SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with
'A++' Grade
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Chennai

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

19ECT213- IoT SYSTEM ARCHITECTURE

II ECE / IV SEMESTER

UNIT 5 – IoT Applications

Home Automation with Android Application and Google Assistance

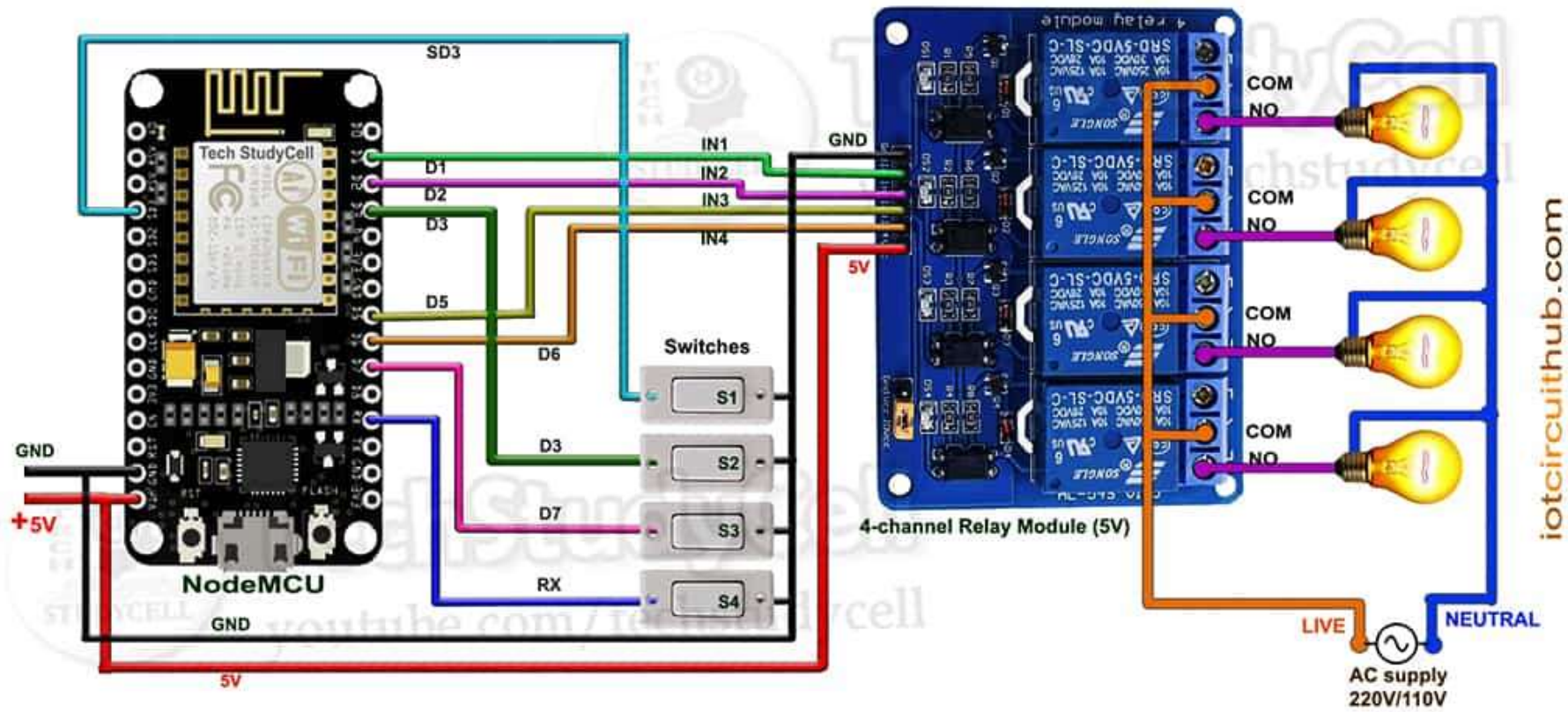IoT Applications/19ECT213 IoT SYSTEM ARCHITECTURE / Divya.M/ECE/SNSCT

Home Automation

- Smart Home with Google Assistant and Alexa using NodeMCU ESP8266 and Sinric Pro.
- Control **3 home appliances** with Google Assistant, Alexa, and **manual switches**.
- Control the relays from **Google Home** and **Amazon Alexa App** from anywhere in the world.

NodeMCU control Relay Module

- **D1, D2, D5 & D6** GPIO to control the 4-channel relay module.
- GPIO **SD3, D3, D7** & **RX** are connected with manual switches to control the relay module manually.
- Whenever the control pins of the relay module receive the **LOW** signal the respective relay will **turn on** and the relay will **turn off** for the **HIGH** signal in the control pin.
- Boot will fail if SD3 and D3 are grounded during the Boot process. So manual switch-S1 and switch-S2 must be OFF during NodeMCU Boot.
- If we want to use **pushbuttons** then just connect the pushbuttons across the GPIO pins and GND pin instead of switches.

Required components:
- NodeMCU
- 4-channel 5V SPDT Relay Module
- Manual Switches or Pushbuttons
- Amazon Echo Dot **(optional)**
- Google Nest Mini **(optional)**

Steps to follow:
- Control 3 relays with **Google Assistant, Alexa**, and **switches**.
- Create an account and add devices in **Sinric Pro**
- **Programming** the NodeMCU with Arduino IDE
- Connect Sinric Pro and add IoT devices with **Amazon Alexa App**.
- Connect Sinric Pro and add IoT devices with **Google Home App**.

Refer this link for coding

https://iotcircuithub.com/smart-home-with-google-assistant-alexa/#Circuit_of_the_NodeMCU_Home_Automation

Thank you