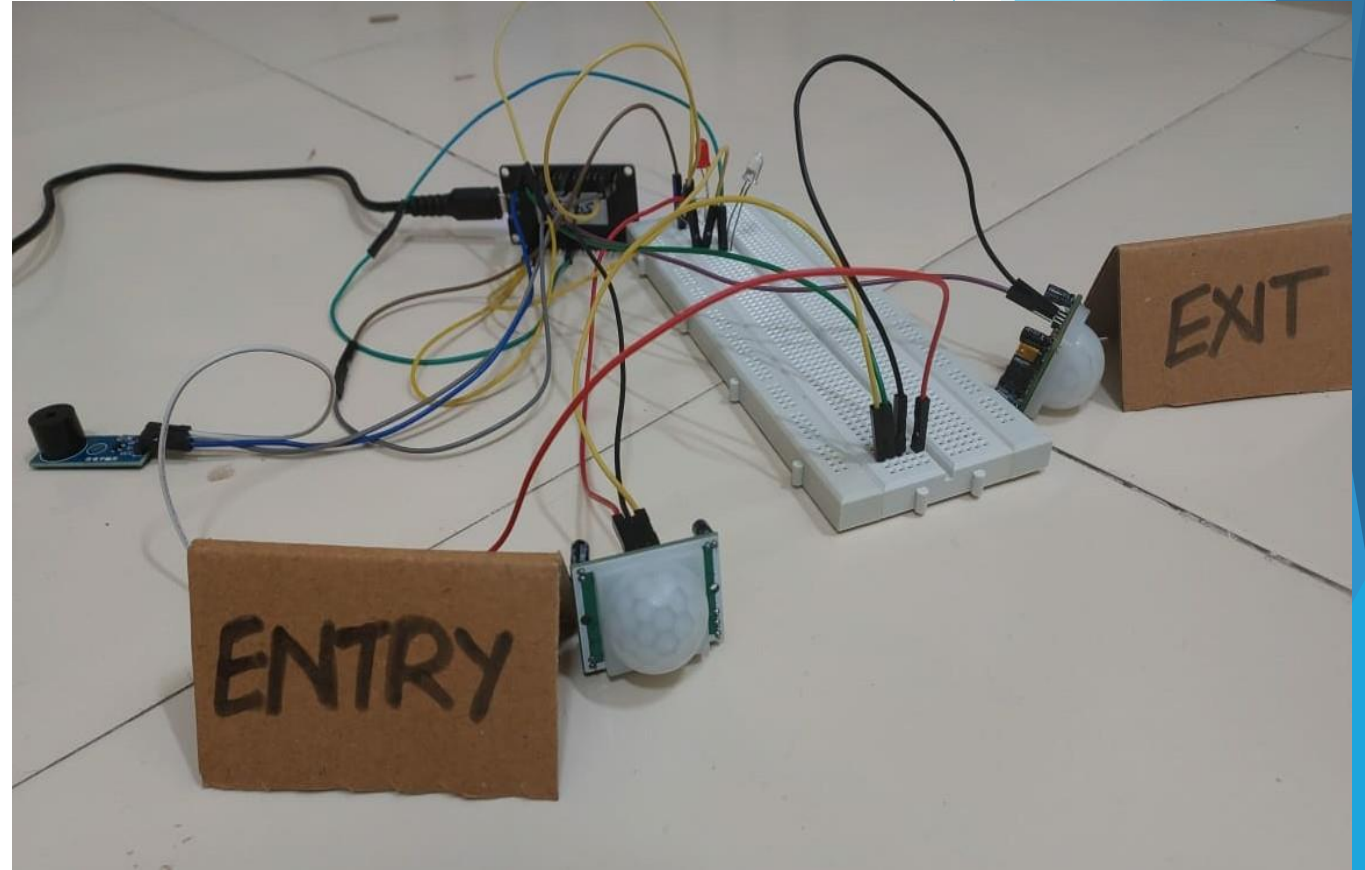
HOW WE GATHER DATA?

- >We use 2 PIRs sensors one each at entry and exit
- >The count of visitors increments when a person enters into room and it decrements when a person exits
- >Hence we can always keep track of the count of people inside the room

INFO PROVIDED TO PEOPLE

->When the visitors count is less than capacity, red LED glows at entrance of room which indicates a person that he could enter the room

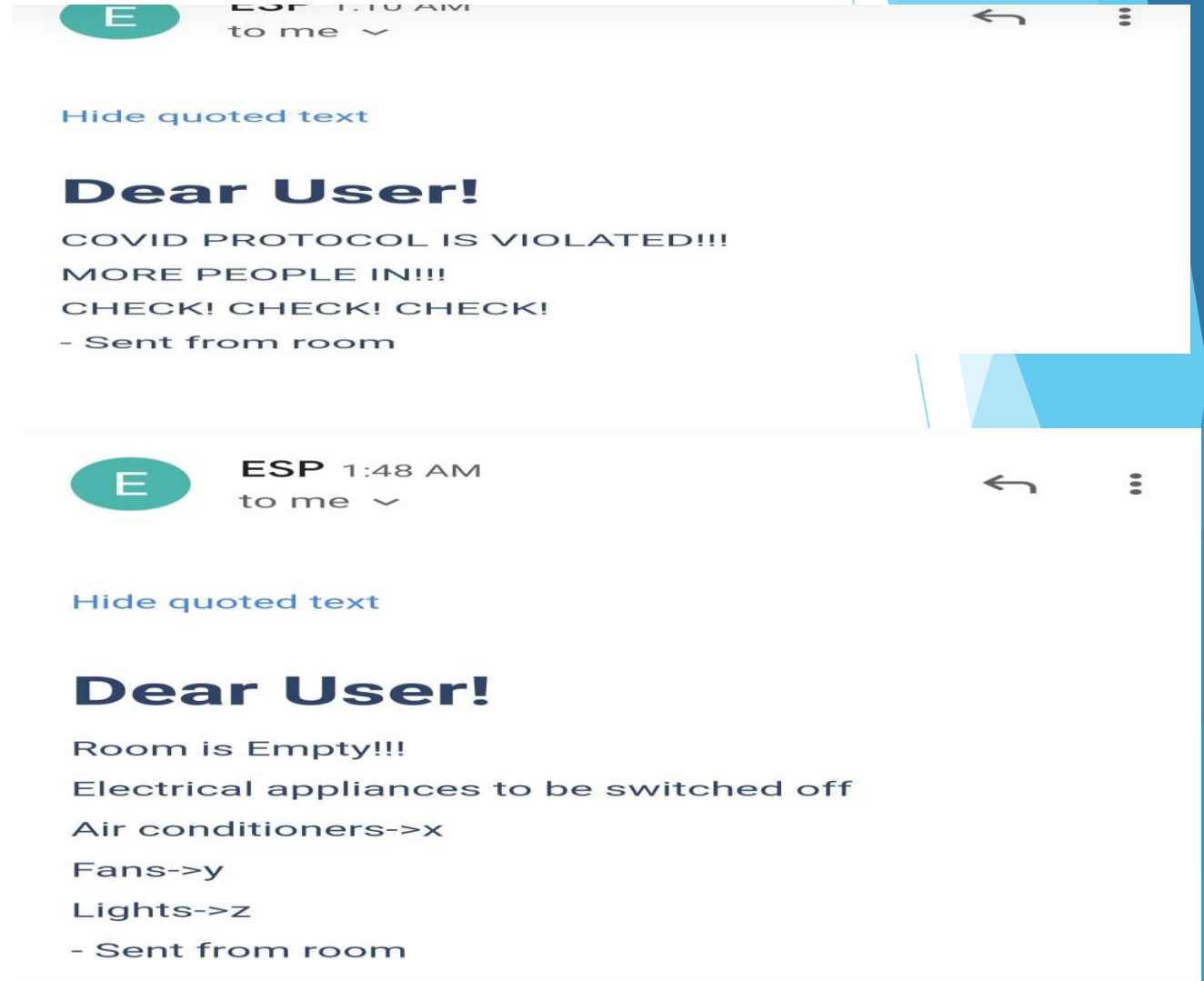
->When the visitors count exceeds capacity of room, a buzzer will be given alerting the people inside that room's capacity is exceeded



INFORMATION TO AUTHORITY OF PLACE

->An email will be sent to the gmail address of concerned person of room when the room becomes empty

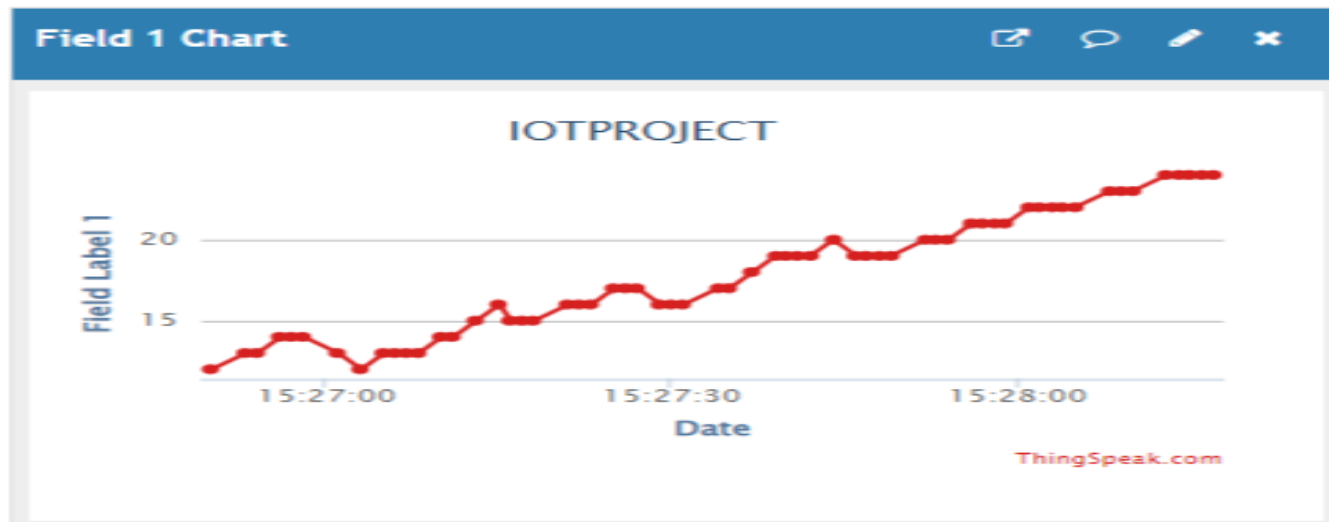
->An email will be sent to gmail address of concerned person of room when the capacity of room exceeds limit



THINGSPEAK

->Visitors count will always be plotted in a graph in thingspeak

Last entry: less than a minute ago
Entries: 9770



DATA IN OM2M

OM2M CSE Resource tree

Firefox Web Browser - Jun 30 11:39 PM

OM2M CSE

127.0.0.1:8080/webpage/welcome/index.html?context=-&cseId=in-cse

Logout

OM2M CSE Resource Tree

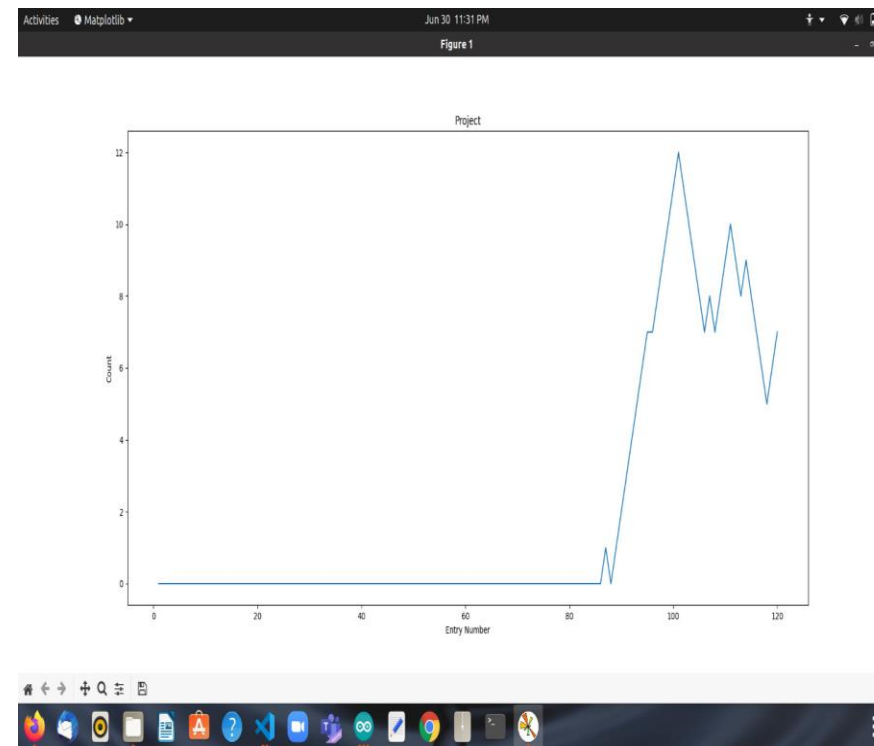
<http://127.0.0.1:8080/~in-cse/cin-466686176>

in-name

- acp_admin
- DHT11
- SmartHome
- PIR_SENSOR
 - Node1
 - cin_65923759
 - cin_809621134
 - cin_833249674
 - cin_714611872
 - cin_916242282
 - cin_898758936
 - cin_643772914
 - cin_939897908
 - cin_769552363
 - cin_919397806
 - cin_869016508
 - cin_899526075
 - cin_827156680

Attribute	Value
rn	cin_466686176
ty	4
ri	/in-cse/cin-466686176
pi	/in-cse/cin-306683227
ct	20220630T232728
lt	20220630T232728
st	0
cnf	application/json
cs	1
con	9

Graph



Thank You

Questions?