Send Notification in Telegram with ESP8266

In this tutorial, we are going to program our esp8266 to send data to our telegram account. We will create our telegram chatbot to make communication between esp8266 and the telegram account. As long as you have access to the internet you'll be notified by the ESP8266 board in your telegram account no matter where you are.

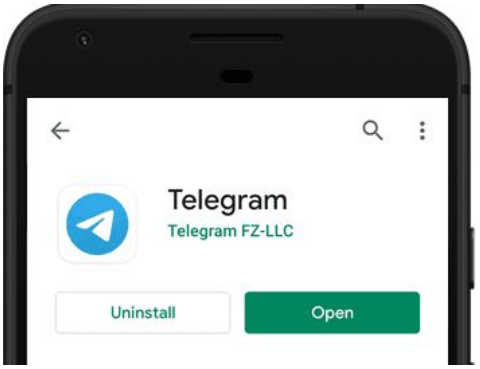
Project Overview

We are going to use an Infrared Sensor and we will the status of the infrared sensor as a string to our chatbot in telegram. Let's see the steps of the project.

I. Create a Telegram Bot.
II. Installation of the required libraries.
III. Connect the IR sensor to the ESP8266.
IV. Complete code of the project.

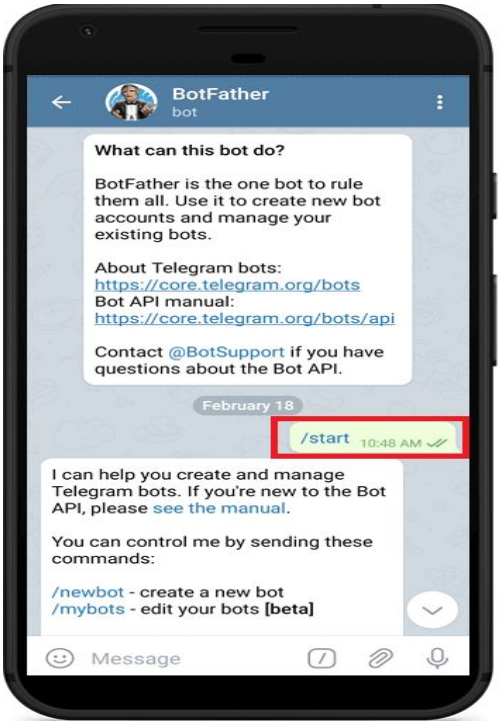
I. Create a Telegram Bot:

Install the Telegram app on your Android Phone from the google play store.

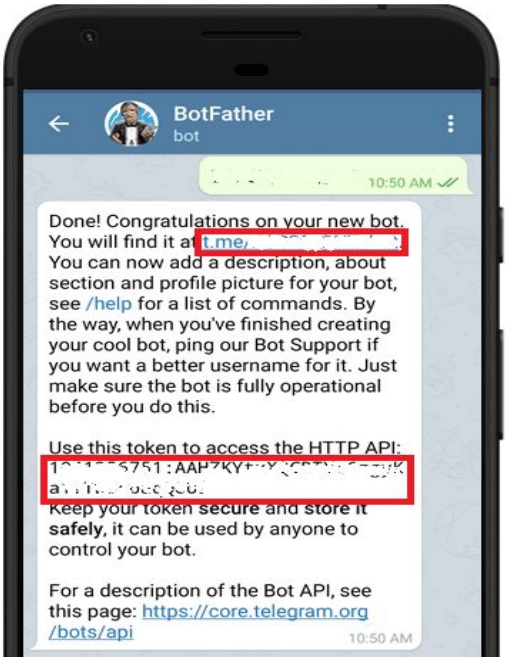


Create an account in telegram with your phone number and search for "BotFather" in the search bar and click the BotFather as shown below. Or you can open this link t.me/botfather your browser.

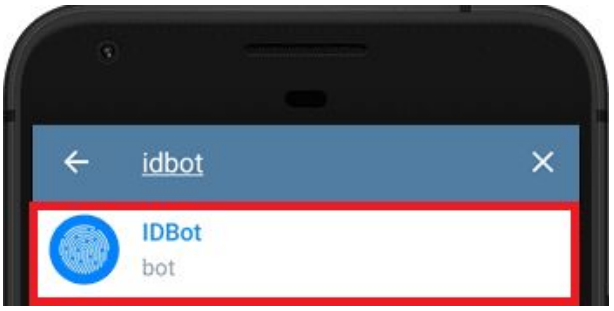
When you click on the “BotFather”, the following window should open and you’ll be prompted to click the **start** button.



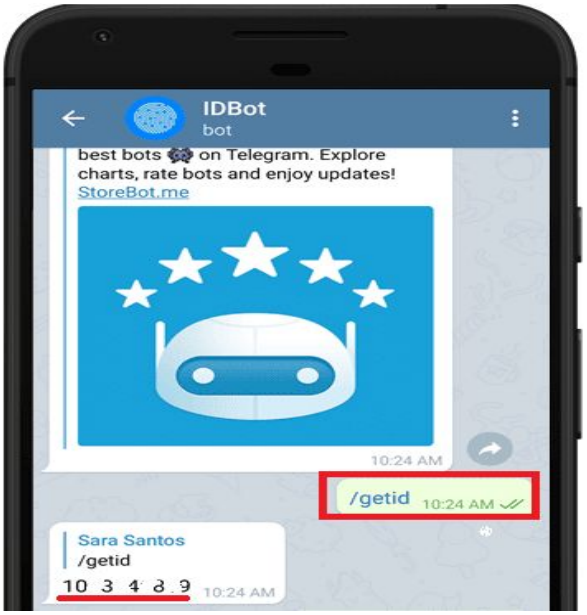
You’ll receive a message with a link to access your chatbot and the bot token. NOTE: Save the bot token because you will need it in your esp8266 code so that the esp8266 board can communicate to your bot.



So, You have now your Instagram bot but the problem is anyone can message or interact with your bot by the bot name or your bot link. You can get your Telegram User ID to filter-out those messages from an unauthorized user. Search for “IDBot” in telegram or open this link t.me/myidbot on your phone.



Now start a conversation with the IDBot by typing “**/getid**” in chat. You will get a reply with your userID. Save that userID because you’ll need it in the esp8266 program.



II. Installation of the Required Libraries:

You need Arduino IDE to program your esp8266 board. If you don’t know how to setup ArduinoIDE and ESP8266, please visit the video on our youtube channel named as **cybotians** where I have already given full detailed instructions. (Video Link)

Now you need two libraries as mentioned below.

Universal Telegram Bot Library

We'll use the Universal Telegram Bot Library created by Brian Lough that provides an easy interface for the Telegram Bot API and helps us to interact with our bot with esp8266.

Follow the next steps to install the latest release of the library.

1. Click here to download the library.
2. Go to **Sketch** > **Include Library** > **Add.ZIP Library..**.
3. Add the library you've just downloaded.

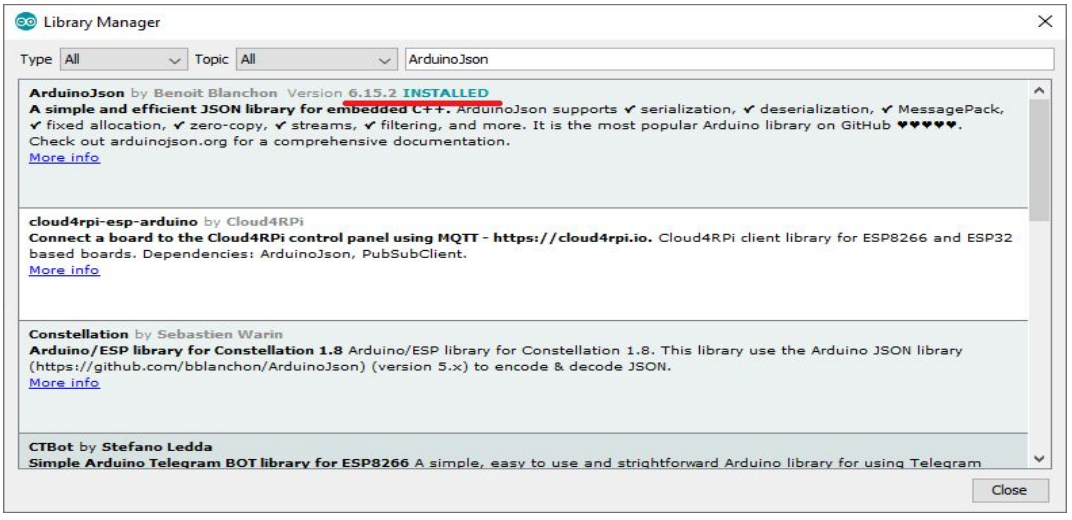
Important: don't install the library through the Arduino Library Manager because it might install a deprecated version.

For all the details about the library, take a look at the Universal Arduino Telegram Bot Library GitHub page.

ArduinoJson Library

You also have to install the ArduinoJson library. Follow the next steps to install the library.

1. Go to **Sketch** > **Include Library** > **Manage Libraries**.
2. Search for "ArduinoJson".
3. Install the library.



III. Connect the IR Sensor to ESP8266:

Connect the IR Sensor as mentioned below.

ESP8266 Pins -> IR Sensor Pins
+3.3v pin -> +Vcc pin
Pin D7 -> Out pin
GND -> GND

IV. Complete Code of the Project:

To download the code visit, GitHub Link.

Thank You so much hope you liked this tutorial. Please follow @cybotians on Instagram and subscribe to our channel on YOUTUBE.