Practical 5:

Controlling Raspberry Pi with WhatsApp

Host a Telegram Bot on your Raspberry Pi and chat with your brand new IoT device!

Things used in this project

Hardware components

Raspberry Pi 3 Model B	×	1
LED (generic)	×	1
Jumper wires (generic)	×	1
Breadboard (generic)	×	1

Story

Learn how to use the Telegram Bot, host a Telegram Bot on your Raspberry Pi, and use the messaging app to interact with your device.

Step 1: Open Telegram app in your system or mobile

1.1 Open Telegram app in your system or mobile

Download from here: Telegram

1.2 Start "BotFather"

1.3 Open "BotFather"

1.4 Start "BotFather"

/start

1.5 Create a new Bot /newbot

Bot: name332_bot

1.6 Obtain access token /token

copy the token

/mybots

Step 2: Setup Raspberry Pi

Note: If you already set the Pi then skip this section.

Step 3: Install TelegramBot on Raspberry Pi

3.1 Open Putty

3.2 Connect Pi via SSH /VNC

enter pi ip address

pi username

we are in

3.3 Install "Python Package Index"

```
sudo apt-get install python-pip
```

Note: Make sure Pi has internet access

3.4 Install "telepot"

```
sudo pip install telepot
```

Step 4: Run the Python Code

4.1 Clone the git

```
git clone --recursive https://github.com/vysheng/tg.git &&
cd tg
```

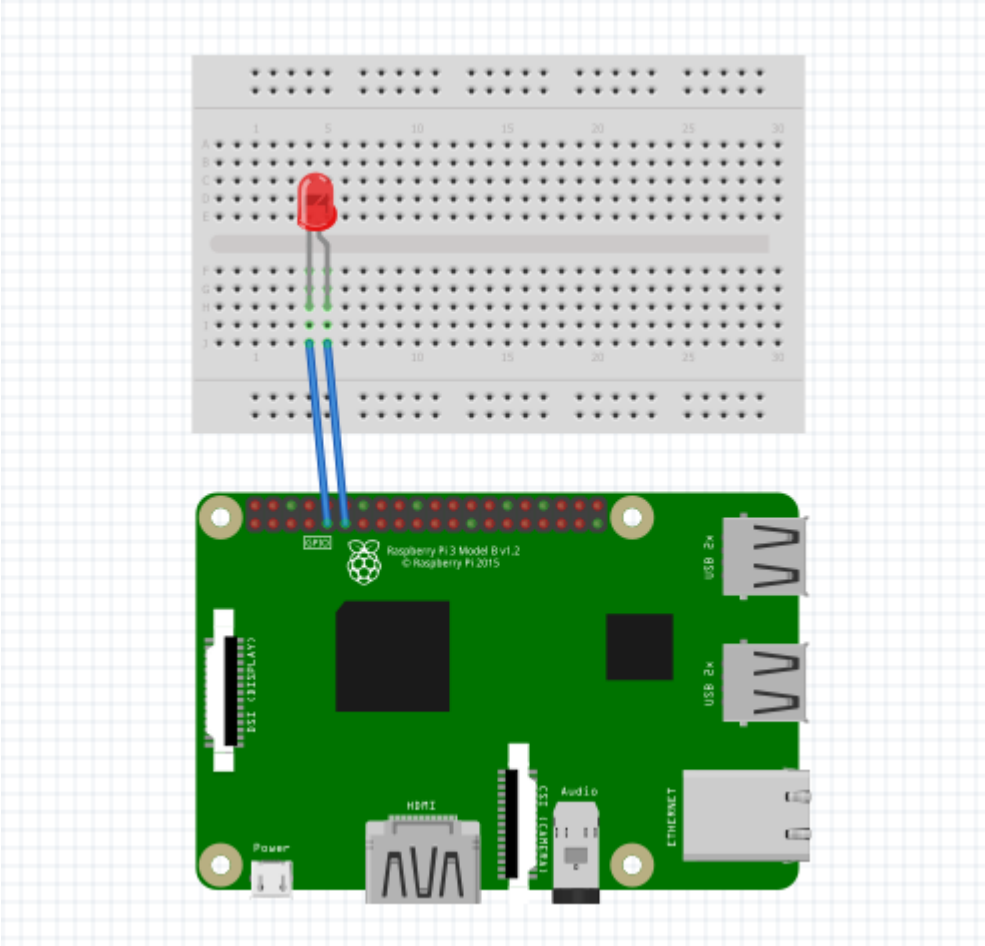
git clone https://github.com/salmanfarisvp/TelegramBot.git

4.2 Paste your Bot Token here

```
bot = telepot.Bot('Bot Token')
```

python TeleLed.py

All set, now time to connect the Pi and LED.



Step 5: Connect LED to Pi

Step 6: Send Command

6.1 Start our Bot

6.2 Send "on" & "off"

Look at your Pi, you can see the LED on and off when you send "on" and "off" to our bot.

Conncection between pi and LED

Code

TeleLed.py

```
import sys
import time
import telepot
import RPi.GPIO as GPIO

#LED
def on(pin):
        GPIO.output(pin,GPIO.HIGH)
        return
def off(pin):
        GPIO.output(pin,GPIO.LOW)
        return
# to use Raspberry Pi board pin numbers
GPIO.setmode(GPIO.BOARD)
# set up GPIO output channel
GPIO.setup(11, GPIO.OUT)

def handle(msg):
    chat_id = msg['chat']['id']
    command = msg['text']

    print('Got command: %s' % command)

    if command == 'On':
      bot.sendMessage(chat_id, on(11))
    elif command =='Off':
      bot.sendMessage(chat_id, off(11))
```

```
bot = telepot.Bot('565260611:AAGniNl0wPuEOcKCKs0m6zMh5OS1DoEqKAI')
bot.message_loop(handle)
print('I am listening...')

while 1:
    try:
        time.sleep(10)

    except KeyboardInterrupt:
        print('\n Program interrupted')
        GPIO.cleanup()
        exit()

    except:
        print('Other error or exception occured!')
        GPIO.cleanup()
```

Step4: Telepot for installing Telegram on Raspberry Pi

Using Telegram Bot in Raspberry Pi is made possible by the python package called Telepot. We need to install this package on Raspberry Pi by using the following commands on Lx terminal

```
sudo apt-get install python-pip

sudo pip3 install telepot
```

Once Telepot is imported into Raspberry we can use this package in our python program to communicate with our Telegram Bot.