



New Horizon Public School



C.S. Project Documentation

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CERTIFICATE

*This is to certify that this PROJECT _____
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*These students have satisfactorily completed the PROJECT
work for the year 20 to 20 as per the guidelines laid down
by CBSE.*

Internal Examiner

Date:

Principal,

New Horizon Public School

Airoli, Navi Mumbai.

Acknowledgment

I would like to acknowledge all those without whom this project would not have been successful. Firstly, I wish to express our sincere gratitude to our respective Principal,

I wish to express our sincere thanks to our computer science teacher, Ms. Merlin Chezian who guided us throughout the project and gave her immense support. She made us understand how to complete this project and without her, the project would not have been complete.

This project has been a source to learn and bring our theoretical knowledge to the real world. So, I would really acknowledge her help and guidance for this project.

Once again, thanks to everyone for making this project successful.

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Overview of Python

Python is the most popular programming language. Python is an easy-to-learn yet powerful object oriented programming language. It is as powerful as many other languages like C, C++, Java etc.

Python programming language was developed by Guido Van Rossum in February 1991. Python is based on or influenced with two programming languages

- 1) ABC language, a teaching language created as a replacement of BASIC, and
- 2) Modula-3

Python Pros:

1. **Easy to Use:** Python is compact and very easy to use object oriented language with very simple syntax rules.
2. **Expressive Language:** Python is an expressive language i.e., fewer lines of code and simpler syntax.
3. **Interpreted Language:** Python is an interpreted language, not a compiled language. It makes Python an easy-to-debug language and thus suitable for beginners to advanced users.
4. **Its Completeness:** Most types of required functionality is available through various modules of Python standard library.
5. **Cross-Platform Language:** Python can run equally well on variety of platforms. For ex.: Linux, Windows, Mac OS, etc. Python is a portable language.

6. **Free and Open Source:** Python language is freely available along with its source code.
7. **Variety of Usage/Applications:** Python is being used in many diverse fields/applications. For ex.: Scripting/automation, Web applications, Game development, etc.

Python Cons:

- 1) **Not the fastest language:** Python is an interpreted language, not a fully compiled one. Fully compiled languages are faster than their interpreted counterparts.
- 2) **Not strong on type-binding:** Python interpreter is not very strong on catching 'Type-mismatch' issues. For ex.: if you declare a variable as integer, but later store a string value in it, Python won't complain or pin-point it.
- 3) **Not Easily Convertible:** Due to its lack of syntax, python is an easy language to program in. But when it comes to translating a program into another programming language , python comes to disadvantage as most other languages have structure defined syntax.

Project Synopsis

The purpose of Airways Management System is to automate most of the airways travel processes and enable the travel related operations to be carried out in an easy and efficient way. The project presented by our group aims to achieve the following goals :

1. This system allows user to quickly access the relevant details and book tickets.
2. Users will be able to search flights and book tickets for various flights and destinations according to their convenience.
3. Admins can manage employee and flight details, thus maintaining the system for best experience.

Nowadays, there are many air-travel companies emerging in the modern world, but many of them lack a hassle-free management system, due to which their growth is affected. Whereas, this system can help the traveller to book tickets online within a few minutes, thus providing an effortless experience to the customer.

Minimum hardware and software requirements for Python

1) Modern Operating System:

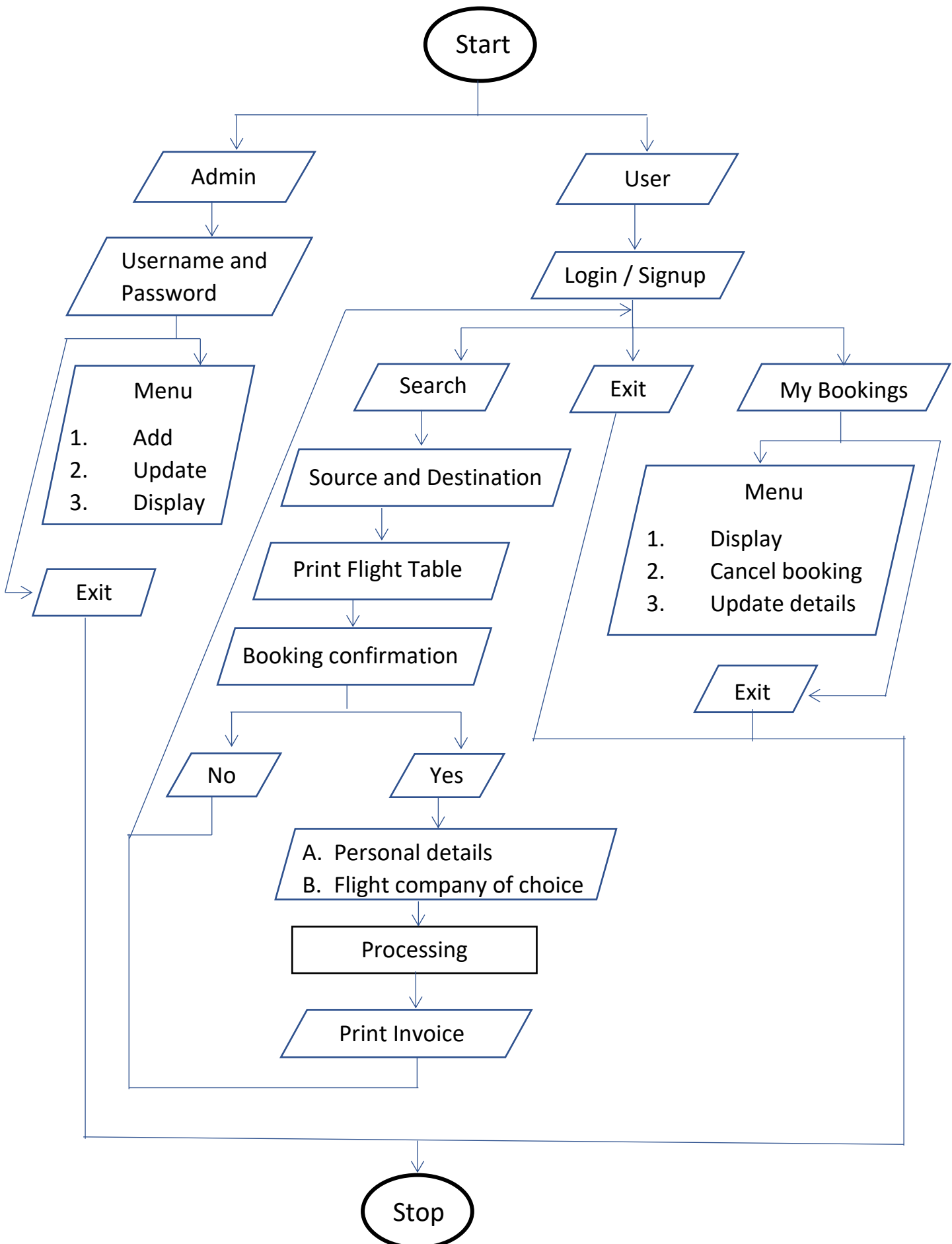
- a) Windows 7 or higher
- b) Mac OS X 10.11 or higher, 64-bit
- c) Linux: RHEL 6/7, 64-bit

2) Architecture: x86 64-bit CPU (Intel / AMD architecture)

3) RAM : 4 GB RAM (8 GB preferred)

4) ROM : 5 GB free disk space

Project Flowchart



Module Used

1) Random Module :

- a. The random module generates random integers from a given range of integers.
- b. In this project, we have used the random integer module to generate random 'Tour ID' which is a unique for each user.

User – defined functions

1) Destination : destination()

This function contains the menu for the user to select the destination from the given list. The menu provides six choices to the user and asks the user to enter their preferred destination.

2) Travel Means : travel()

This function contains the menu for the user to select the travelling means (airways or railways). The menu provides two choices to the user and asks the user to enter their preferred travel means.

3) Number of rooms required : rooms(num)

This function calculates and returns the number of hotel rooms required. It divides the total number of people into groups of three, assigning each group a room.

4) Confirmation : confirmation()

This function asks the user whether they want to continue the program or not. If they choose to discontinue the program will print exit.

5) Payment : payment()

This function asks the user to enter their preferred mode of payment from the given options . After the user enters their payment choice, they get the following message:

“You will be redirected to the payments page.” and “Payment successful.”

6) Destination name : destname()

Since the destinations are stored in the dictionary as numbers,

this function converts those numbers into their respective names. Those names will further be used in the program.

7) Travel means name : tmeansname()

Since the travelling means are stored in the dictionary as numbers, this function converts those numbers into their respective names. Those names will further be used in the program.

8) Short invoice : invoice()

This function prints a short version of the invoice as an immediate lookup for the user. It prints the name, e-mail ID, phone numbers, tour ID, starting point, destination, travelling means, number of people travelling, dates (from, to) and total trip cost. At the end it prints “All the necessary documents, tickets and full invoice will be sent to your e-mail id.” and a ‘Thank You’ statement.

Source Code

```
#Storage-----
-----
# 1:airways , 2: railways
# 1: Delhi, 2: Chennai, 3: Kolkata, 4: Goa, 5: Dehradun, 6: Mysore
dict ={'1':{'1':11000, '2':13000, '3':16000, '4':8000, '5':18000,
'6':18000},
      '2':{'1':5000, '2':7000, '3':6000, '4':1300, '5':4000,
'6':3000}}

# 1: 3 Star Hotel, 2: 5 Star Hotel
hotel = {'1':1500, '2':3000}

#Functions -----
-----

# Destinations
```

```

def destination():
    print()
    print("Destinations :")
    print()
    print("~~~~~ MENU
~~~~~")
    print("1. Delhi")
    print("2. Chennai")
    print("3. Kolkata")
    print("4. Goa")
    print("5. Dehradun")
    print("6. Mysore")
    print()
    global dest
    dest=input("Choose your preferred destination from the
following cities - ")

# Travel Means
def travel():
    print()
    print("Travel means:")
    print()
    print("~~~~~ MENU
~~~~~")
    print("1. Airways")
    print("2. Railways")
    print()
    global tmeans
    tmeans=input("Choose your preferred travelling means - ")

# No. of rooms needed
def rooms(num):
    global numr
    numr = 0
    if (num/3 <= 1):
        numr = numr+1
    elif (num/3 <= 2):
        numr = numr+2
    elif (num/3 <= 3):
        numr = numr+3
    elif (num/3 <= 4):
        numr = numr+4
    elif (num/3 <= 5):
        numr = numr+5
    else:
        numr = numr
        print("Not available for more than 15 people")

# Confirmation function to proceed further
def confirmation():
    print()
    print("~~~~~ Confirmation
~~~~~")
    print()
    global cfm

```

```

    cfm=input("Do you want to continue? (Y/N) : ")

#Payment
def payment():
    print()
    print("Payment mode:")
    print()
    print("~~~~~ MENU
~~~~~")
    print("1. Credit Card")
    print("2. Debit Card")
    print("3. UPI")
    print("4. Net Banking")
    print()
    global pay
    pay=int(input("Choose your preferred payment mode -"))
    print()
    print('You will be redirected to the payments page.')
    print()
    print('Payment successful.')
    print()

#Function for printing destination name
def destname():
    if dest=='1':
        print("Destination: Delhi")
    elif dest=='2':
        print("Destination: Chennai")
    elif dest=='3':
        print("Destination: Kolkata")
    elif dest=='4':
        print("Destination: Goa")
    elif dest=='5':
        print("Destination: Dehradun")
    elif dest=='6':
        print("Destination: Mysore")
    else:
        print()

#Function for printing traveling means name
def tmeansname():
    if tmeans == 1:
        print("Travel means : Airways ")
    elif tmeans == 2:
        print("Travel means : Railways")
    else:
        print()

#Short Invoice
def invoice():
    print()
    print()
    print()

```

```

        print("~~~~~ SHORT INVOICE
~~~~~")
        print()
        print()
        print("Name: ",name)
        print()
        print("Email ID: ", email)
        print()
        print("Phone number 1 :",phone1)
        print("Phone number 2 :",phone2)
        print()
        print("Tour ID: ",tid)
        print()
        print("Starting Point: Mumbai")
        print()
        destname()
        print()
        tmeansname()
        print()
        print("Number of people traveling: ", num)
        print()
        print("Dates: ")
        print("From - ",fr)
        print("To - ", to)
        print()
        print("Total cost: ₹", tcost)
        print()
        print("All the necessary documents, tickets and full invoice
will be sent to your e-mail id.")# Not really though :)
        print()
        print("~~~~~ THANK YOU
~~~~~")
        print()

```

```

#Program -----
-----

print("
---")
print("
|~~~~~|")
print("
|***** Paradise Tours and
*****|")
print("
|***** Travels
*****|")
print("
|~~~~~|")
print("
---")
print()
print("~~~~~ Welcomes you
~~~~~")
print()
print("Not able to decide where to go and what to do?")
print()

```

```

print("Plan your trip to some of the limited destinations and make
some life-long\
  memories with us :)")
print()
print("=====
=====")

#Starting Point
print("Starting Point : Mumbai")
print()

destination()

# if dest is from 1 to 6 then only proceed further to travel
function or show error
if dest=='1' or dest=='2' or dest=='3' or dest=='4' or dest=='5' or
dest=='6':
    travel()
else:
    print("Error! Invalid choice.")
    print()

#Hotel selection

# if value of tmeans is 1 or 2 then only proceed to hotel selection
or show an error
if tmeans=='1' or tmeans=='2':
    print()
    print("Hotel:")
    print()
    print("~~~~~ MENU
~~~~~")
    print("1. 3 Star Hotel")
    print("2. 5 Star Hotel")
    print()
    h=input("Choose your preferred hotel - ")
else:
    print("Error! Invalid choice.")

# No. of people travelling

# if value of h is 1 or 2 then only proceed to no. of people or
show an error
if h=='1' or h=='2':
    print()
    print("**Note: At most 15 people can travel**")
    print()
    num = int(input("Enter no. of people travelling - "))
    if num > 15:
        num = 0
        print()
        print("Error! At most 15 people can travel.") # people
limit is 15
else:
    print("Error! Invalid choice.")

```



```

rooms(num)

# Date and days
print()
print("Enter dates (Format: dd/mm/yyyy)  :")
fr = input("From :")
to = input("To :")
print()
days = int(input("Enter number of days :"))
print()

# Total trip cost calculation
a = dict[tmeans][dest]
b = hotel[h]

tcost = (a * num) + (b * days * numr) + (2000 * days) + (5000 *
days)
# 2000 - Guide cost , 5000= Miscellaneous costs (tax, meals, cabs,
etc.)
print()
print("Total trip cost: ₹", tcost)
print()

confirmation()

# If user enters Y program continues or program discontinues and
exits
#Personal Details:
if cfm=='Y' or cfm == 'y':
    print()
    name=input("Enter Your Name : ")
    email=input("Enter your Email id : ")
    phone1=input("Enter your phone no. 1 : ")
    phone2=input("Enter your phone no. 2 : ")
    print()
else:
    print('Thank you for visiting our website')
    print()
    print('Exit')

if cfm=='Y' or cfm == 'y':
    payment()
else:
    print()

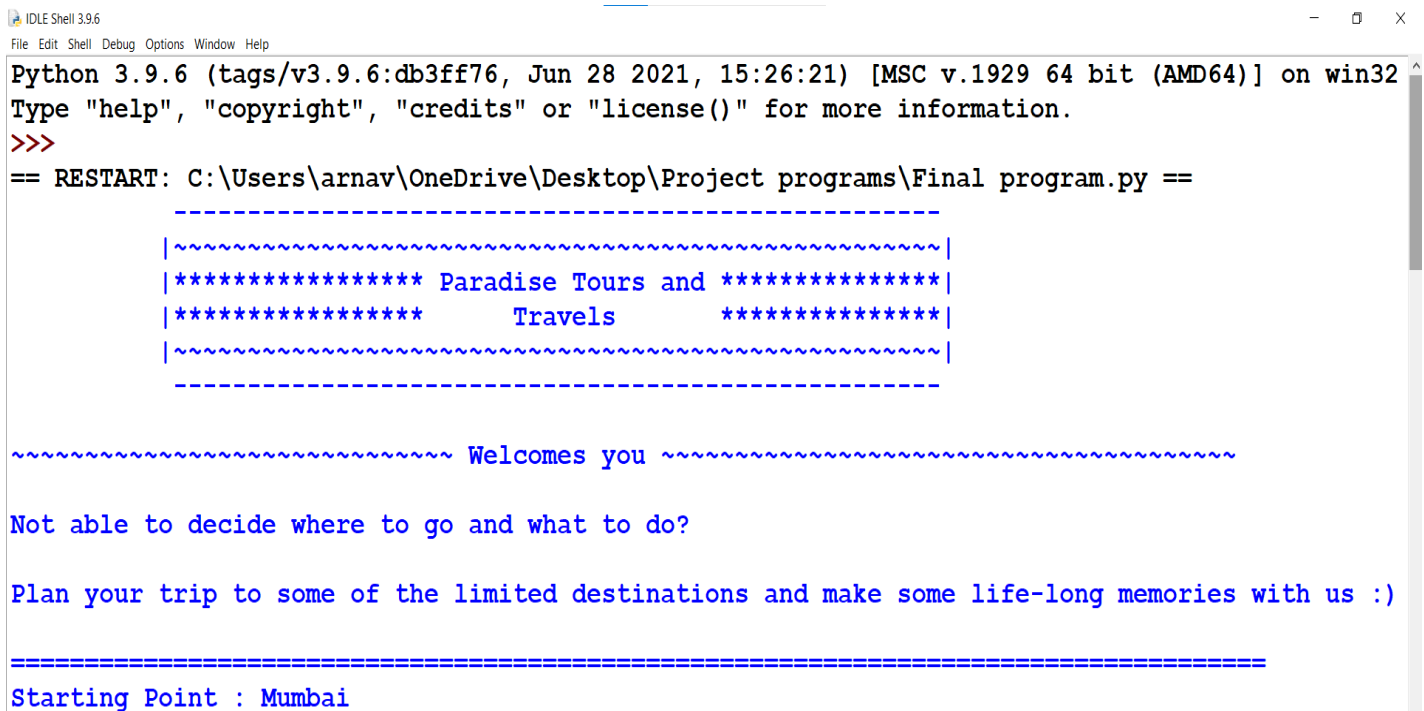
#Random integer function for creating tour ID
# Note : tid = tour id
import random
tid = random.randint(321404,539586)

if cfm == 'Y' or cfm == 'y':
    invoice()
else :

```

```
print()
```

Output



The screenshot shows the IDLE Shell 3.9.6 window. The title bar reads 'IDLE Shell 3.9.6'. The menu bar includes 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The main text area displays the following output:

```
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:\Users\arnav\OneDrive\Desktop\Project programs\Final program.py ==

-----
| ~~~~~|
| ***** Paradise Tours and *****|
| ***** Travels *****|
| ~~~~~|
|-----|

~~~~~ Welcomes you ~~~~~

Not able to decide where to go and what to do?

Plan your trip to some of the limited destinations and make some life-long memories with us :)

=====
Starting Point : Mumbai
```

Destinations :

```
~~~~~ MENU ~~~~~
1. Delhi
2. Chennai
3. Kolkata
4. Goa
5. Dehradun
6. Mysore
```

Choose your preferred destination from the following cities - 3

Travel means:

```
~~~~~ MENU ~~~~~
1. Airways
2. Railways
```

Choose your preferred travelling means - 1

Hotel:

```
~~~~~ MENU ~~~~~
1. 3 Star Hotel
2. 5 Star Hotel
```

Choose your preferred hotel - 2

****Note: At most 15 people can travel****

Enter no. of people travelling - 12

Enter dates (Format: dd/mm/yyyy) :

From :12/05/2022

To :20/05/2022

Enter number of days :9

Total trip cost: ₹ 363000

~~~~~ Confirmation ~~~~~

Do you want to continue? (Y/N) : y

Enter Your Name : Rohan Sharma

Enter your Email id : rohan2953@gmail.com

Enter your phone no. 1 : 8956758670

Enter your phone no. 2 : 9367845742

Payment mode:

~~~~~ MENU ~~~~~

1. Credit Card

2. Debit Card

3. UPI

4. Net Banking

Choose your preferred payment mode -2

You will be redirected to the payments page.

Payment successful.

~~~~~ SHORT INVOICE ~~~~~

Name: Rohan Sharma

Email ID: rohan2953@gmail.com

Phone number 1 : 8956758670

Phone number 2 : 9367845742

Tour ID: 382736

Starting Point: Mumbai

Destination: Kolkata

Number of people traveling: 12

Dates:

From - 12/05/2022

To - 20/05/2022

Total cost: ₹ 363000

All the necessary documents, tickets and full invoice will be sent to your e-mail id.

~~~~~ THANK YOU ~~~~~

>>>

Ln: 121 Col: 4

Shortcomings

1. Planning

- i. With someone else doing all the planning, you won't get to decide what to do.
- ii. Researching and planning your own trip and making your own choices about what activities you do (and when you do them) can play a big part in enjoying your vacation.

2. Traveling Too Quickly

- i. Many tours are set up to show you as many places as possible in the allotted time.
- ii. Traveling too quickly can lead to exhaustion and travel burn-out in a matter of days.

3. This software may not cover all the destinations.

4. This software may not be able to calculate accurate costs.

Bibliography

- 1) Computer Science with Python textbook for Class XI by Sumita Arora
- 2) Wikipedia
- 3) <https://www.northeastern.edu/graduate/blog/most-popular-programming-languages>