**Class Project Dragara-Flying123**

For your class project we will be creating an application to interacts with a webservice in order to obtain data.  Your program will use all of the information you’ve learned in the class in order to create a useful application.

Your program must prompt the user for their city or zip code and request weather forecast data from openweathermap.org.  Your program must display the weather information in an READABLE format to the user.

**Requirements:**

* Create a Python Application which asks the user for their zip code or city.
* Use the zip code or city name in order to obtain weather forecast data from: <http://openweathermap.org/>
* Display the weather forecast in a readable format to the user.
* Use comments within the application where appropriate in order to document what the program is doing.
* Use functions including a main function.
* Allow the user to run the program multiple times.
* Validate whether the user entered valid data.  If valid data isn’t presented notify the user.
* Use the **Requests** library in order to request data from the webservice.
* Use **Python 3.**
* Use try blocks when establishing connections to the webservice.  You must print a message to the user indicating whether or not the connection was successful.

**Deliverables (More detail on these deliverables in provided in the course):**

* Pseudocode (**Due week 4**)
* Flowchart (**Due week 4**)
* Draft Program in a .py file (**Due week 9**)
* Final Program in a .py file (**Due week 12**)

**Project Notes:**

* Sign up for API Key <http://openweathermap.org/appid>
* The API key will look something similar to this: d5751b1a9e2e4b2b8c7983646072da8b
* Make a connection to the API using the Requests library.

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**Pseudocode:**

*Code:*

Pull the API

Pull the website info

*Screen:*

Display website asking for location

Enter input

Display results

End program

**CODE:**

# import required modules  
import requests

# function to request for data  
def weather\_data(query):  
   # Enter your API key here  
   api\_key = ""  
   # base\_url variable to store url  
   base\_url = "http://api.openweathermap.org/data/2.5/weather?"  
   complete\_url = base\_url + "appid=" + api\_key + "&" + query  
   # response object  
   res=requests.get(complete\_url);  
   return res.json();

# function to display results  
def display\_results(weathers,city):  
   print("{}'s temperature: {}°C ".format(city,weathers['main']['temp']))  
   print("Wind speed: {} m/s".format(weathers['wind']['speed']))  
   print("Description: {}".format(weathers['weather'][0]['description']))  
   print("Weather: {}".format(weathers['weather'][0]['main']))

# main function  
def main():  
   # Give city name  
   city=input('Enter the city:')  
   print()  
   # try-except block  
   try:  
      query='q='+city;  
      w\_data=weather\_data(query);  
      display\_results(w\_data, city)  
      print()  
   except:  
      print('City name not found')

if \_\_name\_\_=='\_\_main\_\_':  
   main()

Finished code:

**CODE:**

# import required modules  
import requests

# function to request for data  
def weather\_data(query):  
   # Enter your API key here  
   api\_key = "c358a8034e5c2d572f2573c3bb1cb8c1"  
   # base\_url variable to store url  
   base\_url = "http://api.openweathermap.org/data/2.5/weather?"  
   complete\_url = base\_url + "appid=" + api\_key + "&" + query  
   # response object  
   res=requests.get(complete\_url);  
   return res.json();

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def display\_results(weathers,city):  
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   print("Weather: {}".format(weathers['weather'][0]['main']))

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      print('City name not found')

if \_\_name\_\_=='\_\_main\_\_':  
   main()