edureka!

Python Projects

TRAVEL PLANNER

MANAV MAHESH / KEANE COUTINHO / AHMED MADHIH -11-B

Certificate

This is hereby to certify that, the original and genuine investigation work has been carried out to investigate about the subject matter and the related data collection and investigation has been completed solely, sincerely and satisfactorily by **Keane Coutinho, Manav Mahesh and Ahmed Madhih of Class XI B, 'Our Own High School'** regarding his project titled **"*TRAVEL PLANNER*".**

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ACKNOWLEDGEMENT

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I would like to thank her for teaching us computer science from the very basics thus strengthening our root and making us understand complex chapters easily.

This project has been made not only for fetching marks but also for knowledge.

INTRODUCTION

Python is an interpreted, interactive, object-oriented programming language. It incorporates modules, exceptions, dynamic typing, very high-level dynamic data types, and classes. Python combines remarkable power with very clear syntax. Python permits its users to write programs and files in fewer lines of code as compared to other programming languages like C++ and Java. The program can be modified at any instant in accordance with the user’s requirements. Python provides the user to write clear programs both on a large and small scale.

History of Python

Python was perceived in the late 1980s and its implementation was started in December 1989 by Guido van Rossum at CWI in the Netherlands as a successor to the ABC language (itself inspired by SETL) capable of exception handling and interfacing with the Amoeba operating system. Guido Van Rossum is Python's principal author, and his continuing central role in deciding the direction of Python is reflected in the title given to him by the Python community, benevolent dictator for life (BDFL).

Many of Python's features originated from an interpreted language called ABC. Rossum wanted to correct some of ABC's problems and keep some of its features. Guido Van Rossum published the first version of Python code (version 0.9.0) at in February 1991. This release included

already exception handling, functions, and the core data types of list, dict, str and others. It was also object oriented and had a module system. Python version 1.0 was released in January 1994. The major new features included in this release were the functional programming tools lambda, map, filter and reduce, which Guido Van Rossum never liked. Six and a half years later in October 2000, Python 2.0 was introduced.

This release included list comprehensions, a full garbage collector and it was supporting Unicode. With this release the development process was changed and became more transparent and community backed.

Significant Features of Python

- **Easy to use**
  Python is a very developer-friendly language which means that anyone and everyone can learn to code it in a couple of hours or days. As compared to other object-oriented programming languages like Java, C, C++, and C#, Python is one of the easiest to learn.
- **Open and free source**
  Python is an open-source programming language which means that anyone can create and contribute to its development. Python has an online forum where thousands of coders gather daily to improve this language further. Along with this Python is free to

download and use in any operating system, be it Windows, Mac or Linux.

- **Support for GUI**

  GUI or Graphical User Interface is one of the key aspects of any programming language because it has the ability to add flair to code and make the results more visual. Python has support for a wide array of GUIs which can easily be imported to the interpreter, thus making this one of the most favorite languages for developers.

- **High level language**

  Python has been designed to be a high-level programming language, which means that when you code in Python you don’t need to be aware of the coding structure, architecture as well as memory management.

Uses of python

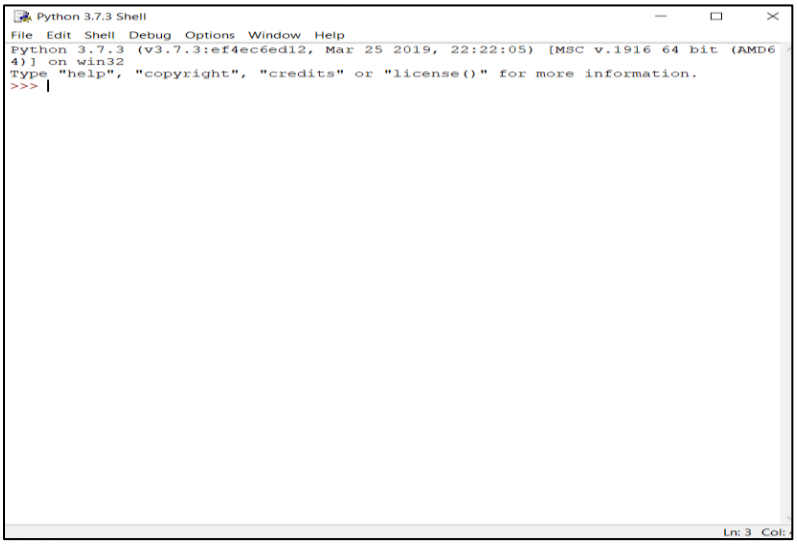
Python is in the following places:

- In operations pf google search engine, YouTube, etc.
- Intel, cisco, HP,IBM, etc use python for hardware testing.
- The popular social media application “INSTAGRAM” was made by just using python.
- I-robot uses python to develop commercial Robot.
- NASA and others use python for their scientific programming task.

Types of python shells

1) Interactive Mode

Working in the interactive mode we will start python on our computer. When we start up the IDLE what we see is a welcome message of python interpreter with revision details and python prompt, i.e, '>>>'. This primary prompt indicating that the interpreter is expecting a python command. Interpreter uses prompt to indicate that it is ready for instructions.



2) Script Mode

In script mode, we type python program in a file and then use the interpreter to execute the content from the file. Working in interactive mode is convenient for beginners and for the testing small pieces of code, as we can test them immediately. But for coding more than a few lines, we should always save our code so that we may modify and reuse the code.

PROBLEM DEFINITION

Aim

To make a basic trip planner software, which asks the user of the program about where he /she wishes to go and various travelling information and, in the end, enables the user to book the required flight ticket.

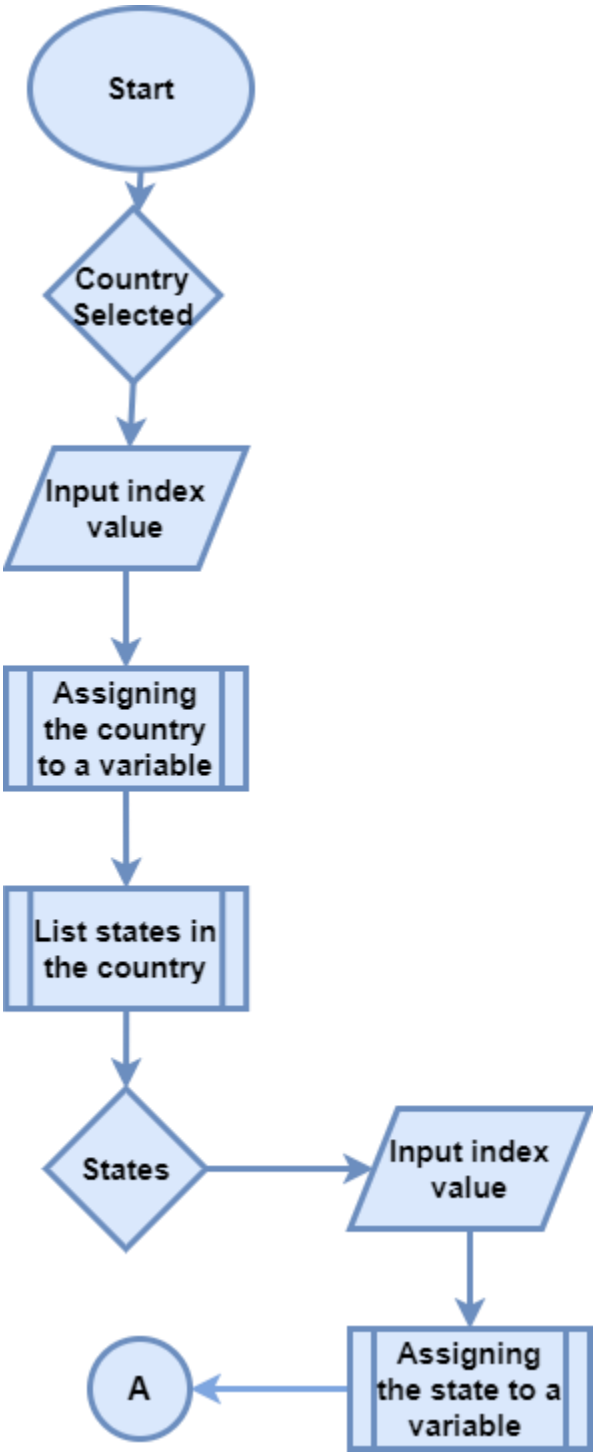
Objective

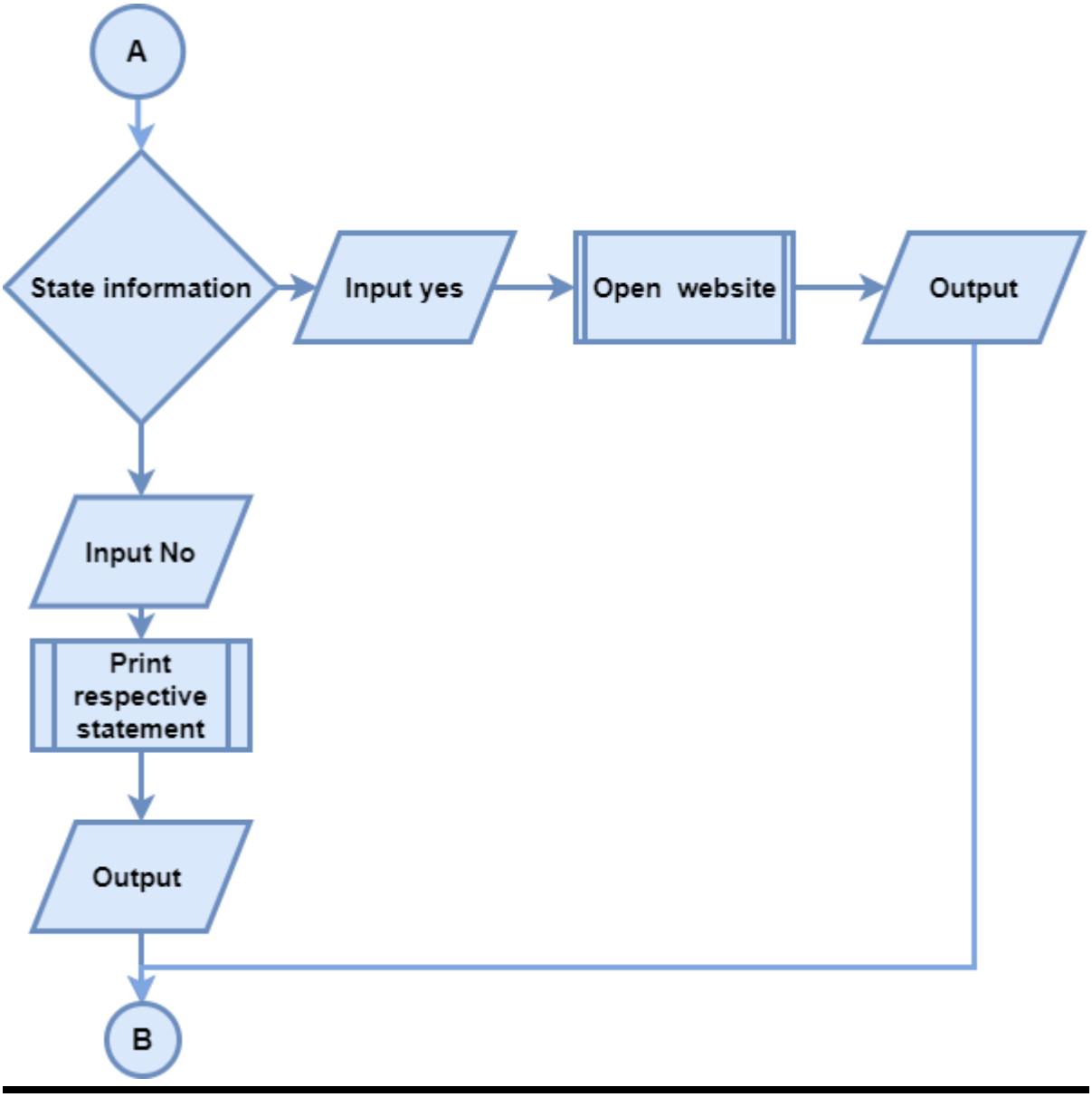
This program is basically a vacation planner. The user is provided with several options as possible destination till it is narrowed down to one city from the given options

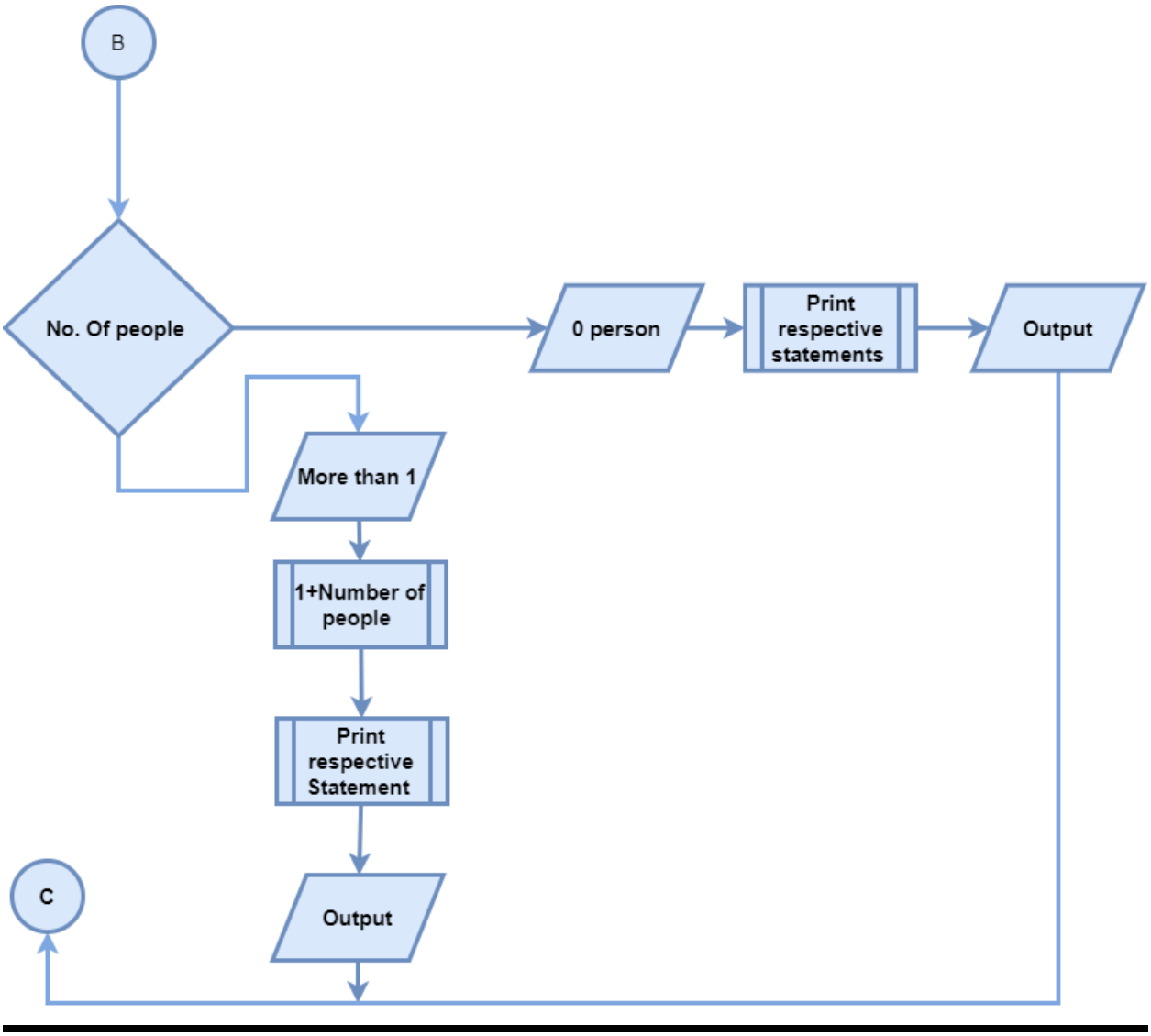
The user is also asked about his/her budget for the trip, if they already know about the city and if there are some other companions with him on the trip.

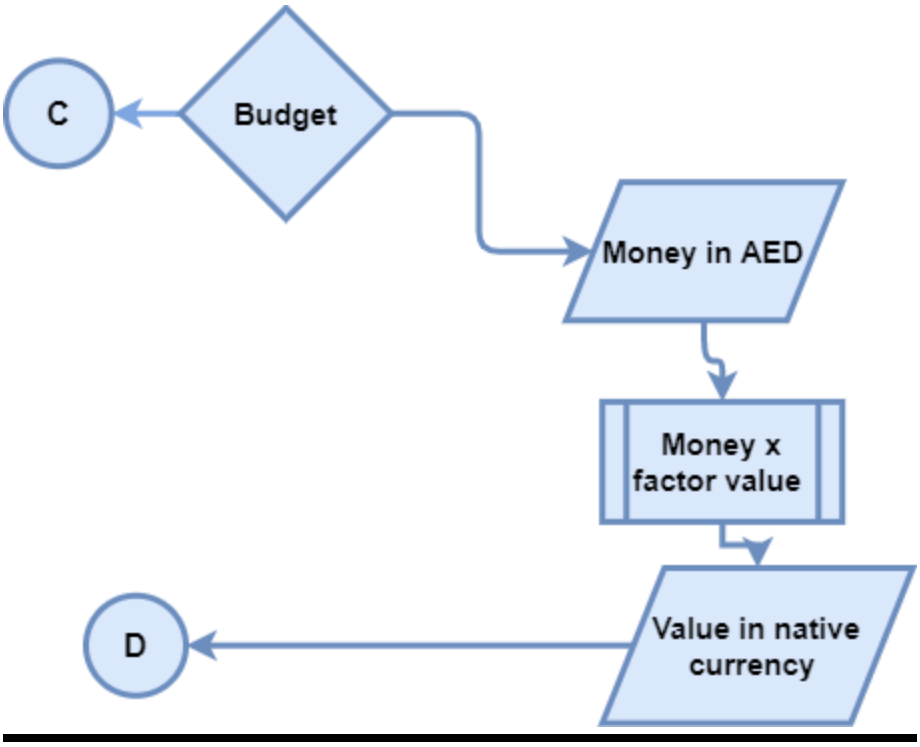
In the end, the user is directed to an airplane ticket booking webpage from where he/she can book the plane tickets.

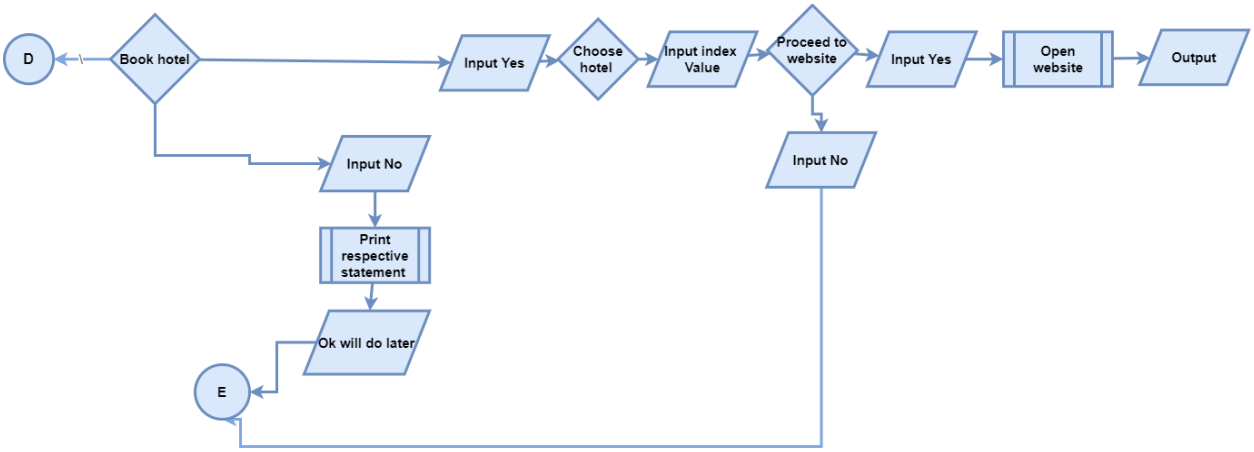
FLOWCHART

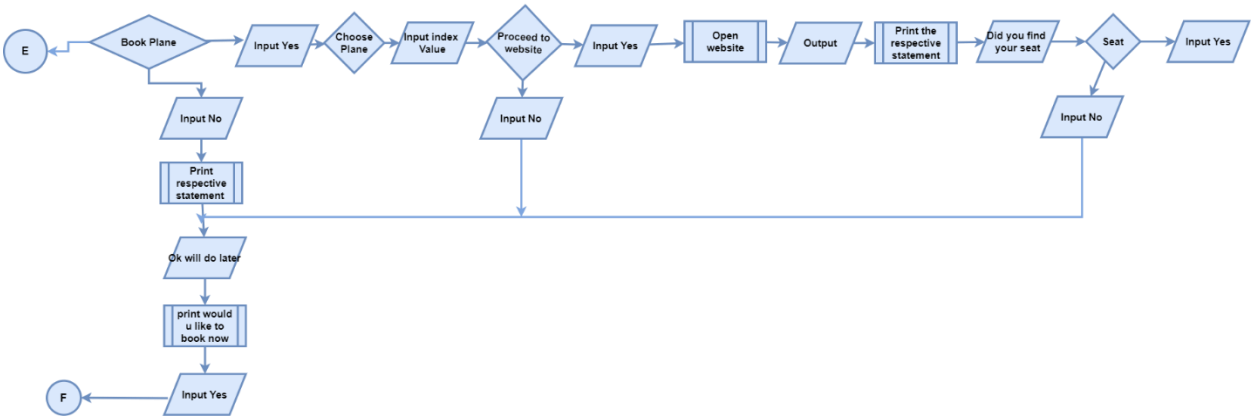

Start
Country Selected
Input index value
Assigning the country to a variable
List states in the country
States
Input index value
Assigning the state to a variable
A

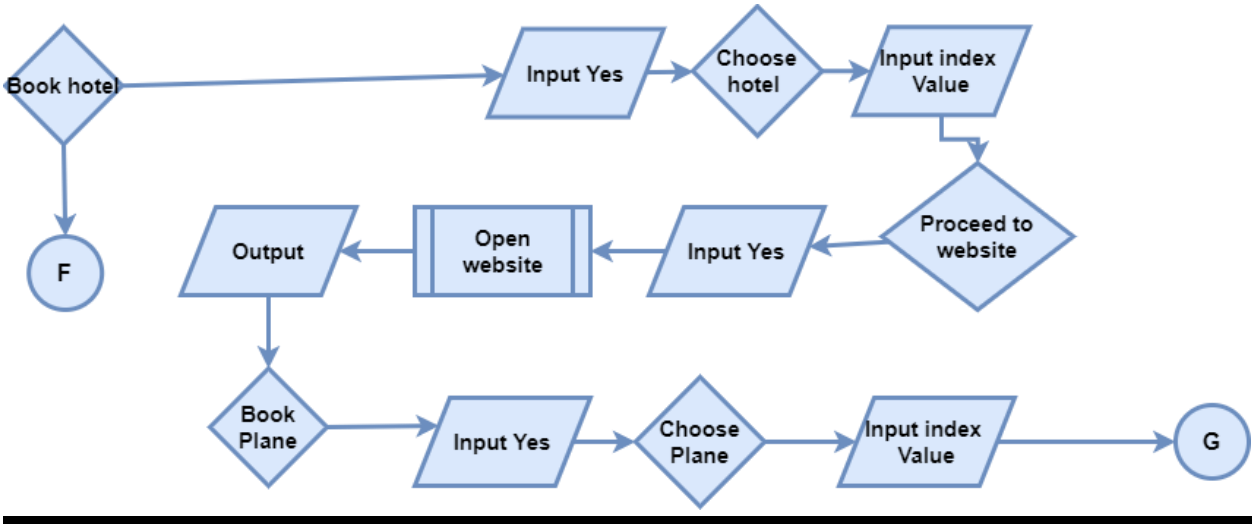

A
State information
Input yes
Open website
Output
Input No
Print respective statement
Output
B

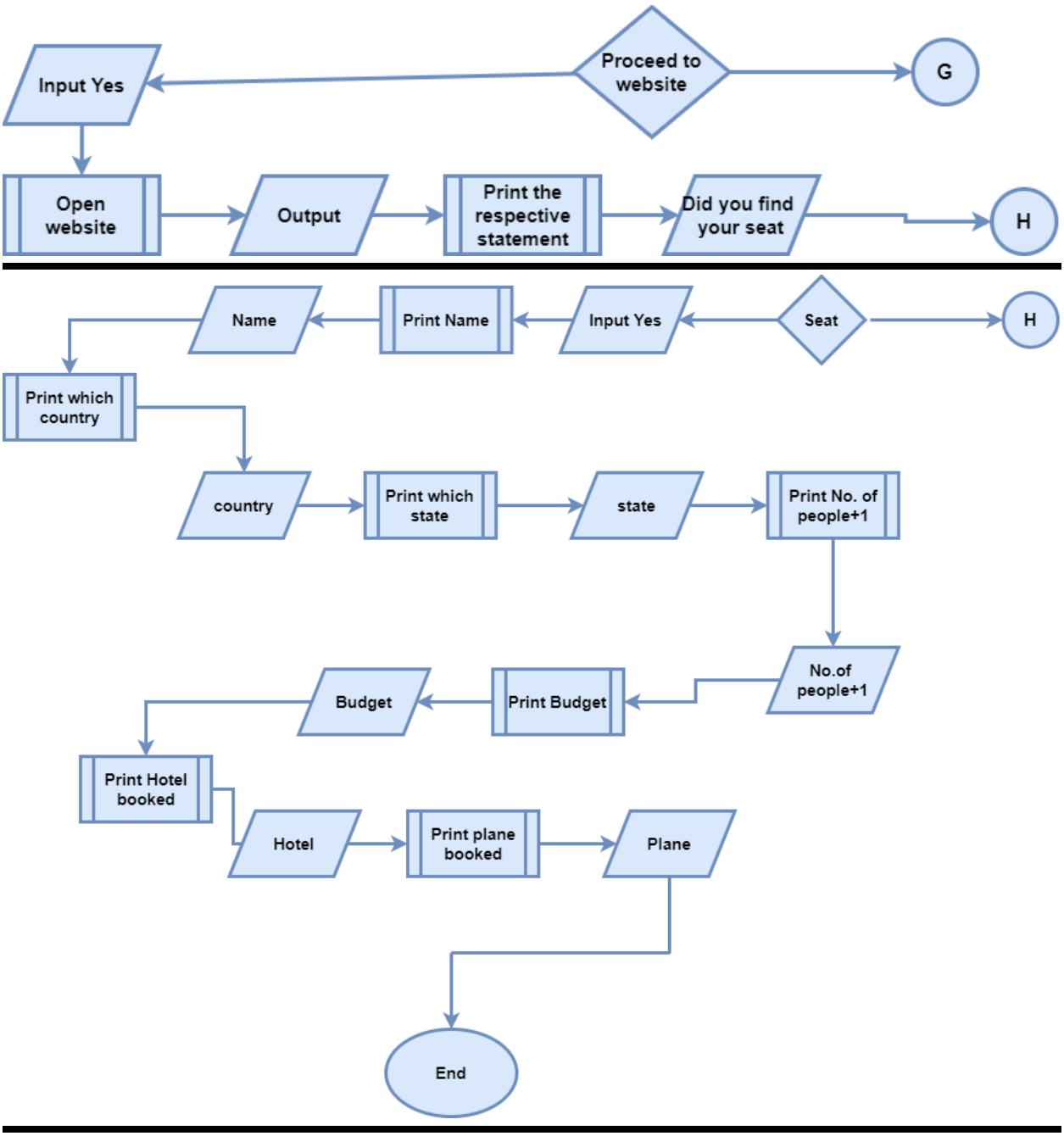

B
No. Of people
0 person
Print respective statements
Output
More than 1
1+Number of people
Print respective Statement
Output
C


C
Budget
Money in AED
Money x factor value
Value in native currency
D


D
Book hotel
Input Yes
Choose hotel
Input index Value
Proceed to website
Input Yes
Open website
Output
Input No
Print respective statement
Ok will do later
E
Input No


E
Book Plane
Input Yes
Choose Plane
Input index Value
Proceed to website
Input Yes
Open website
Output
Print the respective statement
Did you find your seat
Seat
Input Yes
Input No
Input No
Input No
Print respective statement
Ok will do later
print would u like to book now
F
Input Yes


Book hotel
Input Yes
Choose hotel
Input index Value
Proceed to website
Input Yes
Open website
Output
F
Book Plane
Input Yes
Choose Plane
Input index Value
G


Input Yes
Proceed to website
G
Open website
Output
Print the respective statement
Did you find your seat
H
Name
Print Name
Input Yes
Seat
H
Print which country
country
Print which state
state
Print No. of people+1
No.of people+1
Budget
Print Budget
Print Hotel booked
Hotel
Print plane booked
Plane
End

TECHNICAL DOCUMENTATION

Our program of Travel Planner was coded individually by our members and was then grouped and accessed through the main function. For coding this program, we used the following modules/features of python:

1. **Website Module:** We used the website module to open the desired URL through python

2.**‘def’ function: It** is used to call all the functions specified above and print various menus. Also, opens and uses files, and creates objects of the classes used.

3. **Dictionary**: We used dictionary to make a dictionary of the countries and the states in the selected country.

4.’**For, if, elif and while’ loop**: We have used these loops thorough out the program which helps beginners to easily understand the coding.

USER DOCUMENTATION

Firstly, the user shall enter his name, then the user is given an option to choose from various countries. Then the user needs to choose the city they would like to visit, the option is then given to the user to choose if he/she wants to know more about the place if the user selects yes the user is directed to Wikipedia to know more about that place, otherwise its continues and asks the user how many people he/she is bring along with them. The program then asks the user how many days they will be staying for, since many people travel on a budget so the user inputs how much money they are carrying. Then the user has the option to book his/her hotel from the selected hotels or booking sites if user wishes to book later, he can select the no option.

SOURCE CODE

```
import webbrowser
countries=["Australia","Japan","France","South Africa",
           "Italy","Indonesia","Spain","United States of America",
           "Greece","South America","West Africa","East Africa",
           "North Africa","Georgia","Russia","China(Not Available due to Corona
virus)",
           "Turkey","Philippines","New Zealand","Thailand",
           "Norway","Vietnam"]

my_dict={"Australia":["Sydney","Melbourne","Canberra","Perth","Brisbane"],
         "Japan":["Tokyo","Kyoto","Yokohama","Hiroshima","Nagasaki"],
         "France":["Paris","Cannes","Lyon","Marseille","Lyon"],
         "South Africa":["Cape Town","Bloemfontein","Durban","East
London","Johannesburg",],
         "Italy":["Rome","Venice","Florence","Pisa","Naples"],
          "Indonesia":["Bali","Ubud","Jakarta","Kuta"],
         "Spain":["Barcelona","Madrid","Seville","Granada","Valencia"],
         "United States of America":["New York","Los Angeles","Las Vegas","San
Francisco","Washington, D.C."],
         "Greece":["Athens","Santorini","Mykonos","Crete Region","Rhodes"],
         "South America":["Brazil","Chile","Argentina","Colombia","Peru"],
         "West Africa":["Nigeria","Benin"," Burkina Faso", "Cameroon", "Cabo Verde"],
         "East Africa":["Tanzania", "Kenya", "Uganda", "Rwanda"," Burundi","South
Sudan"],
          "North Africa":["Plazas de soberanía","Ceuta","Melilla","Canary
Islands","Madeira"],
         "Georgia":["Tbilisi","Batumi","Mtskheta","Stepantsminda","Kutaisi"],
         "Russia":["Moscow","Saint Petersburg","Lake
Baikal","Kazan","Yekaterinburg"],
         "China(Not Available due to Corona
virus)":["Beijing","Shanghai","Chengdu","Guangzhou","Lhasa"],
         "Turkey":["Istanbul","Cappadocia","Pamukkale","Antalya","Izmir"],
         "Philippines":["Manila","Boracay","Cebu City","Bohol","El Nido"],
         "New Zealand":["Milford Sound","Mount Cook","Waitomo","Lake Tekapo","Franz
Josef Glacier"],
         "Thailand":["Bangkok","Phuket","Ko Samui", "Pattaya City","Ko Tao"],
         "Norway":["Oslo","Bergen","Tromso","Geirangerfjord","Flam"],
         "Vietnam":["Hạ Long Bay","Ho Chi Minh City","Hanoi","Hoi An","Hue"]}

hotelname=""
planename=""
```

```
print("**********************")

print("*WELCOME TO TRIP PLANNER*")

print("**********************\n")

name=input("Hello there! What is your name? ")

print("\nOh hey, "+name+"! Nice to meet you!")

print("\nOur services extend to various countries. Right now, we can offer you a
quality time in one of the following:\n")

i=1

for c in my_dict.keys():
     print(str(i)+". "+str(c))
     i+=1
     print()

country=int(input("So, which country are you interested in? Please type in the index
number: "))

my_country=countries[country-1]

print()

print(my_country+" is an amazing choice indeed! In "+my_country+" we offer a tour in
one of the following cities:\n")
i=1
for v in my_dict[my_country]:
    print(str(i)+". "+str(v))
    i+=1
print()

city=int(input("So tell us! Which city do you plan do go to? Enter its index number:
"))
my_city=my_dict[my_country][city-1]

print()

print("So you want to go to "+my_city+"? That is an awesome choice!")
info=input("Do you want to know more about "+my_city+"?(Y/N) ")

if(info=='y' or info=='Y'):
    url_city="https://en.wikipedia.org/wiki/"+my_city
    webbrowser.open_new_tab(url_city)
elif(info=='n' or info=='N'):
    print("It seems you already know about "+my_city+"! Awesome")
nop=int(input("\nSo, "+name+". You must be bringing along a few people atleast,
right? To help us plan your trip better, "
                            "please tell us how many people you're bringing with you:
```

```
"))
if(nop==0):
    print("\nOh! So it's more like a solo trip!")
else:
    print("\nOh so it's the "+str(nop+1)+" going together! All of you will have a
great time together!")

days=int(input("For how many days are you planning to stay in "+my_city+"?" ))
budget=int(input("\nHow much money in AED are you planning to carry? "))

if(country==1):
    factor=0.40

elif(country==2):
    factor=29.64

elif(country==3):
    factor=0.25

elif(country==4):
    factor=4.03

elif(country==5):
    factor=0.25

elif(country==6):
    factor=3,735.40

elif(country==7):
    factor=0.25

elif(country==8):
    factor=0.27

elif(country==9):
    factor=0.25

elif(country==10):
    factor=1.16

elif(country==11):
    factor=0.41

elif(country==12):
    factor=628.673

elif(country==13):
    factor=159.54

elif(country==14):
    factor=0.77

elif(country==15):
```

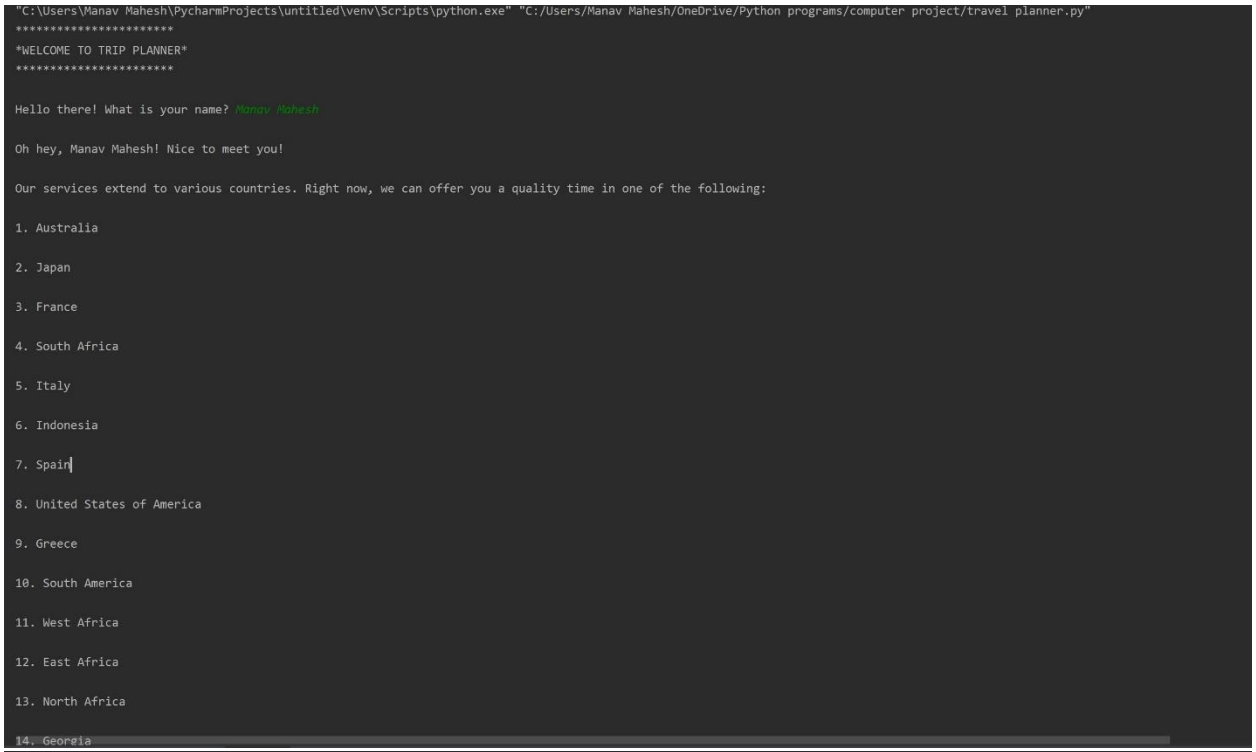
```
    factor=17.18

elif(country==16):
    factor=1.90

elif(country==17):
    factor=1.62

elif(country==18):
    factor=13.81

elif(country==19):
    factor=0.42

elif (country ==20):
    factor=8.43

elif (country ==21):
    factor=2.51

elif (country ==22):
    factor=6329.01

print(str(budget)+" AED is around "+str(int(budget*factor))+" in "+my_country+"'s
native currency")
if budget<500000:
    print("\nThis much money is sufficient! You'll spend around
"+str(int(budget*factor/days))+" per day on average.")
else:
    print("\nThis much money is more than enough for you to enjoy this trip to the
fullest!")
hotelbooked=False
print("\nNow let's see the Hotel's where you could be staying for the trip!")
choice=input("Shall we? (Y/N)")

def book_hotel(choice):
    global hotelbooked
    global hotelname
    if(choice=='N' or choice=='n'):
        print("\nOkay then we'll come back to this step later on!")
    elif(choice=='y' or choice=='Y'):
        print("\nWhich of the following sites do you prefer?")
        site = int(input("1.Le
Meridien\n2.Marriott\n3.Hilton\n4.Booking.com\n5.trivago\n6.Yatra.com\nChoice: "))
        if (site == 1):
            url = "https://le-meridien.marriott.com/"
            hotelname="Le Meridien"
        elif (site == 2):
            url = "https://www.marriott.com/default.mi"
            hotelname="Marriott"
        elif (site == 3):
            url =
"https://explorehotels.hilton.com/en_gb/landing/?location=25.204663,55.27077&radius=2
```

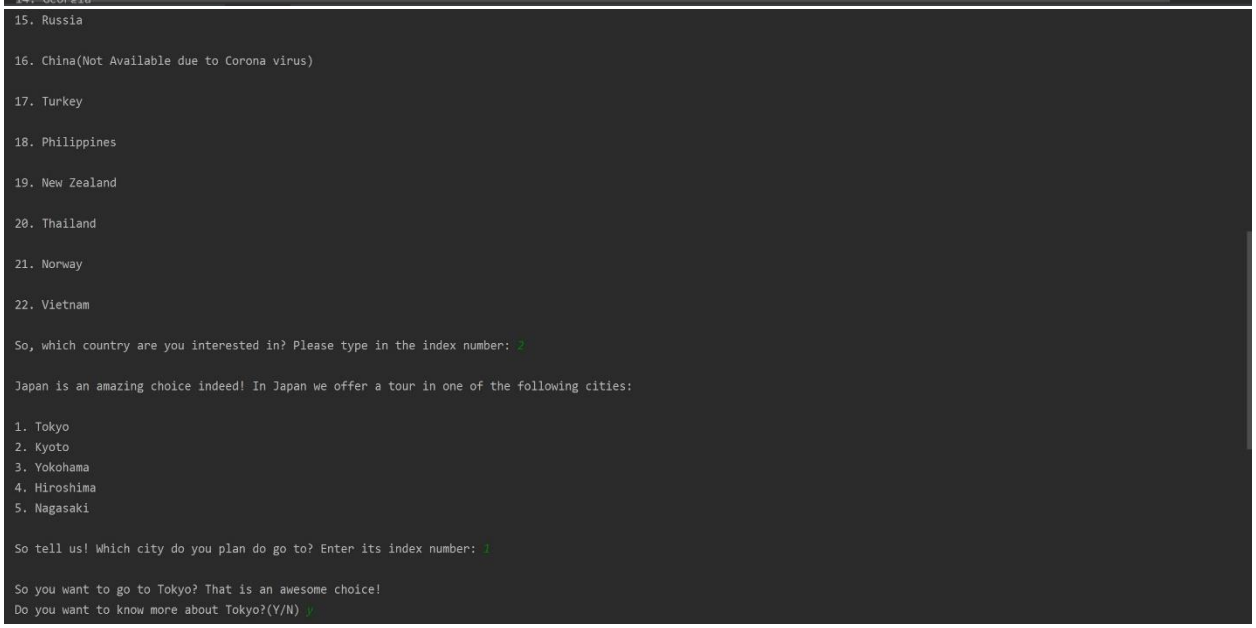
```
5&title=Dubai,_UAE&tracking=OM,MB,DLP_EMEAx&campaign_id=Default&WT.srch=1&WT.mc_id=zI
MDPDA0EMEA1MB2PSH3PPC_Google_search4cid992557122_aid49269459516_me_kkwd-
3645597134375Brand_Cluster6MULTIBR7en&utm_source=Google&utm_medium=ppc&utm_campaign=p
aidsearch&campaignid=992557122&adgroupid=49269459516&targetid=kwd-
364559713437&gclsrc=aw.ds&"
            hotelname="Hilton"
        elif (site == 4):
            url = "https://www.booking.com/index.en-gb.html?label=gen173nr-
1DCAEoggI46AdIM1gEaAKIAQGYAQm4ARfIAQzYAQPoAQGIAgGoAgO4ArHIs-
wFwAIB;sid=f1581273cee9c93549cda1462e8dbff6;keep_landing=1&sb_price_type=total&"

        elif(site==5):
            url = "https://www.trivago.ae/"

        elif (site == 6):
            url = "https://www.yatra.com/ae"
        info2 = input("Proceed to webiste?(Y/N) ")
        if (info2 == 'y' or info2 == 'Y'):
            webbrowser.open_new_tab(url)
        hotelbooked=True

book_hotel(choice)

print("\nNow let's go ahead and book the tickets.")

flightbooked=False

def book_flight():
    global flightbooked
    global planename
    print("\nWhich of the following sites do you prefer?")

    site=int(input("1.Emirates\n2.Etihad\n3.Lufthansa\n4.Singapore
Airlines\n5.Private Jet\n6.Qantas Airways\n7.Qatar Airways \nChoice: "))

    if(site==1):

url="https://fly4.emirates.com/CAB/IBE/SearchAvailability.aspx?gclid=Cj0KCQiApt_xBRDx
ARIsAAMUMu9rS8VKCywDOj7bKgmxwpcgDArpLZhNA3w2yJnzE9mmgab9gnT0xgQaAto-
EALw_wcB&gclsrc=aw.ds"
        planename="Emirates"
    elif(site==2):
        url="https://www.etihad.com/en-ae/?CID=PPC-UAE-
GOOGLE&gclid=Cj0KCQiApt_xBRDxARIsAAMUMu-
jkAsA8lfNkBbfxL9jiWkNuZZhwh9M44SGX2XwPnb9pWHXMl-CmMgaAt2bEALw_wcB&gclsrc=aw.ds"
        planename="Etihad"
    elif(site==3):
        url="https://www.lufthansa.com/ae/en/flight-search"
        planename="Lufthansa"
    elif(site==4):

url="https://www.singaporeair.com/en_UK/sg/home?ds_rl=1245134&ds_rl=1245134&gclid=Cj0
KCQiApt_xBRDxARIsAAMUMu9kdeQoZWf1DGQcTEXUmd8BPZrdT3karES6ikPm6W6s4sTdJAqW5vsaAnqfEALw
```

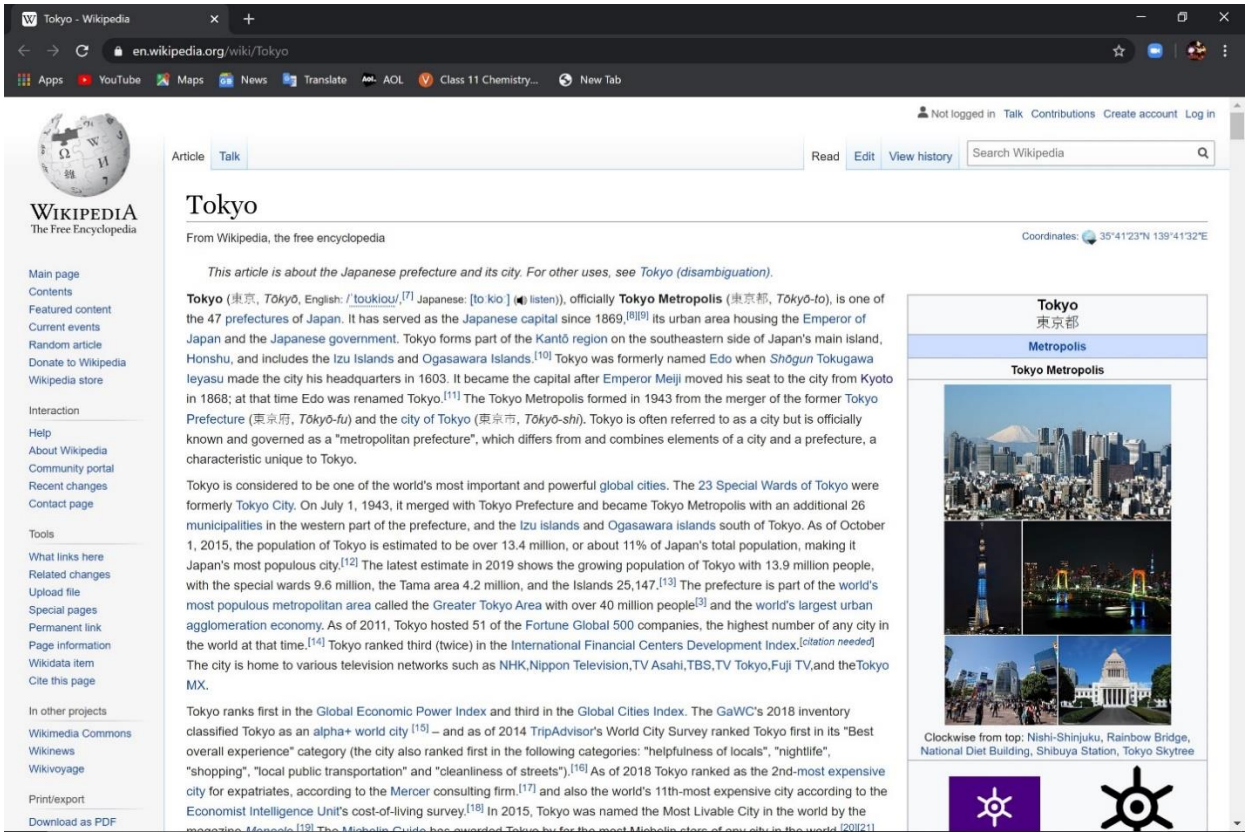
```
_wcB&gclsrc=aw.ds#/book/bookflight"
        planename="Singapore Airlines"
    elif(site==5):
        url="https://privatejetcharter.ae/"
        planename="Private Jet"
    elif (site == 6):
        url = "https://www.qantas.com/us/en.html"
        planename = "Qantas Airways"
    elif (site == 7):
        url = "www.qatarairways.com/"
        planename = "Qatar Airways"

    info2=input("Proceed to webiste?(Y/N) ")
    if(info2=='y' or info2=='Y'):
        webbrowser.open_new_tab(url)
        book=input("\nDid you find your desired seat or plane? (Y/N): ")
        if(book=='n' or book=='N'):
            book_flight()
        else:
            flightbooked=True
            print("\nOkay that's great!")
    else:
        print("\nOkay we'll do that later!")

book_flight()

if(hotelbooked==False):
    choice=input("\nWould you like to book the Hotel Room now? (Y/N): ")
    if(choice=='Y' or choice=='y'):
        print("\nOkay let's go!")
        book_hotel(choice)
    else:
        print("Alright then!")

if(flightbooked == False):
    choice = input("\nWould you like to book the Flight tickets now? (Y/N): ")
    if (choice == 'Y' or choice == 'y'):
        print("\nOkay let's go!")
        book_flight()
print()

print("YOUR TOTAL PACKAGE")
print("------------------")
print("Your selected country is",my_country)
print("----------------------------------")
print("Your selected city is",my_city)
print("----------------------------------")
print("The number of days you will be staying",days)
print("----------------------------------")
print("The amount you are travelling with is",budget)
print("----------------------------------")
print("You are bringing along",nop,"people")
print("----------------------------------")
```

```
print("You will be staying in",hotelname)
print("-----------------------------------")
print("You will be travelling through",planename)
print("-----------------------------------")
print("We genuinely hope you have an amazing trip and return home with plenty of
unforgettable moments! Hope you'll think of us next time when you wish to travel once
again. See you later, " + name + "!")
print("")
```

OUTPUT

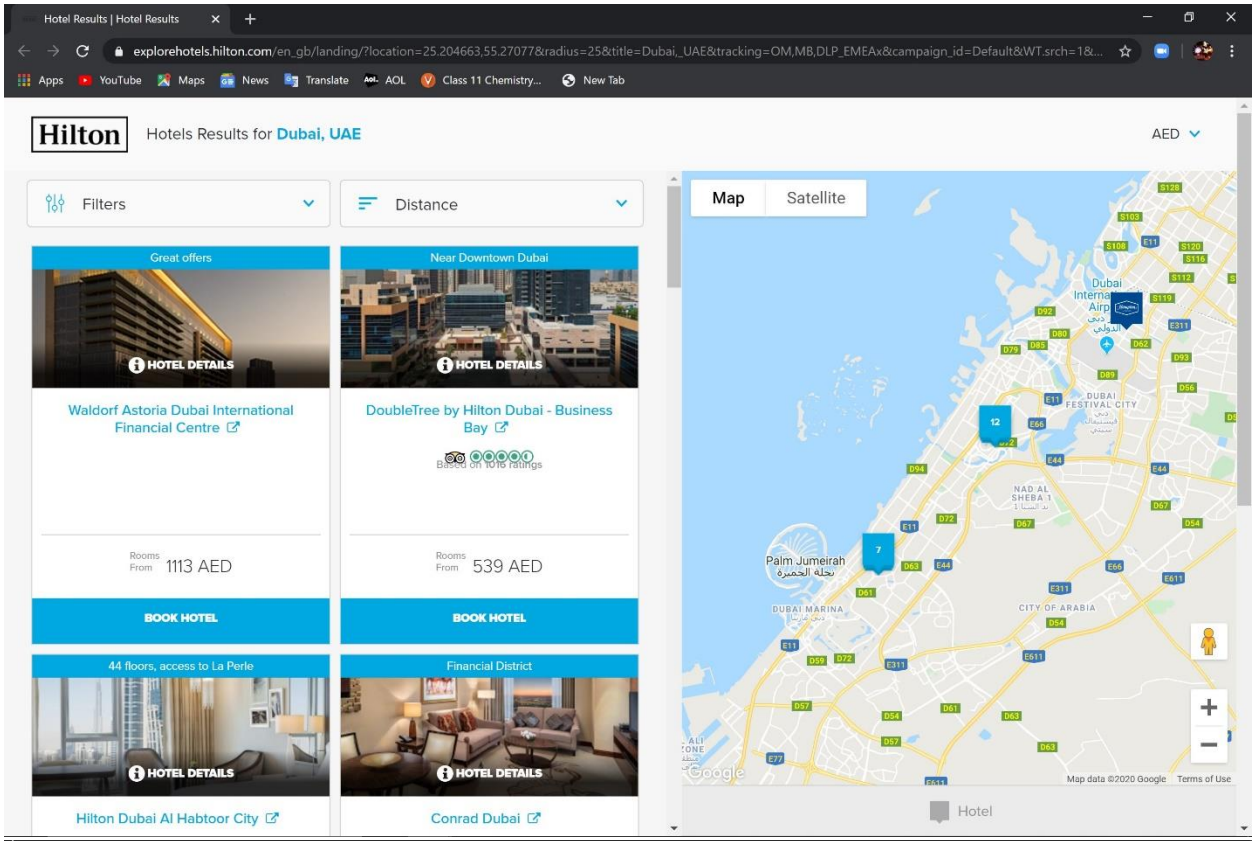

"C:\Users\Manav Mahesh\PycharmProjects\untitled\venv\Scripts\python.exe" "C:/Users/Manav Mahesh/OneDrive/Python programs/computer project/travel planner.py"
****
WELCOME TO TRIP PLANNER
****
Hello there! What is your name? Manav Mahesh
Oh hey, Manav Mahesh! Nice to meet you!
Our services extend to various countries. Right now, we can offer you a quality time in one of the following:
1. Australia
2. Japan
3. France
4. South Africa
5. Italy
6. Indonesia
7. Spain
8. United States of America
9. Greece
10. South America
11. West Africa
12. East Africa
13. North Africa
14. Georgia


15. Russia
16. China(Not Available due to Corona virus)
17. Turkey
18. Philippines
19. New Zealand
20. Thailand
21. Norway
22. Vietnam
So, which country are you interested in? Please type in the index number: 2
Japan is an amazing choice indeed! In Japan we offer a tour in one of the following cities:
1. Tokyo
2. Kyoto
3. Yokohama
4. Hiroshima
5. Nagasaki
So tell us! Which city do you plan do go to? Enter its index number: 1
So you want to go to Tokyo? That is an awesome choice!
Do you want to know more about Tokyo?(Y/N) y




```
So, Manav Mahesh. You must be bringing along a few people atleast, right? To help us plan your trip better, please tell us how many people you're bringing with you: 2

Oh so it's the 3 going together! All of you will have a great time together!
For how many days are you planning to stay in Tokyo?2

How much money in AED are you planning to carry? 1234522
1234522 AED is around 36591232 in Japan's native currency

This much money is more than enough for you to enjoy this trip to the fullest!

Now let's see the Hotel's where you could be staying for the trip!
Shall we? (Y/N)y
```

```
Which of the following sites do you prefer?
1.Le Meridien
2.Marriott
3.Hilton
4.Booking.com
5.trivago
6.Yatra.com
Choice: 3
Proceed to webiste?(Y/N) y
```


Hotel Results | Hotel Results
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Apps
YouTube
Maps
News
Translate
AOL
Class 11 Chemistry...
New Tab
Hilton
Hotels Results for Dubai, UAE
AED
Filters
Distance
Great offers
HOTEL DETAILS
Waldorf Astoria Dubai International Financial Centre
Rooms From 1113 AED
BOOK HOTEL
Near Downtown Dubai
HOTEL DETAILS
DoubleTree by Hilton Dubai - Business Bay
Rooms From 539 AED
BOOK HOTEL
44 floors, access to La Perle
HOTEL DETAILS
Hilton Dubai Al Habtoor City
Financial District
HOTEL DETAILS
Conrad Dubai
Map
Satellite
Palm Jumeirah
DUBAI MARINA
CITY OF ARABIA
NAD AL SHEBA 1
DUBAI FESTIVAL CITY
Map data ©2020 Google
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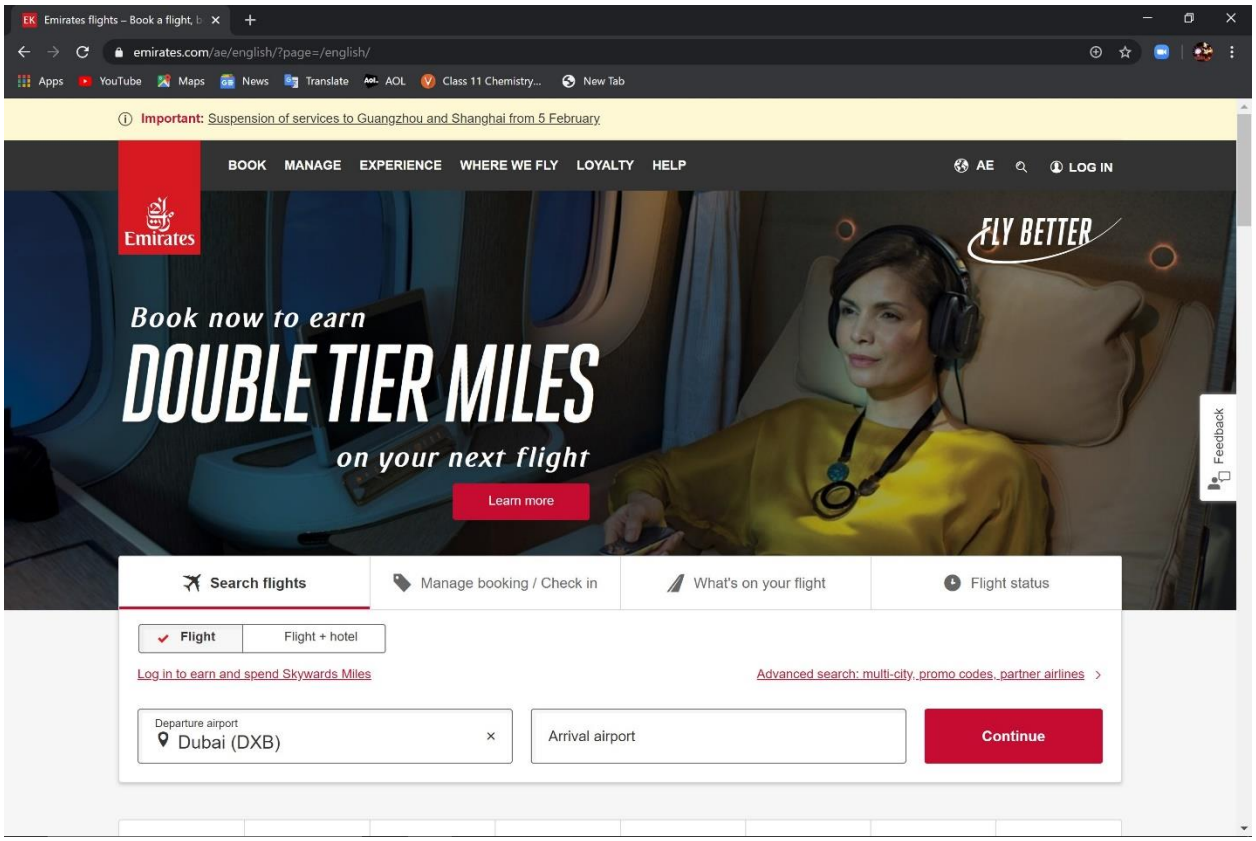
Hotel
Now let's go ahead and book the tickets.
Which of the following sites do you prefer?
1.Emirates
2.Etihad
3.Lufthansa
4.Singapore Airlines
5.Private Jet
6.Qantas Airways
7.Qatar Airways
Choice: 3
Proceed to webiste?(Y/N) y




```
Did you find your desired seat or plane? (Y/N): y

Okay that's great!

YOUR TOTAL PACKAGE
------------------
Your selected country is Japan
-----------------------------------
Your selected city is Tokyo
-----------------------------------
The number of days you will be staying 2
-----------------------------------
The amount you are travelling with is 1234522
-----------------------------------
You are bringing along 2 people
-----------------------------------
You will be staying in Hilton
-----------------------------------
You will be travelling through Emirates
-----------------------------------
We genuinely hope you have an amazing trip and return home with plenty of unforgettable moments! Hope you'll think of us next time when you wish to travel once again. See you later,
```

LIMITATIONS

1. Lack of GUI (graphic user interface)
2. Program is sequenced
3. Limited number of countries.

SUGGESTIONS FOR IMPROVEMENT

1. Make use of graphic user interface to make it more appealing.
2. Add more countries.
3. Create a menu so that the user doesn't have to follow the sequence.

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