

Topic : Home automation using Telegram

Group members :

Jitendra Kumar, 1401CS19, Anupam Das, 1401CS52

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Advisor : Dr. Jimson Mathew

Objective

- The idea is to develop a telegram bot, running on Raspberry Pi, that receives commands via Telegram chats.
- Connected to the raspberry pi, Fan and light to be controlled remotely using telegram chats.

Materials Needed

- Raspberry Pi 3.0
- Telegram Bot API to build a telegram bot
- Home Appliances - 1 x FAN, 1 x LED
- Transistor - 2N3904
- Relay
- Resistance - 2.18 k Ω
- Breadboard
- Adapter - 5V DC
- Jumping Wires

Raspberry Pi

- Pi is low cost, **small computer** that plugs into a monitor and uses a standard keyboard and mouse.
- It's capable of doing everything you'd expect a desktop computer to do.

Telegram Chat Bot

- Telegram bots are third-party applications that run inside Telegram.
- API Used for our purpose:
 - getUpdates
 - to receive incoming updates using long polling
 - sendMessage
 - to send text Feedback.

Relay

- Relays are switches that open and close circuits electromechanically.
- Relays control one electrical circuit by opening and closing contacts in another circuit
- States
 - NC - Normally closed i.e. relay is not energized
 - NO - Normally opened i.e. relay is energized.

Result

- The screenshots of results and working model have been attached.

Conclusion

- Connected to the raspberry pi, Fan and light to be controlled remotely using telegram chats.
- The model was working fine with full satisfaction

