

# Smart Home Project

## Objectives :

To keep us up to date with the new technology in the world by making every manual tasks to be smart Using embedded system.

## Smart home project :

In this project, home will be smart controlled using some embedded system technology and makes it easy to turn on or off appliances using smart application or using some sensors.

Let's talk about features in that project :

### Features:

#### 1.Door Security with login system

##### -Login system features:

- \*For the first time using that system you will be set your password. (future update)
- \*After setting your password login system will check if it is true or not.
- \*After successfully login, Door will open or unlock for an estimated Time then close automatically.
- \*There is an LCD for monitoring some needed visuals like (password & some Text).
- \*if login not successfully by entering a wrong password. Login system makes you able to try again For 3 Times only

#### 2.appliances and lights control using Bluetooth module or mobile application

Note : This feature will be available after successfully login in.

##### -Control Items:

- \*Room light with 3 modes
- \*Fan (on / off)

By using UART Communication Protocol, Module connected with system, you can control lights or fan according to the next guidance table:

Command	Action
F	Turn on Fan
f	Turn off Fan
1	First mode of light system
2	Second mode of light system
3	Third mode of light system
0	Turn off all of them

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3. Appliances and light system controlled by sensors using (ADC)

*-Controlling Air Conditioner (AC)*

\*LM35 Temperature Sensor is used to detect temperature readings in degrees continuously

\* if temperature reading is higher than 24 degree, system will turn on AC automatically.

\* if temperature reading is lower than 24 degree, system will turn off AC automatically.

*-Controlling Lights*

\*LDR Light Sensor is used to detect intensity of the light

\*for some ranges lights will turn on.

## Future updates:

-Set password for first time then save it to EEPROM

Our Project Link :

<https://github.com/Ahmed-Zahran-AZ/Smart-Home>

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Thanks.