Exercise

Sending a message to your phone

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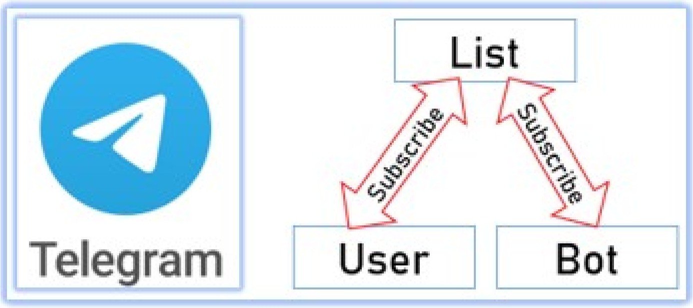
Introduction

Telegram is a free service offering amongst other the ability to send SMS like messages to other Telegram users.
Telegram also features a nice REST API allowing “Bots” to send messages as well. This could be used as an example to let a monitoring system send alert messages to an operator.

The “Telegram” architecture looks something like this:



Which means that you must install the Telegram app on your phone, make yourself a “User”, create a “Bot”, create a “List” and connect the entities in order to send messages through the REST API.

In order to use the API you must be in possession of the following pieces of information:

1. An **Access Token**
2. A **ChatID**

Your task

For this exercise you must create a C# ASP.Net application, preferably dockerized, which will allow you to send a message to your phone using this technology.

1: Install Telegram on your phone

Its free and it works on Android as on iPhones.

2: Install Telegram on your laptop

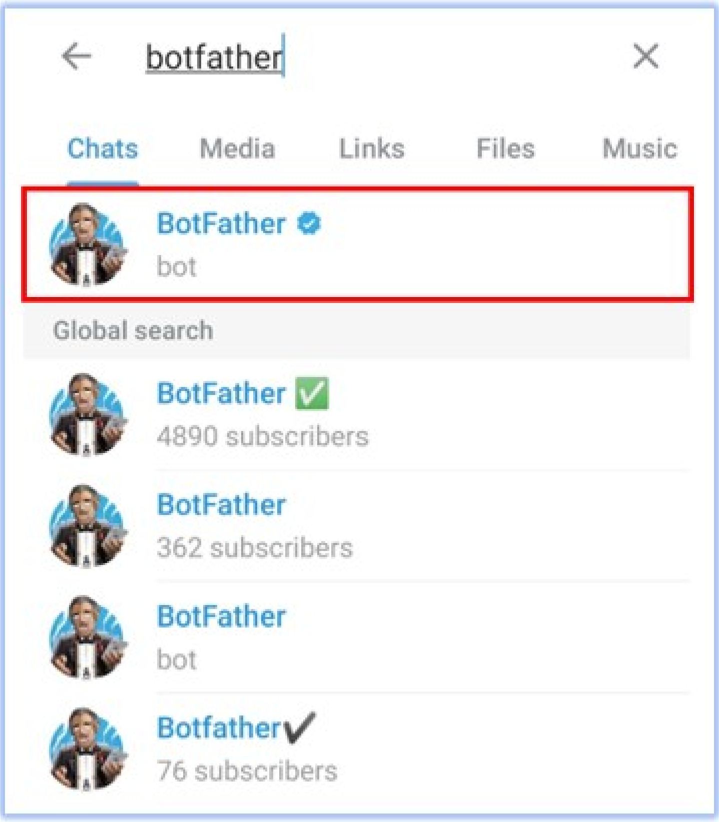
Although this is not strictly necessary, it does make the work a lot less complicated.
https://desktop.telegram.org/

3: Connect your desktop Telegram to your account

On your phone Telegram choose Settings => Devices => Link Desktop Device
and scan the QR code on your laptop screen.
From hereon we can pretty much do all the work on the laptop/desktop.

4: Create a new bot

When you have created and logged on to your Telegram account you add the bot “BotFather” to your contacts. Make sure it is marked “bot” as scammers will try to lure you:

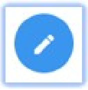


botfather

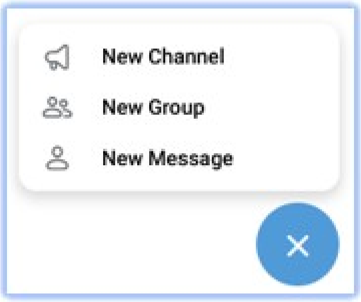
- Press “Start” or send the command “/start”
- Use the command /newbot
- Follow the yellow brick road, and note that the bot name must end in bot (MyNewBot, MyNewbot, MyNew_bot)
- Note the **Access Token**.
  Ex: **5949217810:AAFqqP1QyJAtrp4_jermdlLGBXiCzAqoJk8**

4: Create a channel

Click the symbol:
You find it in the
lower left part of
the window.

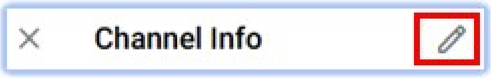


Once clicked a small menu will appear:
Select ”New Channel” and give it name.

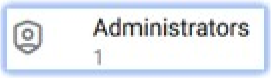


5: Add your ”bot” ad an admin to the channel

Select the channel edit at the top right:



Then select ”Administrators”:



and add your bot as an administrator.

Getting the ChatID

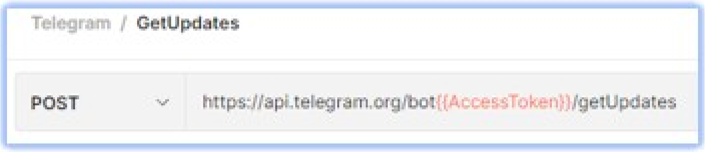
For this purpose you need to send a message in the chat channel. It serves the purpose of leaving a trail in the chat history which we now will explore using Postman.
Please find enclosed in the zip archive a json collection file which you should import into Postman. The collection will require you to set up an environment to provide the **Access Token** and the **ChatID**. At this point you only know the value of the **Access Token**. So please define that variable in the environment.

6: Getting the ChatID

Execute the “GetUpdates” request in PostMan. Close to the buttom you should find the testmessage from earlier:

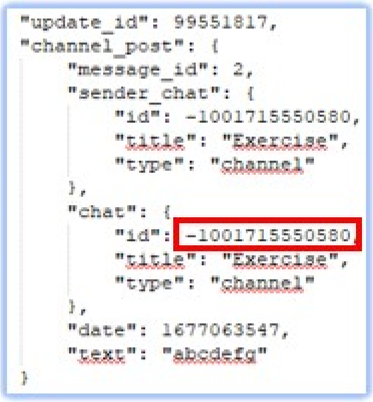
In the “chat” section you will locate the **ChatID**.

Enter this into the Postman environment



Telegram / GetUpdates

POST https://api.telegram.org/bot{{AccessToken}}/getUpdates



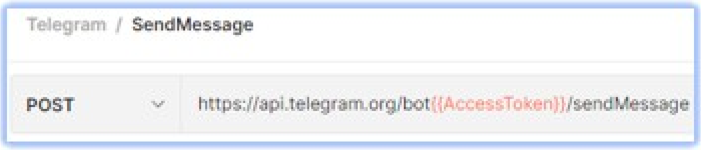
```
"update_id": 99551817,
"channel_post": {
    "message_id": 2,
    "sender_chat": {
        "id": -1001715550580,
        "title": "Exercise",
        "type": "channel"
    },
    "chat": {
        "id": -1001715550580,
        "title": "Exercise",
        "type": "channel"
    },
    "date": 1677063547,
    "text": "abcdefg"
}
```

7: Testing the connection

Execute the “SendMessage” request in Postman.

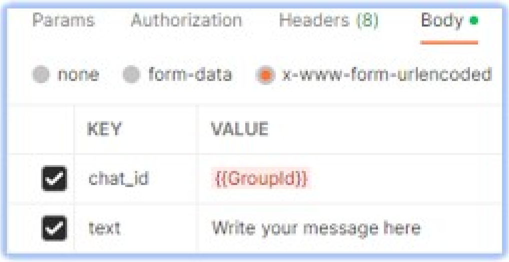
Note that you must supply the ChatID in the environment section while the message text goes in the request section.

Note that the request section is in x-www-form-urlencoded form.



Telegram / SendMessage

POST https://api.telegram.org/bot{{AccessToken}}/sendMessage

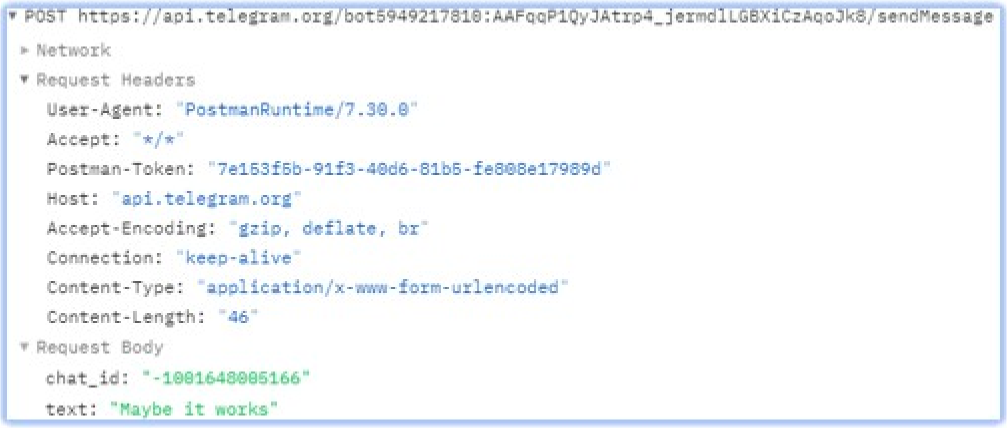


○ none ○ form-data ● x-www-form-urlencoded

	KEY	VALUE
☑	chat_id	{{GroupId}}
☑	text	Write your message here

Notes

The request produced by the previous section should read something like this:



```
▼ POST https://api.telegram.org/bot5949217810:AAFqqP1QyJAtrp4_jermdlLGBXiCzAqoJk8/sendMessage
  ▶ Network
  ▼ Request Headers
     User-Agent: "PostmanRuntime/7.30.0"
     Accept: "*/*"
     Postman-Token: "7e153f5b-91f3-40d6-81b5-fe808e17989d"
     Host: "api.telegram.org"
     Accept-Encoding: "gzip, deflate, br"
     Connection: "keep-alive"
     Content-Type: "application/x-www-form-urlencoded"
     Content-Length: "46"
  ▼ Request Body
     chat_id: "-1001648085166"
     text: "Maybe it works"
```

Also the Telegram API may be found at: https://core.telegram.org/bots/api
Look in particular at the “Making requests” section