

Smart Home based on ESP 32 (by Saif)

- It can control up to 3 AC devices & a AC Fan whose speed from 0-4.
- This project consists of temperature & humidity sensor for monitoring
- It can be controlled by ESP Rainmaker Mobile App & also Alexa & Google Assistant.
- Special feature of this project is that it remembers its devices state when main supply failure occurs, so that when power is back it automatically restore its devices state.
- For demo I used table Fan instead of AC fan
- Overall cost spend for this project was around 1600/-

Components

NAME	Qnt	PRICE
ESP 32 Board	1	500/-
5v Relay	6	25/-
DHT 11 Temperature sensor	1	200/-
1k ohm resister	6	2/-
Diodes 14007	6	3/-
Transistors BC547	6	10/-

Power supply 5v	1	300/-
AC Fan regulator	1	70/-
Connectors etc	-	-

program the ESP32 using Arduino IDE.

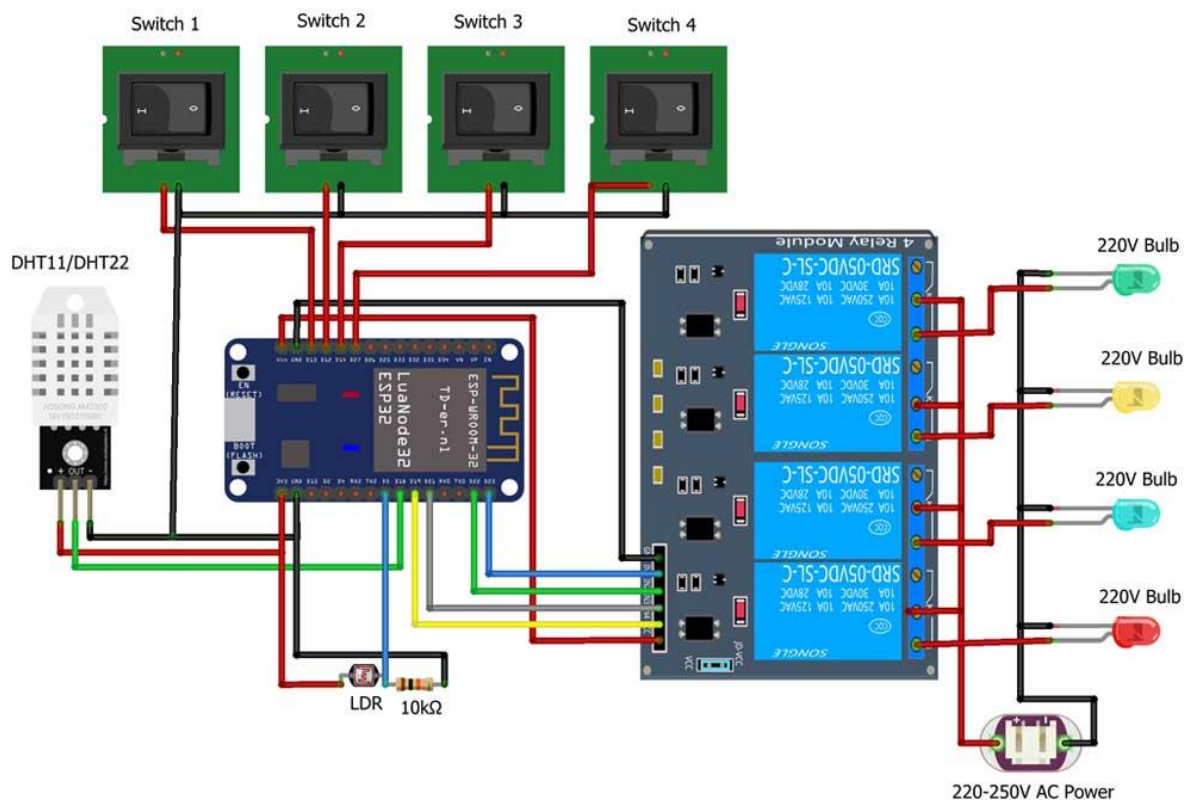
Update the Preferences → Additional boards Manager URLs:

https://raw.githubusercontent.com/espressif/arduino-esp32/gh-pages/package_esp32_index.json

- Then install the **ESP32** board (Version: **2.0.3**) from the Board manager
- Download the required libraries
SimpleTimer-master & DHT Library
- After uploading the code to ESP32,
- Open the serial monitor, and select **Baud Rate: 115200**.
- Then **press and hold the BOOT button** of ESP32 for at least **4 seconds**.
- After releasing the BOOT button, a QR code will appear on the Serial Monitor.
- Now, **copy the URL**, just below the QR code, and **open the URL in a browser**.
- This QR code is unique, so you can print the QR code. Later on, if you want to change the WiFi details, you can use the same QR code.
- Scan QR code to Add Devices in RainMaker Dashboard

- Now open the ESP RainMaker App and **turn on Mobile Bluetooth and GPS (Location)**.
- Tap on **“Add Device“**.
- **Scan the QR code** from the Browser and **Pair the Bluetooth**.
- **Enter the WiFi credentials** (WiFi Name & Password). Tap on **“Start“**.
- After the process is complete, tap on **“Done“**.
- Now, all the devices are added to the ESP RainMaker dashboard.
- Thus you can easily add devices to the ESP RainMaker app.
- Similarly, in ESP RainMaker App go to settings click on voice services
And we can easily add devices to **Alexa & Google Assistant**

Circuit Diagram (it might vary according to the code)



PCB (selfmade):



Concept:

