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SUBJECT CODE: BCSE101E

SUBJECT: Computer Programming: Python

Vtop - Lab - Assesment- 4 -TRAVEL BOOKING - Mini-Project

INTRODUCTION TO TRAVEL BOOKING:

I, Ms. **Sneha Vejju** (21BIT0647), is very thankful to my teacher for giving me this opportunity to explore my skills and develop a mini-project in the python language.

Traveling, is a very important component of our day-to-day life. Due to the development in resource and technology we there by have different means of transport which helps us to travel from one part of the world to the other.

When we get to travel in means of transport there is a tremendous amount of competition for that of a seat / ticket. Therefore, with the advancement in technology to avoid clashes between people we introduced a 'BOOKING' or 'reservation' system. Booking helps people to have a happy and tension free travel-!!

In today's project I have included only two means of transport booking that is rail-way and road-way.

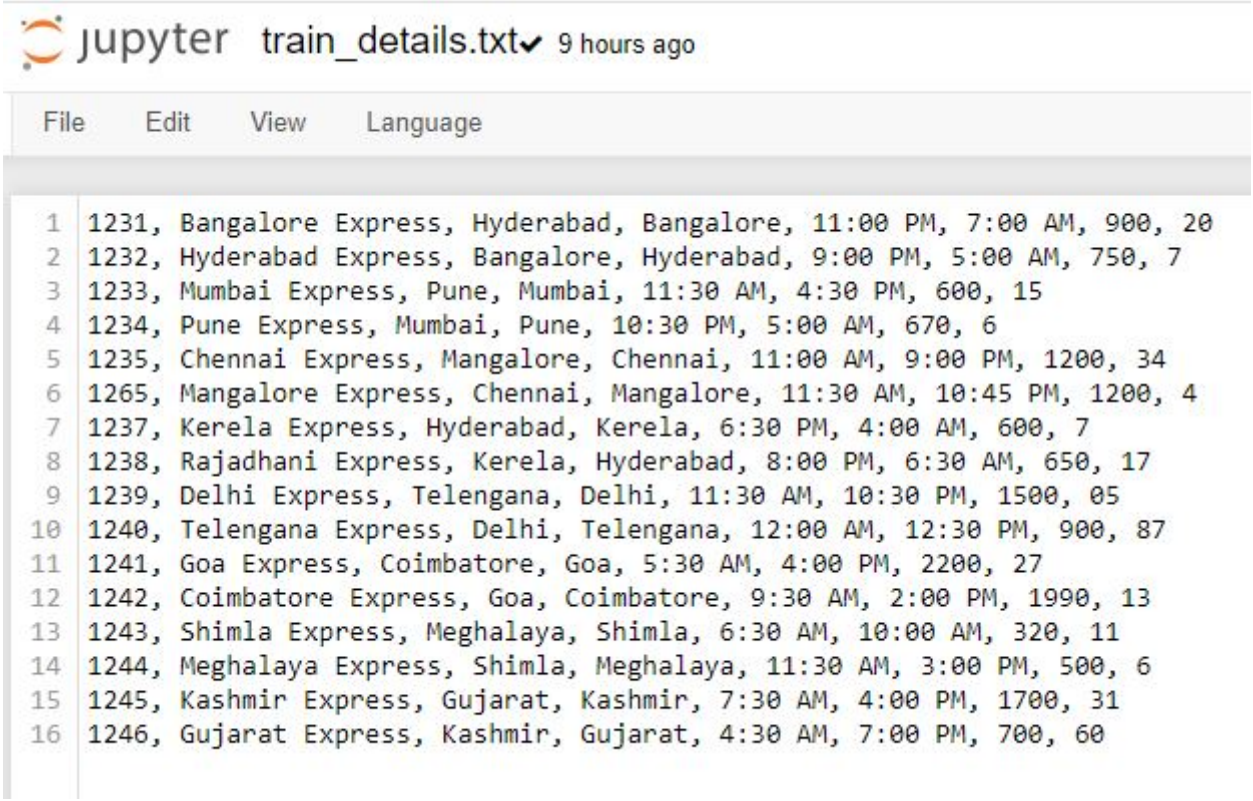
1. Train Travel Booking
    - Trains are considered one of the cheap means of long travel.
    - In my project the application only consists of non-stop-expresses
    - It ONLY contains limited number of stations or places to travel.

2. Rental Car Travel Booking
    - Our rental car services are present only in the Metro-Politian cities in India.
    - We have all types of cars like: general cars, travel cars and luxurious cars
    - Users are free to choose their required requirements

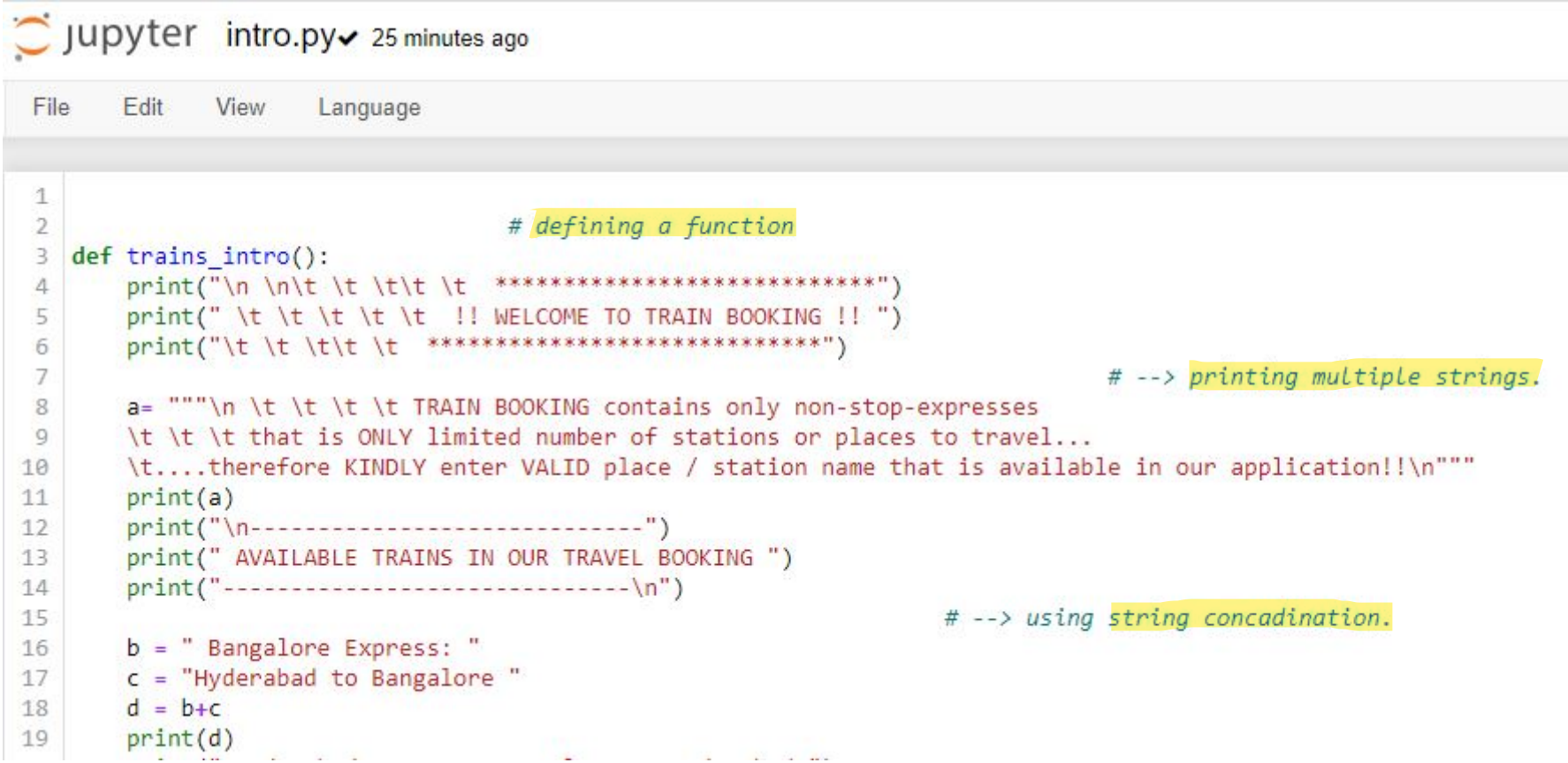
Contents Involved in Travel-Booking mini-project:

1. While loop-Indentation
2. Nested while loops-break-continue
3. Decision Making and Branching if-elif-else
4. For loop
5. Strings in Python
6. Lists in Python
7. Tuples
8. Functions
9. Files
10. Modules

train_details.txt file created in jupyter notebook. There are 16 available trains



Defining a function in a module.. intro.py in the jupyter notrbook

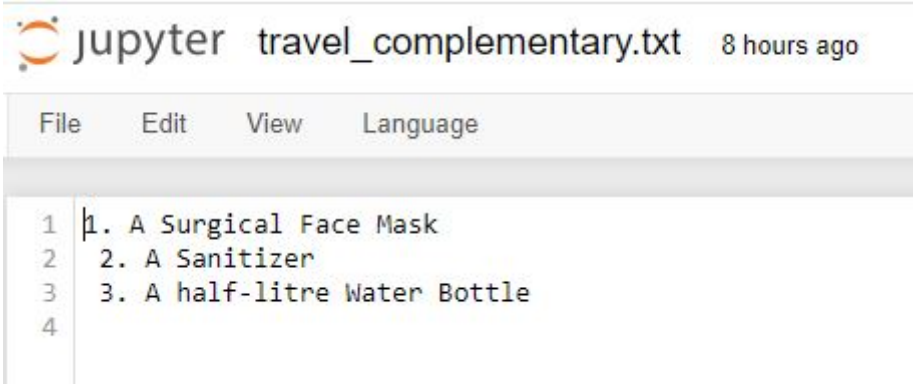



```
1
2                                   # defining a function
3  def trains_intro():
4      print("\n \n\t \t \t\t \t  ****************************")
5      print(" \t \t \t \t \t  !! WELCOME TO TRAIN BOOKING !! ")
6      print("\t \t \t\t \t  ****************************")
7                                                                  # --> printing multiple strings.
8      a= """\n \t \t \t \t TRAIN BOOKING contains only non-stop-expresses
9      \t \t \t that is ONLY limited number of stations or places to travel...
10     \t....therefore KINDLY enter VALID place / station name that is available in our application!!\n"""
11     print(a)
12     print("\n-----------------------------")
13     print(" AVAILABLE TRAINS IN OUR TRAVEL BOOKING ")
14     print("-----------------------------\n")
15                                                               # --> using string concadination.
16     b = " Bangalore Express: "
17     c = "Hyderabad to Bangalore "
18     d = b+c
19     print(d)
```

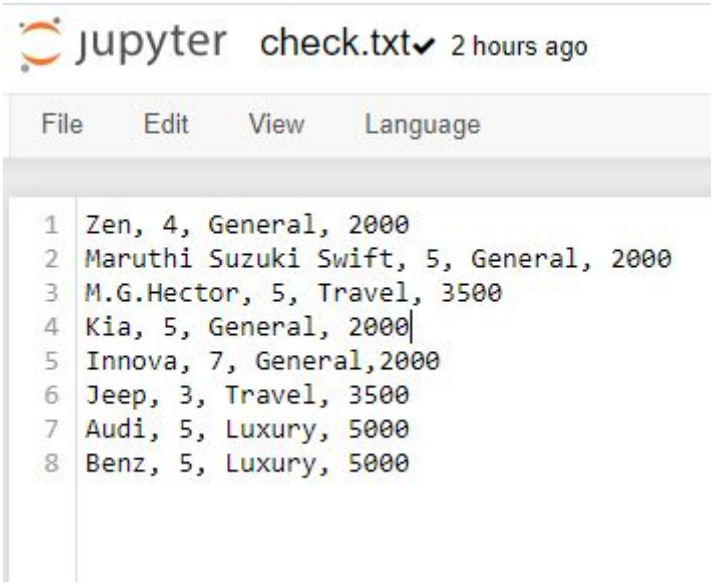
```
    print(" Hyderabad Express: Bangalore to Hyderabad ")
    print(" Mumbai Express: Pune to Mumbai ")
    print(" Pune Express: Mumbai to Pune ")
    print(" Chennai Express: Mangalore to Chennai ")
    print(" Mangalore Expressto Chennai to Mangalore ")
    print(" Kerela Express: Hyderabad to Kerela ")
    print(" Rajadhani Express: Kerela to Hyderabad ")
    print(" Delhi Express: Telengana to Delhi ")
    print(" Telengana Express: Delhi to Telengana ")
    print(" Goa Express: Coimbatore to Goa ")
    print(" Coimbatore Express: Goa to Coimbatore ")
    print(" Shimla Express: Meghalaya to Shimla ")
    print(" Meghalaya Express: Shimla to Meghalaya ")
    print(" Kashmir Express: Gujarat to Kashmir ")
    print(" Gujarat Express: Kashmir to Gujarat ")

```

Travel complementary file which was created during the code << used open, write, read, append, and close functions>>



Text file named check.txt has all the information regaurding RENTAL CARS



The Code + Input + Output for --> TRAVEL BOOKING

In [11]:
```
def date():
    global booking_date
    i=0
    while i == 0:
        from datetime import datetime
        import time
        print("\n kindly enter the date in DD/MM/YYYY format")
        date = input(" Enter date : ")
        date_time = date + " 23:59:59"
                                                # using this datetime only for comparision
                                                #since both today date and booking date should be in same type
                                                # 'Y' gives in the format YYYY and 'y' will give the output in the format YY

        try:
            booking_date = datetime.strptime(date_time, '%d/%m/%Y %H:%M:%S')

                                                # converting the date_time into the datetime format/type.
            today = datetime.now()
            to_day = today.strftime('%d/%m/%Y')
                                                # --> try and except function- try if that is working else try except.
            if booking_date >= today:
```

```
                print("\n ------------------")
                print(" Confirmed Booking date: ",date)
                print("------------------\n")
                i=1
            else:
                print("\n ------------------")
                print (' DATE IS EXPIRED!')
                print(" Date should be >= today's date! ")
                print("------------------\n")
                i=0
        except:
            print("\n ------------------")
            print ("Not a valid date format")
            print("------------------\n ")
            i=0

def train_booking():
    def payment():
        global fare
        global total_fare
        total_fare = int(fare)*int(num)
        payment = input("proceed to payment??  ")
        if payment == '1' and payment.isdigit() == 1:
            print("\n----------------")
            print(" Payment PROCESSING! ")
            print("----------------\n")
            q=0
            while q == 0:
                ph_no = input("Enter your 10 digit phone number for payment: ")
                                                                    # --> using length of the string function.
                if ph_no.isdigit():
                    if len(str(ph_no)) == 10:
                        print("\n------------------")
                        print("..Logged-in through your mobile number!..")
                        print("----------------\n")
                        q=1
                    else:
                        print(" \n!! ERROR !! Your entered phone number is INVALID !!")
                        q=0
                else:
                    print(" \n!! ERROR !! Your entered phone number is INVALID !!")
                    q=0
            m=0
            while m == 0:
```

```
            card_no = input(" Enter your 4 digit card number: ")
            if card_no.isdigit():
                if len(str(card_no)) == 4:
                    print("\n----------------")
                    print("Cretiding Rs",total_fare,"/- from your card")
                    print("----------------\n")
                    m=1
                else:
                    print(" \n!! ERROR !! Your entered card number is INVALID !!")
                    m=0
            else:
                print(" \n!! ERROR !! Your entered card number is INVALID !!")
                m=0

def availability(source,destination):
                                    # --> open the train file.
                                    # first read the lines individually.
                                    # and then convert the line to a list using line.split()
                                    # --> Lists are created.
    f = open("train_details.txt", "r")
                                    # --> using readline function from files.
                                    # --> using .split() function to convert the given line into a list
    line1 = f.readline()
    list1 = line1.split(",")
    line2 = f.readline()
    list2 = line2.split(",")
    line3 = f.readline()
    list3 = line3.split(",")
    line4 = f.readline()
    list4 = line4.split(",")
    line5 = f.readline()
    list5 = line5.split(",")
    line6 = f.readline()
    list6 = line6.split(",")
    line7 = f.readline()
    list7 = line7.split(",")
    line8 = f.readline()
    list8 = line8.split(",")
    line9 = f.readline()
    list9 = line9.split(",")
    line10 = f.readline()
    list10 = line10.split(",")
    line11 = f.readline()
    list11 = line11.split(",")
```

```
        line12 = f.readline()
        list12 = line12.split(",")
        line13 = f.readline()
        list13 = line13.split(",")
        line14 = f.readline()
        list14 = line14.split(",")
        line15 = f.readline()
        list15 = line15.split(",")
        line16 = f.readline()
        list16 = line16.split(",")
        f.close                                 # --> closing the file
        print("\n")

                                                # --> using global variable.
        global fare
                                              # Displaying the details of the individual train according to the users neccessity.

                                                # --> using print() buit-in function by using indexing of a list.
                                                # --> using if and elif condition.

        if  source == 'HYDERABAD' and destination == 'BANGALORE' :
            print("\n ------------------")
            print("Train name: ",list1[1])
            print("Train no: ",list1[0])
            print("Start point: ",list1[2])
            print("End point: ",list1[3])
            print("Source time: ",list1[4])
            print("Departure time: ",list1[5])
            print("Ticket Fare: Rs",list1[6],"/-")
            print("No of available seats: ",list1[7])
            print("------------------\n")
            fare = list1[6]
        elif  source == 'BANGALORE' and destination == 'HYDERABAD':
            print("\n ------------------")
            print("Train name: ",list2[1])
            print("Train no: ",list2[0])
            print("Start point: ",list2[2])
            print("End point: ",list2[3])
            print("Source time: ",list2[4])
            print("Departure time: ",list2[5])
            print("Ticket Fare: Rs",list2[6],"/-")
            print("No of available seats: ",list2[7])
            print("------------------\n")
            fare = list2[6]
        elif  source == 'PUNE' and destination == 'MUMBAI':
```

```
            print("\n ------------------")
            print("Train name: ",list3[1])
            print("Train no: ",list3[0])
            print("Start point: ",list3[2])
            print("End point: ",list3[3])
            print("Source time: ",list3[4])
            print("Departure time: ",list3[5])
            print("Ticket Fare: Rs",list3[6],"/-")
            print("No of available seats: ",list3[7])
            print("------------------\n")
            fare = list3[6]
        elif  source == 'MUMBAI' and destination == 'PUNE':
            print("\n ------------------")
            print("Train name: ",list4[1])
            print("Train no: ",list4[0])
            print("Start point: ",list4[2])
            print("End point: ",list4[3])
            print("Source time: ",list4[4])
            print("Departure time: ",list4[5])
            print("Ticket Fare: Rs",list4[6],"/-")
            print("No of available seats: ",list4[7])
            print("------------------\n")
            fare = list4[6]
        elif  source == 'MANGALORE' and destination == 'CHENNAI':
            print("\n ------------------")
            print("Train name: ",list5[1])
            print("Train no: ",list5[0])
            print("Start point: ",list5[2])
            print("End point: ",list5[3])
            print("Source time: ",list5[4])
            print("Departure time: ",list5[5])
            print("Ticket Fare: Rs",list5[6],"/-")
            print("No of available seats: ",list5[7])
            print("------------------\n")
            fare = list5[6]
        elif  source == 'CHENNAI' and destination == 'MANGALORE':
            print("\n ------------------")
            print("Train name: ",list6[1])
            print("Train no: ",list6[0])
            print("Start point: ",list6[2])
            print("End point: ",list6[3])
            print("Source time: ",list6[4])
            print("Departure time: ",list6[5])
            print("Ticket Fare: Rs",list6[6],"/-")
```

```
            print("No of available seats: ",list6[7])
            print("------------------\n")
            fare = list6[6]
        elif  source == 'HYDERABAD' and destination == 'KERELA':
            print("\n ------------------")
            print("Train name: ",list7[1])
            print("Train no: ",list7[0])
            print("Start point: ",list7[2])
            print("End point: ",list7[3])
            print("Source time: ",list7[4])
            print("Departure time: ",list7[5])
            print("Ticket Fare: Rs",list7[6],"/-")
            print("No of available seats: ",list7[7])
            print("------------------\n")
            fare = list7[6]
        elif  source == 'KERELA' and destination == 'HYDERABAD':
            print("\n ------------------")
            print("Train name: ",list8[1])
            print("Train no: ",list8[0])
            print("Start point: ",list8[2])
            print("End point: ",list8[3])
            print("Source time: ",list8[4])
            print("Departure time: ",list8[5])
            print("Ticket Fare: Rs",list8[6],"/-")
            print("No of available seats: ",list8[7])
            print("------------------\n")
            fare = list8[6]
        elif  source == 'TELENGANA' and destination == 'DELHI':
            print("\n ------------------")
            print("Train name: ",list9[1])
            print("Train no: ",list9[0])
            print("Start point: ",list9[2])
            print("End point: ",list9[3])
            print("Source time: ",list9[4])
            print("Departure time: ",list9[5])
            print("Ticket Fare: Rs",list9[6],"/-")
            print("No of available seats: ",list9[7])
            print("------------------\n")
            fare = list9[6]
        elif  source == 'DELHI' and destination == 'TELENGANA':
            print("\n ------------------")
            print("Train name: ",list10[1])
            print("Train no: ",list10[0])
            print("Start point: ",list10[2])
```

```
            print("End point: ",list10[3])
            print("Source time: ",list10[4])
            print("Departure time: ",list10[5])
            print("Ticket Fare: Rs",list10[6],"/-")
            print("No of available seats: ",list10[7])
            print("------------------\n")
            fare = list10[6]
        elif  source == 'COIMBATORE' and destination == 'GOA':
            print("\n ------------------")
            print("Train name: ",list11[1])
            print("Train no: ",list11[0])
            print("Start point: ",list11[2])
            print("End point: ",list11[3])
            print("Source time: ",list11[4])
            print("Departure time: ",list11[5])
            print("Ticket Fare: Rs",list11[6],"/-")
            print("No of available seats: ",list11[7])
            print("------------------\n")
            fare = list11[6]
        elif  source == 'GOA' and destination == 'COIMBATORE':
            print("\n ------------------")
            print("Train name: ",list12[1])
            print("Train no: ",list12[0])
            print("Start point: ",list12[2])
            print("End point: ",list12[3])
            print("Source time: ",list12[4])
            print("Departure time: ",list12[5])
            print("Ticket Fare: Rs",list12[6],"/-")
            print("No of available seats: ",list12[7])
            print("------------------\n")
            fare = list12[6]
        elif  source == 'MEGHALAYA' and destination == 'SHIMLA':
            print("\n ------------------")
            print("Train name: ",list13[1])
            print("Train no: ",list13[0])
            print("Start point: ",list13[2])
            print("End point: ",list13[3])
            print("Source time: ",list13[4])
            print("Departure time: ",list13[5])
            print("Ticket Fare: Rs",list13[6],"/-")
            print("No of available seats: ",list13[7])
            print("------------------\n")
            fare = list13[6]
        elif  source == 'SHIMLA' and destination == 'MEGHALAYA':
```

```
            print("\n ------------------")
            print("Train name: ",list14[1])
            print("Train no: ",list14[0])
            print("Start point: ",list14[2])
            print("End point: ",list14[3])
            print("Source time: ",list14[4])
            print("Departure time: ",list15[5])
            print("Ticket Fare: Rs",list14[6],"/-")
            print("No of available seats: ",list14[7])
            print("------------------\n")
            fare = list14[6]
        elif  source == 'GUJARAT' and destination == 'KASHMIR':
            print("\n ------------------")
            print("Train name: ",list15[1])
            print("Train no: ",list15[0])
            print("Start point: ",list15[2])
            print("End point: ",list15[3])
            print("Source time: ",list15[4])
            print("Departure time: ",list15[5])
            print("Ticket Fare: Rs",list15[6],"/-")
            print("No of available seats: ",list15[7])
            print("------------------\n")
            fare = list15[6]
        elif  source == 'KASHMIR' and destination == 'GUJARAT':
            print("\n ------------------")
            print("Train name: ",list16[1])
            print("Train no: ",list16[0])
            print("Start point: ",list16[2])
            print("End point: ",list16[3])
            print("Source time: ",list16[4])
            print("Departure time: ",list16[5])
            print("Ticket Fare: Rs",list16[6],"/-")
            print("No of available seats: ",list16[7])
            print("------------------\n")
                                                    # --> using negetive list indexing.
            fare = list16[-2]


    def booking():
                                                    # --> using input() built-in function.
                                                    # --> using local variable
                                                    # --> using upper() function.
        i=0
        while i == 0 :
```

```
        a = input(" Source : ")
        source = a.upper()
        if source == 'HYDERABAD' or source == 'BANGALORE' or source == 'MUMBAI' or source == 'PUNE' or source == 'MANGALORE' o
            print("")
            i=1
        else:
            print("\n------------------")
            print(" !! ERROR !!....Enter the correct station name! ")
            print("... (OR) No trains are available!! \n ... for your required destination!! ... ")
            print("------------------\n")
            i=0

    i=0
    while i == 0 :
        b = input(" Destination : ")
        destination = b.upper()
        if source == destination:
            print ("Source and desination cannot be same..")
            i=0
        elif destination == 'BANGALORE' or destination == 'HYDERABAD' or destination == 'MUMBAI' or destination == 'PUNE' or d
            print("")
            i=1
        else:
            print("\n------------------")
            print(" !! ERROR !!....Enter the correct station name! ")
            print("... (OR) No trains are available!! \n ... for your required destination!! ... ")
            print("------------------\n")
            i=0
                                                    # calling the date function
    date()

    print(" \n Searching....")
    print(" Available trains in the departure timings \n UPDATED 15 mins ago")

                                                # calling the availability function
    availability(source,destination)
                                                # --> using nested while and nested if loops
                                                # --> creating empty lists

    details = []
    name_list = []
    age_list = []
    gender_list = []

    i=0
```

```
while i == 0:
    global num
    print("**********************")
    print("\n*** Ticket will be booked only for children above 5 years! *** \n")
    print("**********************")
    print("\n # for yes press 1 / for no press any other key #")
    book = input("Do you want to book the train ticket? ")
    if book == '1' and book.isdigit() == 1:
        print("\n------------------")
        num = input("\nEnter the number of passesngers you want to book the ticket for: ")
        print("------------------\n")
                                                        # --> using for loop.
        for i in range(int(num)):
            print("\n")
            j=0                                          # --> using break and continue keyword.
            while j == 0:
                name = input("Enter the name of the passesnger: ")
                if name == '':
                    print("Kindly enter the name of the passenger")
                    print("\n------------------")
                    print("** This a mandatory column to fill in **")
                    print("------------------\n")
                    continue
                else:
                    print("")                            # --> append() to the respective lists
                    name_list.append(name)
                    break

            k=0
            while k == 0:                                       # --> using if, elif and else condition.
                print("Age of the passenger should be mentioned !!")
                age = input("Passenger's Age: ")
                if age.isdigit():
                    if int(age) > 5:
                        age_list.append(age)
                        print("")
                        if int(age) > 60:
                            print("\n------------------")
                            print("Glad to book a train ticket for a SENIOR CITIZEN!")
                            print("------------------\n")
                            k=1
                        k=1
                    elif str(age) == '':
                        print("** This a mandatory column to fill in **")
```

```
                else:
                    print("\n------------------")
                    print("Ticket will be booked only for children above 5 years!")
                    print("Enter the correct age of the passenger.")
                    print("------------------\n")
                    k=0

        p=0
        while p == 0:
            print("Enter wheather the passesnger is male / female / other")
            c = input("Passesnger's Gender: ")
            gender = c.upper()
            if gender == 'MALE' or gender == 'FEMALE' or gender == 'OTHER':
                print("")
                gender_list.append(gender)
                p=1
            else:
                print("Enter the correct gender.")
                p=0
                                                        # --> printing a list
print("\n   CONVERSION OF A LIST TO A TUPLE: \n",name_list)
passenger_names = tuple(name_list)
                                                    # --> tuple after converting a list to a tuple.
                                                    # --> Deleting a tuple.
print(passenger_names)
del passenger_names
                                                # --> using list of tuples, if in-case we want to add another passenger.
details = list(zip(name_list,age_list,gender_list))
print("\n    PASSENGER DETAILS TRAVELLING\n",details)
                                                    # --> Sorted()- sorting according to the age.
                                                    # --> using anonymous lambda fuction.
def sort_age(details):
    return sorted(details, key = lambda x:x[1])
print("\n    SORTED THE PASSENGER DETAILS ACCORDING TO THEIR AGE!\n",sort_age(details))



print("\n------------------")
print("*** Confirming! your booking for",num, "passengers! on",booking_date.strftime("%d/%m/%Y")," \n \t and proce
print("------------------\n")
                                                # total fare
total_fare = int(fare)*int(num)
print("if yes press 1 else any other key!")
print(" One ticket fare amount: Rs",fare,"/- for payment")
```

```
            print(" Total ticket fare amount: Rs",total_fare,"/- for payment")
                                                                    # calling the function payment
            payment()
            print("\n--------------")
            print(" Ticket Fare amount: Rs",total_fare,"/- is DEDUCTED FROM YOUR WALLET ")
            print("----------------\n")
            print("\n------------------")
            print("*** Your seats are booked in the train for",num, "passengers! on" ,booking_date.strftime("%d/%m/%Y"), "***"
            print("------------------\n")
            i=1
        else:
            print("Go back to home page")
            i=1


                                                        # --> Creating a new file
                                                        # --> using write mode in a file

    f = open("travel_complementary.txt","w")
    f.write("1. A Surgical Face Mask \n")
    f.write(" 2. A Sanitizer \n")
    f.close()

                                                            # --> using append mode in a file
    f = open("travel_complementary.txt","a")
    f.write(" 3. A half-litre Water Bottle \n")
    f.close()

                                                            # --> using read mode in a file.
    f = open("travel_complementary.txt")
    print("\n------------------")
    print("\t\t TRAVEL COMPLEMENTARY!!\n")
    for x in f:
        print(x)
    f.close()
    print("----------------\n")

                                        # --> calling the function (intro) from the module intro
import intro
result = intro.trains_intro()

print("\n\t\t\t------------------")
print("\t\t||||| Enter city name / station name |||||")
print("\t\t\t------------------\n")
                                                    # calling the function for booking.
booking()
```

```
    print("\n Do you want to book return travel tickets?? ")
    return_tickets = input("if yes press 1 / else any other key: ")
    if return_tickets == '1' and return_tickets.isdigit() == 1:
        booking()
    else:
        print("\n **** HAPPY AND SAFE JOURNEY ****\n ")

def car_rental_booking():
    def check():
        f = open("check.txt","r")
        l1 = f.readline()
        lst1 = l1.split(",")
        l2 = f.readline()
        lst2 = l2.split(",")
        l3 = f.readline()
        lst3 = l3.split(",")
        l4 = f.readline()
        lst4 = l4.split(",")
        l5 = f.readline()
        lst5 = l5.split(",")
        l6 = f.readline()
        lst6 = l6.split(",")
        l7 = f.readline()
        lst7 = l7.split(",")
        l8 = f.readline()
        lst8 = l8.split(",")
        f.close
        print("\n")

        global deposite

        if  car_name == 'ZEN' and seats == 4 and category == 'GENERAL':
            print("\n ------------------")
            print("Car name: ",lst1[0])
            print("No of seats: ",lst1[1])
            print("Category: ",lst1[2])
            print("Deposit Amount: ",lst1[3])
            print("------------------\n")
            deposite = lst1[3]
        elif  car_name == 'MARUTHI SUZUKI SWIFT' and seats == 5 and category == 'GENERAL':
            print("\n ------------------")
            print("Car name: ",lst2[0])
            print("No of seats: ",lst2[1])
```

```
        print("Category: ",lst2[2])
        print("Deposit Amount: ",lst2[3])
        print("------------------\n")
        deposite = lst2[3]
    elif  car_name == 'M.G HECTOR' and seats == 5 and category == 'TRAVEL':
        print("\n ------------------")
        print("Car name: ",lst3[0])
        print("No of seats: ",lst3[1])
        print("Category: ",lst3[2])
        print("Deposit Amount: ",lst3[3])
        print("------------------\n")
        deposite = lst3[3]
    elif  car_name == 'KIA' and seats == 5 and category == 'GENERAL':
        print("\n ------------------")
        print("Car name: ",lst4[0])
        print("No of seats: ",lst4[1])
        print("Category: ",lst4[2])
        print("Deposit Amount: ",lst4[3])
        print("------------------\n")
        deposite = lst4[3]
    elif  car_name == 'INNOVA' and seats == 7 and category == 'GENERAL':
        print("\n ------------------")
        print("Car name: ",lst5[0])
        print("No of seats: ",lst5[1])
        print("Category: ",lst5[2])
        print("Deposit Amount: ",lst5[3])
        print("------------------\n")
        deposite = lst5[3]
    elif  car_name == 'JEEP' and seats == 3 and category == 'TRAVEL':
        print("\n ------------------")
        print("Car name: ",lst6[0])
        print("No of seats: ",lst6[1])
        print("Category: ",lst6[2])
        print("Deposit Amount: ",lst6[3])
        print("------------------\n")
        deposite = lst6[3]
    elif  car_name == 'AUDI' and seats == 5 and category == 'LUXURY':
        print("\n ------------------")
        print("Car name: ",lst7[0])
        print("No of seats: ",lst7[1])
        print("Category: ",lst7[2])
        print("Deposit Amount: ",lst7[3])
        print("------------------\n")
        deposite = lst7[3]
```

```
        elif  car_name == 'BENZ' and seats == 5 and category == 'LUXURY':
            print("\n ------------------")
            print("Car name: ",lst8[0])
            print("No of seats: ",lst8[1])
            print("Category: ",lst8[2])
            print("Deposit Amount: ",lst8[3])
            print("------------------\n")
            deposite = lst8[3]

    def pay_deposite():
        print("\n----------------")
        print(" Payment PROCESSING! ")
        print("----------------\n")
        q=0
        while q == 0:
            ph_number = input("Enter your 10 digit phone number for payment: ")
            if ph_number.isdigit():
                if len(str(ph_number)) == 10:
                    print("\n------------------")
                    print("..Logged-in through your mobile number!..")
                    print("----------------\n")
                    q=1
                else:
                    print(" \n!! ERROR !! Your entered phone number is INVALID !!")
                    q=0
            else:
                print(" \n!! ERROR !! Your entered phone number is INVALID !!")
                q=0
        m=0
        while m == 0:
            card_number = input(" Enter your 4 digit card number: ")
            if card_number.isdigit():
                if len(str(card_number)) == 4:
                    print("\n----------------")
                    print("Cretiding Rs",deposite,"from your card")
                    print("----------------\n")
                    m=1
                else:
                    print(" \n!! ERROR !! Your entered card number is INVALID !!")
                    m=0
            else:
                print(" \n!! ERROR !! Your entered card number is INVALID !!")
                m=0
```

```
def car_intro():
    print("\n \n\t \t \t\t \t  ***************************")
    print(" \t \t \t \t \t  !! WELCOME TO RENTAL CARS !! ")
    print("\t \t \t\t \t  ***************************")
    a= """\n \t \t \t \t RENTAL CARS contain only self-driving cars
        \t \t \t that is NO driver will be provided.....
        \t....therefore the eligibility criterias are very strictly followed!!\n"""
    print(a)
    print("INDIA'S METROPOLITIAN CITIES NAMES:")
    m_cities = ['CHENNAI','DELHI','MUMBAI','KOLKATA']
    print("\n------------------")
    print(m_cities)
    print("------------------\n")
    print("Available Cars in RENTAL CARS")
    print("\n------------------")
    print(" 1. Zen\n 2. Maruthi Suzuki Swift\n 3. M.G.Hector\n 4. Kia\n 5. Innova\n 6. Jeep\n 7. Audi\n 8. Benz")
    print("------------------\n")

car_intro()
i=0
while i==0:
    print("Enter an INDIAN METROPOLITIAN CITY NAME from where you want to rent the car:")
    print(" PICK-UP CITY")
    c = input("City name of your location:")
    city = c.upper()
    if city == 'CHENNAI' or city == 'DELHI' or city == 'MUMBAI' or city == 'KOLKATA':
        print("")
        i=1
    else:
        print("\n------------------")
        print("!! ERROR !! Enter a valid INDIA'S METROPOLITIAN CITY NAME...")
        print("------------------\n")
        i=0

e=0
while e == 0:
    print("Kindly enter your start point address..")
    print(" Pick-up - ADDRESS ( Home / Hotel / Airport)")
    address = input(" Address: ")
    if address == '':
        print("Kindly enter your start point address..")
        print("\n------------------")
```

```
            print("** This a mandatory column to fill in **")
            print("-----------------\n")
            e=0
        else:
            print("")
            e=1
    date()

    i=0
    while i == 0 :
        p = input(" Preffered Car name : ")
        car_name = p.upper()
        if car_name == 'ZEN' or car_name == 'MARUTHI SUZUKI SWIFT' or car_name == 'M.G HECTOR' or car_name == 'KIA' or car_name ==
            print("")
            i=1
        else:
            print("\n------------------")
            print(" !! ERROR !!....Enter the correct car name! ")
            print("...SORRY!! THIS CAR ISN'T AVAILABLE NOW!! ... ")
            print("------------------\n")
            i=0
    i=0
    while i == 0 :
        seats = int(input(" How many seater car do you preffer - 3/4/5/7 : "))
        if seats == 3 or seats == 4 or seats == 5 or seats == 7 :
            print("")
            i=1
        else:
            print("\n------------------")
            print("...SORRY!! THIS CAR ISN'T AVAILABLE NOW!! ... ")
            print("------------------\n")
            i=0
    i=0
    while i == 0 :
        print("CAR RENTALS are under 3-categories:\n 1. General\n 2. Luxury\n 3. Travel")
        q = input(" Which category do you preffer? : ")
        category = q.upper()
        if category == 'GENERAL' or category == 'LUXURY' or category == 'TRAVEL':
            print("")
            i=1
        else:
            print("\n------------------")
            print("...SORRY!! THIS CAR ISN'T AVAILABLE NOW!! ... ")
            print("------------------\n")
```

```
        i=0

check()
print("\n------------------")
print("do you want to confirm the booking for\n****", car_name,"-->", seats,"seated car on ", booking_date.strftime("%d/%m/%Y"
print("------------------\n")

print("\n # for yes press 1 / for no press any other key #")
booking = input("Do you want to book the car? ")
if booking == '1' and booking.isdigit() == 1:
    j=0
    while j == 0:
        d_name = input("Kindly enter your name on which the car will be booked: ")
        if d_name == '':
            print("Kindly enter driver's name")
            print("\n------------------")
            print("** This a mandatory column to fill in **")
            print("------------------\n")
            j=0
        else:
            print("")
            j=1

    k=0
    while k == 0:
        print("\n------------------")
        print("Booking will be done only for adults i.e age above 18 years!!")
        print("------------------\n")
        print("Age of the Driver should be mentioned !!")
        d_age = input("Driver's Age: ")
        if d_age.isdigit():
            if int(d_age) > 18:
                q=0
                while q == 0:
                    print("Kindly enter your unique 7 digit-Driver's License Number (DLN)!!")
                    dln = input("Enter you DNL:")
                    if dln.isdigit():
                        if len(str(dln)) == 7:
                            print("\n------------------")
                            print("..Approved by RTO..Valid throughout India..")
                            print("<<< Your address proof is verified >>>")
                            print("----------------\n")
                            q=1
                        else:
```

```
                            print(" \n!! ERROR !! Entered DLN is INVALID !!")
                            q=0
                    else:
                        print(" \n!! ERROR !! Entered DLN is INVALID !!")
                        q=0
                k=1
        elif str(d_age) == '':
            print("** This a mandatory column to fill in **")
        else:
            print("\n------------------")
            print("Booking will be done only for adults i.e age above 18 years!!")
            print("------------------\n")
            k=0
print("\n------------------")
print("Booking in process for :-\n", car_name,"-->", seats,"seated car will be delivered \nat",address," \non ", booking_date.
print("------------------\n")
print("\n ...To confirm your booking a MINIMAL SECURITY DEPOSITE AMOUNT has to be paid..")
print("if yes press 1/ else any other key! ")
pay = input("Do you want to proceed to payment? : ")
if pay == '1' and pay.isdigit() == 1:
    if category == 'GENERAL':
        print(" The Minimal Security Deposite is Rs ",deposite)
        pay_deposite()
    elif category == 'LUXURY':
        print(" The Minimal Security Deposite is Rs ",deposite)
        pay_deposite()
    elif category == 'TRAVEL':
        print(" The Minimal Security Deposite is Rs ",deposite)
        pay_deposite()
    print("Rs",deposite,"is Deposited to RENTAL CAR's account!!")
else:
    print("Go Back to home !!")

print("\n------------------")
print("On- ", booking_date.strftime("%d/%m/%Y"), car_name,"-->", seats,"seated car will be delivered at",address,"in the name
print("------------------\n")
print("\n------------------")
print(":) Enjoy your ROAD TRIP!!")
print("Happy journey____:) \n\t---> from RENTAL CARS")
print("------------------\n")
x=0
while x==0:
    print("\n done with the ride??\n if yes press 1 / else press any other key!!")
    after_ride = input("yes/no: ")
```

```
        if after_ride == '1' and after_ride.isdigit() == 1:
            print(" Kindly enter the total number of KILOMETERS which is displayed on the meter...\n Pls enter only num")
            km = input("Total Kilo-meters: ")
            if km.isdigit():
                if int(km) < 50:
                    print("\n------------------")
                    print("Since",d_name,"you are our regular coustomer Rs 2000 /- is credited from your account through AI-swipe-
                    print("Hope you have enjoyed RENTAL CAR's services \n Hope",d_name," will visit again!!")
                    print("------------------\n")
                elif 51 < int(km) < 200:
                    print("\n------------------")
                    print("Since",d_name,"you are our regular coustomer Rs 7000 /- is credited from your account through AI-swipe-
                    print("Hope you have enjoyed RENTAL CAR's services \n Hope",d_name," will visit again!!")
                    print("------------------\n")
                else:
                    print("\n------------------")
                    print("Since",d_name,"you are our regular coustomer Rs 15000 /- is credited from your account through AI-swipe
                    print("Hope you have enjoyed RENTAL CAR's services \n Hope",d_name," will visit again!!")
                    print("------------------\n")
            x=1
        else:
            print("Please enjoy your ride..")
            x=0

print("\n \n\t \t \t\t \t  ****************************")
print(" \t \t \t \t \t  !! WELCOME TO TRAVEL BOOKING !! ")
print("\t \t \t\t \t  ****************************")
print("\n \t \t \t\t \t choose the serial numbers")
print("\n \t \t \t\t \t 1. TRAIN BOOKING")
print("\n \t \t \t\t \t 2. CAR RENTAL BOOKING")

h=0
while h==0:
    print("TRAVEL BOOKING / RENTAL CAR BOOKING")
    choice = input("Enter your choice of booking: ")
    if choice.isdigit():
        if int(choice) == 1:
            train_booking()
        elif int(choice) == 2:
            car_rental_booking()
    else:
        print("Your choice has NO booking AVAILABLE...")
        f=0
        while f==0:
```

```
            print("\nif yes press 1 / else press any key!!")
            exit = input("Do you want to exit:")
            if exit.isdigit():
                if int(exit)==1:
                    print("\n EXITING...")
                    f=1
                    h=1
                else:
                    print("")
                    f=0
            else:
                print("Enter properly..")
                f=0
```

```
                                        ****************************
                                        !! WELCOME TO TRAVEL BOOKING !!
                                        ****************************

                                       choose the serial numbers

                                       1. TRAIN BOOKING

                                       2. CAR RENTAL BOOKING
TRAVEL BOOKING / RENTAL CAR BOOKING
Enter your choice of booking: 1


                                        ****************************
                                        !! WELCOME TO TRAIN BOOKING !!
                                        ****************************

                                TRAIN BOOKING contains only non-stop-expresses
                            that is ONLY limited number of stations or places to travel...
            ....therefore KINDLY enter VALID place / station name that is available in our application!!


-----------------------------
 AVAILABLE TRAINS IN OUR TRAVEL BOOKING
-----------------------------

 Bangalore Express: Hyderabad to Bangalore
 Hyderabad Express: Bangalore to Hyderabad
 Mumbai Express: Pune to Mumbai
 Pune Express: Mumbai to Pune
 Chennai Express: Mangalore to Chennai
```

```
 Mangalore Expressto Chennai to Mangalore
 Kerela Express: Hyderabad to Kerela
 Rajadhani Express: Kerela to Hyderabad
 Delhi Express: Telengana to Delhi
 Telengana Express: Delhi to Telengana
 Goa Express: Coimbatore to Goa
 Coimbatore Express: Goa to Coimbatore
 Shimla Express: Meghalaya to Shimla
 Meghalaya Express: Shimla to Meghalaya
 Kashmir Express: Gujarat to Kashmir
 Gujarat Express: Kashmir to Gujarat

                        ------------------
                |||||| Enter city name / station name ||||||
                        ------------------

 Source : bangalore

 Destination : hyd

------------------
 !! ERROR !!....Enter the correct station name!
... (OR) No trains are available!!
 ... for your required destination!! ...
------------------

 Destination : hyderabad


 kindly enter the date in DD/MM/YYYY format
 Enter date : 1/12/2021

 ------------------
 DATE IS EXPIRED!
 Date should be >= today's date!
------------------


 kindly enter the date in DD/MM/YYYY format
 Enter date : 2/12/21

 ------------------
Not a valid date format
------------------


 kindly enter the date in DD/MM/YYYY format
```

```
 Enter date : 2/12/2021

 ------------------
 Confirmed Booking date:  2/12/2021
------------------


 Searching....
 Available trains in the departure timings
 UPDATED 15 mins ago



 ------------------
Train name:   Hyderabad Express
Train no:  1232
Start point:   Bangalore
End point:   Hyderabad
Source time:   9:00 PM
Departure time:   5:00 AM
Ticket Fare: Rs  750 /-
No of available seats:   7

------------------

**********************

*** Ticket will be booked only for children above 5 years! ***

**********************

 # for yes press 1 / for no press any other key #
Do you want to book the train ticket? 1

------------------

Enter the number of passesngers you want to book the ticket for: 3
------------------



Enter the name of the passesnger:
Kindly enter the name of the passenger

------------------
** This a mandatory column to fill in **
------------------
```

```
Enter the name of the passesnger: Sneha

Age of the passenger should be mentioned !!
Passenger's Age: 15

Enter wheather the passesnger is male / female / other
Passesnger's Gender: female



Enter the name of the passesnger: Vikram

Age of the passenger should be mentioned !!
Passenger's Age: 5

------------------
Ticket will be booked only for children above 5 years!
Enter the correct age of the passenger.
------------------

Age of the passenger should be mentioned !!
Passenger's Age: 18

Enter wheather the passesnger is male / female / other
Passesnger's Gender: male



Enter the name of the passesnger: Priya

Age of the passenger should be mentioned !!
Passenger's Age: 11

Enter wheather the passesnger is male / female / other
Passesnger's Gender: ot
Enter the correct gender.
Enter wheather the passesnger is male / female / other
Passesnger's Gender: other


   CONVERSION OF A LIST TO A TUPLE:
 ['Sneha', 'Vikram', 'Priya']
('Sneha', 'Vikram', 'Priya')

    PASSENGER DETAILS TRAVELLING
 [('Sneha', '15', 'FEMALE'), ('Vikram', '18', 'MALE'), ('Priya', '11', 'OTHER')]
```

```
    SORTED THE PASSENGER DETAILS ACCORDING TO THEIR AGE!
 [('Priya', '11', 'OTHER'), ('Sneha', '15', 'FEMALE'), ('Vikram', '18', 'MALE')]

------------------
*** Confirming! your booking for 3 passengers! on 02/12/2021
         and proceed to payment! ***
------------------

if yes press 1 else any other key!
 One ticket fare amount: Rs  750 /- for payment
 Total ticket fare amount: Rs 2250 /- for payment
proceed to payment??  1

----------------
 Payment PROCESSING!
----------------

Enter your 10 digit phone number for payment: 9880392725

------------------
..Logged-in through your mobile number!..
----------------

 Enter your 4 digit card number: 987

!! ERROR !! Your entered card number is INVALID !!
 Enter your 4 digit card number: 9874

----------------
Cretiding Rs 2250 /- from your card
----------------


--------------
 Ticket Fare amount: Rs 2250 /- is DEDUCTED FROM YOUR WALLET
----------------


------------------
*** Your seats are booked in the train for 3 passengers! on 02/12/2021 ***
------------------


------------------
                TRAVEL COMPLEMENTARY!!
```

```
1. A Surgical Face Mask

 2. A Sanitizer

 3. A half-litre Water Bottle

----------------


 Do you want to book return travel tickets??
if yes press 1 / else any other key: 1
 Source : hyderabad

 Destination : KERELA


 kindly enter the date in DD/MM/YYYY format
 Enter date : 4/01/2022

 ------------------
 Confirmed Booking date:  4/01/2022
------------------


 Searching....
 Available trains in the departure timings
 UPDATED 15 mins ago



 ------------------
Train name:   Kerela Express
Train no:  1237
Start point:   Hyderabad
End point:   Kerela
Source time:   6:30 PM
Departure time:   4:00 AM
Ticket Fare: Rs  600 /-
No of available seats:   7

------------------

**********************

*** Ticket will be booked only for children above 5 years! ***

**********************
```

```
 # for yes press 1 / for no press any other key #
Do you want to book the train ticket? 1

------------------

Enter the number of passesngers you want to book the ticket for: 4
------------------



Enter the name of the passesnger: Shreya

Age of the passenger should be mentioned !!
Passenger's Age: 14

Enter wheather the passesnger is male / female / other
Passesnger's Gender: female



Enter the name of the passesnger: Subbu

Age of the passenger should be mentioned !!
Passenger's Age: 43

Enter wheather the passesnger is male / female / other
Passesnger's Gender: male



Enter the name of the passesnger: raju

Age of the passenger should be mentioned !!
Passenger's Age: 6

Enter wheather the passesnger is male / female / other
Passesnger's Gender: male



Enter the name of the passesnger: Rita

Age of the passenger should be mentioned !!
Passenger's Age: 6

Enter wheather the passesnger is male / female / other
```

```
Passesnger's Gender: female


   CONVERSION OF A LIST TO A TUPLE:
 ['Shreya', 'Subbu', 'raju', 'Rita']
('Shreya', 'Subbu', 'raju', 'Rita')

    PASSENGER DETAILS TRAVELLING
 [('Shreya', '14', 'FEMALE'), ('Subbu', '43', 'MALE'), ('raju', '6', 'MALE'), ('Rita', '6', 'FEMALE')]

    SORTED THE PASSENGER DETAILS ACCORDING TO THEIR AGE!
 [('Shreya', '14', 'FEMALE'), ('Subbu', '43', 'MALE'), ('raju', '6', 'MALE'), ('Rita', '6', 'FEMALE')]

------------------
*** Confirming! your booking for 4 passengers! on 04/01/2022
         and proceed to payment! ***
------------------

if yes press 1 else any other key!
 One ticket fare amount: Rs  600 /- for payment
 Total ticket fare amount: Rs 2400 /- for payment
proceed to payment??  1

----------------
 Payment PROCESSING!
----------------

Enter your 10 digit phone number for payment: 998029006

!! ERROR !! Your entered phone number is INVALID !!
Enter your 10 digit phone number for payment: 9980290066

------------------
..Logged-in through your mobile number!..
----------------

 Enter your 4 digit card number: 0000

----------------
Cretiding Rs 2400 /- from your card
----------------



--------------
 Ticket Fare amount: Rs 2400 /- is DEDUCTED FROM YOUR WALLET
----------------
```

```
------------------
*** Your seats are booked in the train for 4 passengers! on 04/01/2022 ***
------------------


------------------
                 TRAVEL COMPLEMENTARY!!

1. A Surgical Face Mask

 2. A Sanitizer

 3. A half-litre Water Bottle

----------------

TRAVEL BOOKING / RENTAL CAR BOOKING
Enter your choice of booking: 2


                                          ***************************
                                          !! WELCOME TO RENTAL CARS !!
                                          ***************************

                                RENTAL CARS contain only self-driving cars
                                that is NO driver will be provided.....
                ....therefore the eligibility criterias are very strictly followed!!

INDIA'S METROPOLITIAN CITIES NAMES:

------------------
['CHENNAI', 'DELHI', 'MUMBAI', 'KOLKATA']
------------------

Available Cars in RENTAL CARS

------------------
 1. Zen
 2. Maruthi Suzuki Swift
 3. M.G.Hector
 4. Kia
 5. Innova
 6. Jeep
 7. Audi
 8. Benz
------------------
```

```
Enter an INDIAN METROPOLITIAN CITY NAME from where you want to rent the car:
 PICK-UP CITY
City name of your location:chennai

Kindly enter your start point address..
 Pick-up - ADDRESS ( Home / Hotel / Airport)
 Address: #33, Sri Naidu Nivas, 13th cross, Chennai-93


 kindly enter the date in DD/MM/YYYY format
 Enter date : 15/12/2021

 ------------------
 Confirmed Booking date:  15/12/2021
------------------

 Preffered Car name : audi

 How many seater car do you preffer - 3/4/5/7 : 5

CAR RENTALS are under 3-categories:
 1. General
 2. Luxury
 3. Travel
 Which category do you preffer? : ,

------------------
...SORRY!! THIS CAR ISN'T AVAILABLE NOW!! ...
------------------

CAR RENTALS are under 3-categories:
 1. General
 2. Luxury
 3. Travel
 Which category do you preffer? : luxury




 ------------------
Car name:  Audi
No of seats:   5
Category:   Luxury
Deposit Amount:   5000

------------------
```

```
------------------
do you want to confirm the booking for
**** AUDI --> 5 seated car on  15/12/2021 ****
------------------


 # for yes press 1 / for no press any other key #
Do you want to book the car? 1
Kindly enter your name on which the car will be booked: Keerthi


------------------
Booking will be done only for adults i.e age above 18 years!!
------------------

Age of the Driver should be mentioned !!
Driver's Age: 18

------------------
Booking will be done only for adults i.e age above 18 years!!
------------------

Age of the Driver should be mentioned !!
Driver's Age: 19
Kindly enter your unique 7 digit-Driver's License Number (DLN)!!
Enter you DNL:9432106

------------------
..Approved by RTO..Valid throughout India..
<<< Your address proof is verified >>>
---------------


------------------
Booking in process for :-
 AUDI --> 5 seated car will be delivered
at #33, Sri Naidu Nivas, 13th cross, Chennai-93
on  15/12/2021
------------------


 ...To confirm your booking a MINIMAL SECURITY DEPOSITE AMOUNT has to be paid..
if yes press 1/ else any other key!
Do you want to proceed to payment? : 1
 The Minimal Security Deposite is Rs   5000
```

```
----------------
 Payment PROCESSING!
----------------

Enter your 10 digit phone number for payment: 9980290066

------------------
..Logged-in through your mobile number!..
----------------

 Enter your 4 digit card number: 3248

----------------
Cretiding Rs  5000
 from your card
----------------

Rs  5000
 is Deposited to RENTAL CAR's account!!

------------------
On-  15/12/2021 AUDI --> 5 seated car will be delivered at #33, Sri Naidu Nivas, 13th cross, Chennai-93 in the name of Keerthi
------------------


------------------
:) Enjoy your ROAD TRIP!!
Happy journey____:)
        ---> from RENTAL CARS
------------------


 done with the ride??
 if yes press 1 / else press any other key!!
yes/no: no
Please enjoy your ride..

 done with the ride??
 if yes press 1 / else press any other key!!
yes/no: h
Please enjoy your ride..

 done with the ride??
 if yes press 1 / else press any other key!!
yes/no: 1
```

```
 Kindly enter the total number of KILOMETERS which is displayed on the meter...
 Pls enter only num
Total Kilo-meters: 125

------------------
Since Keerthi you are our regular coustomer Rs 7000 /- is credited from your account through AI-swipe-machine
Hope you have enjoyed RENTAL CAR's services
 Hope Keerthi  will visit again!!
------------------

TRAVEL BOOKING / RENTAL CAR BOOKING
Enter your choice of booking: none
Your choice has NO booking AVAILABLE...

if yes press 1 / else press any key!!
Do you want to exit:1

 EXITING...
```

In [ ]: