

The background features a large white circle in the center, partially overlapping a light blue area on the left and a light pink area on the right. A dark blue shape is at the bottom, also overlapping the white circle. The text is centered within the white circle.

IOT PROJECT "SMART HOME & GARAGE SYSTEM"

TEAM MEMBERS:

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|----------------------------|----------|
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OUR PROJECT IS ABOUT A SMART HOME WITH A SMART GARAGE

FIRST WE WILL TALK ABOUT THE SMART GARAGE: WE USED IN IT A "SERVO MOTOR" TO REPRESENT A GATE WHICH OPENS WHENEVER A CAR COMES NEAR TO IT WITH A SPECIFIC DISTANCE



SMART HOME DESCRIPTION:

- Our smart home consists of a "Door" which opens by entering a password through the keypad

First you press on "*" which allows the keypad to receive the password

Then you press on "#" to send this password so our code checks if this password is right or wrong if the password is correct it prints on the screen "Access granted" and opens the door and the green LED lights up

And if it is wrong it prints on the screen "Access denied" and the red LED lights up

We have a which keypad has 3 LEDs:

- -The yellow one when it lights up means that the keypad is ready to receive the password (which is 4 numbers)
- -The green one lights up when the password is entered correctly
- -The red one lights up when wrong password is entered

WE HAVE IN OUR SMART HOME 4 SENSORS:

- Motion: it sees if there is any movement in our home or not
- Temperature: it reads the temperature and the humidity at this moment
- Flame: it reads if there is flame or not
- Gas: it is the only sensor which reads number (Analog) and see if there is gas or not

All these sensors print their readings on the screen which is beside the door and this screen is programmed that it reads all the readings except if you press on “*” to enter the password on the keypad so at this time it concentrates on the door only to see if the password is correct or not and once the user finishes writing the password it goes back printing the sensors’ readings

OVERVIEW OF DATA TRANSMISSION TO THE CLOUD

All the sensors' readings sent to the cloud
then the flutter receives it from the cloud
and the sensors' readings shows on the application
and also, it's showed if the home's door, garage's door
and the tv are opened or not so you can control
them
through our application

We also used a buzzer which works when there is a
flame or motion

SMART TV

We also have a sofa consists of a sensor which makes the TV(which is a LED in our project) turns on whenever a person sits on the sofa.

We used a LED in our project to reffer as the TV.



CHALLENGES WE FACED:

From the challenges that we faced in our project that we handled the door, keypad in one code and all work together smoothly in a correct way.

And also in making the screen concentrate only with the door while entering the password and not receiving any reading from the sensors.

Another challenge also was the authentication part which is the flutter with the firebox and how to make it sign up and sign in.

**THANK
YOU**