Bitcoin Price Notification by Amol Vaditake (Woodpecker batch)

Bitcoin, the world"'s most common and well known cryptocurrency, has been increasing in popularity.
It has the same basic structure as it did when created in 2008, but repeat instances of the world
market changing has created a new demand for cryptocurrencies much greater than its initial showing.
By using a cryptocurrency, users are able to exchange value digitally without third party oversight

In this project I made a program to get latest bitcoin price. The general process is to run the
code and then it'll fetch the data from a cryptocurrency API called of web https://api.coindesk.com
and then it'll show updated price in a public/private telegram channel and on My personal twitter account.
For that i have used Python and a third party service called IFTTT to send the push notification.

#Get the Bitcoin Price (GET Request):

1. If you do not have python 3 version in your system then, you should update or install it first
2. Then we have to import the requests module by importing pip and make a function price() .
3. Now define the url form Where we need to fetch the latest price.
4. Next, we will need a date with price (import date module).
5. Then we will store the data in a variable response and later will extract the JSON data in 'data' variable.

#Sending IFTTT Notification (POST Request):

1. Now we can move onto the IFTTT side of things. To use IFTTT you'll first need to set up a new account and
install their mobile app (if you want to receive phone notifications from your Python app).
2. Once you set that up, we're going to create a new IFTTT applet for the notification.
3. To create a new test applet follow these steps:
    1. Click on the big "this" button
    2. Search for the "webhooks" service and select the "Receive a web request" trigger
    3. Let's name the event 'n'
    4. Now select the big "that" button
    5. For the action select the "Notifications" service and select the "Send a rich notification from the
    IFTTT app" action.
    6. Give it a title, like "n"
    7. Set the message to Bitcoin price is at $\{\{Value2\}\}$. and Status at $\{\{Value1\}\}$
    To see the documentation on how to use the IFTTT webhooks go to the main applet page and click on the
    "Documentation" button in the top right corner. The documentation page contains the webhook URL and it
    looks like this: "https://maker.ifttt.com/trigger/{event}/with/key/{your-IFTTT-key}"
    8. Next up, you'll need to substitute the {event} part with whatever name you gave our event in step 3,
    when you created the applet. The {your-IFTTT-key} part is already populated with your IFTTT key. Now will ma
ke
    a variable and will store the webhook url.
4. Now whenever we call the post_ifttt_webhook function it'll trigger the notification.
    The event parameter corresponds to whatever event name we gave to our trigger when setting up the
    IFTTT applet. Also, the IFTTT webhooks allow us to send additional data along with the request as
    JSON-formatted data.

#Telegram notification update:

1. Again choose the "webhooks" service and select the "Receive a web request" trigger
2. Name the event telegram_notifier
3. For the action select the "Telegram" service and select the "Send message" action

4. Set the message text to:
      Status: {{Value1}}
      Latest bitcoin prices:
{{Value1}}
5. Create the action and finish with the applet
   To receive the notification in telegram, I created a public channel called Bitcoin
   Notification by Amol and gave the access to the IFTTT telegram bot and make it the
   administrative section.

Twitter notification update:

1. Create New applet for Twitter also by following same steps.
2. Again choose the "webhooks" service and select the "Receive a web request" trigger
3. Name the event twitter_notifier
4. For the action select the "twitter" service and select the "Send message" action
5. Set the message text to:
      Status: {{Value1}}
      Latest bitcoin prices:
{{Value1}}
6. Create the action and finish with the applet
   To receive the notification in Twitter, I have used my personal account to send notification
   named as amol17398. follow this account to get the notification

How Program Works:

1. Now coming to the python console. We have to create two separate function to fetch the price
   and to update that in our telegram channel and twitter account.
2. For that in run function we took two separate function used first one is for fetch and second is for
   send notification .
3. While getting the data from 'price()' under run function we are returning the value
4. through 'twitter_notifier and twitter_notifier' applet which is triggering the Webhook
   notification by send_data function.
5. And lastly the time sleep function imported from datetime package will take care of
   the current time and the time when we need the data.
6. The only thing missing is the format_bitcoin_history function. It takes the bitcoin_history as an
   argument and formats it using some of the basic HTML tags allowed by Telegram, like <br>, <b>, <i>,
   and so on.

#Command line utility:

1. For command line utility we imported a package called argparse.
2. Where we added three argument, one for the interval we want and other two for lower and upper limit.
3. For each we gave default value which will be called if we failed to give any argument.
4. here threee 'add_argument' function are taking the values and at last we are passing all arguments in
   a send_data function.
5. So when run function is being called we are calling two different function 'send_data()" for
   the notification and 'price()' for fetch the price form API.