

Smart Home

Final project



Project team

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Project About

Our Smart IOT System has a door lock with a password and alarm system to notify us if someone one try to enter the house.

Inside the house there is a light system we can control using web app or using sensors Like PIR Sensor.

Also there will be a temperature sensors and LCD screen to display the temperature (but this feature is optional).

Components:

STMF401CC

LCD

Keypad

Motor

PIR sensor

Buzzer

LED

Wifi Module

LM35 (option)

Software Architecture



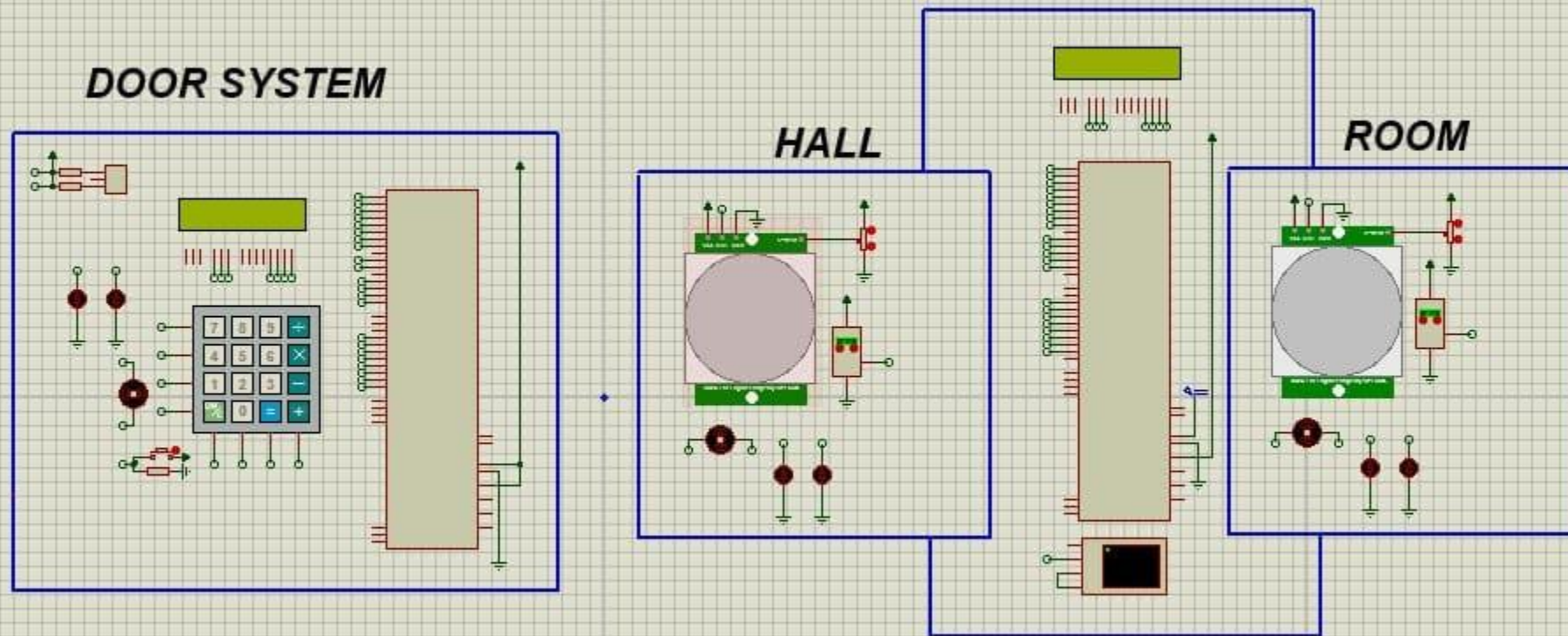
MCAL:

- RCC
- GPIO
- SYSTICK
- NVIC
- EXTI
- USART
- ADC(option)

HAL:

- LED
- BUZZER
- LCD
- Keypad
- Motor
- PIR

Proteus Design



DESCRIPTION of OUR PROJECT

it is our system now. Smart home, In the basic needs, The first thing is the door system, It will be the first thing that I will set password, After what is left, I will stay with the password, If I entered the password, it is rightly, which will enter me on the system and open the door,

In the event that I entered the password wrongly, I will have three attempts, After every attempt, you will miss me about two seconds, And then, after that, I can write the password again, And so on, **This is what is the security or part of the door.**

DESCRIPTION of OUR PROJECT

The second part remains, which is the part that we have a hall, and we have the room, We have three basic needs in each part of the home, We have 2 LEDs, one white and one yellow, We have an air conditioner that is dc motor, we have a pir sensor, and we have LM35 sensor, Ok, I am in control.

How do you get on the sensor or on the LEDs and the conditioner through the Bluetooth module, which is through UART by sending a command and every specific command or every number of a certain number, so it will be for a certain action that is taken, so if you sell one, the first hand will work, The air conditioner extinguishes, and so on, what is the need that I am doing with a control via Bluetooth Model, and I can use it through pir sensor, I still have two types of control only, Who is Pir sensor or B Bluetooth Module.