Airport Management System

Group members:

Britto Fernandes --- 23122012

Sankar Murugan---23122031

Naveen krishna ---23122023

Function Definitions 1) Function for adding details to file.

In [ ]:
```
#importing necessery packages

import random

#Defining functions for adding details.

def add_details():

    #takinginput from the user to save the details to a file.
    flight_number = input("Enter the flight number here: ")
    flight_name = input("Enter the flight name here: ")
    airline_name_init = input("Enter the name of the airline: ")
    airline_name = airline_name_init.title()
    arraival_from_init = input("Enter the destination where the flight came from: "
    arraival_from = arraival_from_init.title()
    departure_to_init = input("Enter the destination of the flight: ")
    departure_to = departure_to_init.title()
    flight_arraival = input("Enter the arraival time: ")
    flight_departure = input("Enter the departure time: ")
    passenger_count = input("Enter the number of total passengers: ")
    total_crew_memners = input("Enter the total count of the crew members for the f

    #Creating 5 random integers for building unique IDs by concatinating all of the
    n1 = random.randint(1,9)
    n2 = random.randint(0,9)
    n3 = random.randint(0,9)
    n4 = random.randint(0,9)
    n5 = random.randint(0,9)
    travel_id = str(n1)+str(n2)+str(n3)+str(n4)+str(n5)

    #Opening the file.
    with open("Details.csv" , "a+") as file:

        #Saving all the data that are collected by the user to the file.
        file.write(travel_id+" , "+flight_number+" , "+flight_name+" , "+airline_na

    #Closing the file.
    file.close()

    #Printing a confirmation message.
    print("Details entered successfully.")
```

1. Function for listing all the elements.

In [ ]:
```
#Defining functions for listing all the data.

def list_details():

    #Opening the file in the name of 'file'.
    with open("Details.csv" , "r+") as file:

        #Iterating through all the items of the file.
        for item in file:

            #Printing all of them.
            print(item)

    #Closing the file.
    file.close()
```

1. Defining a function for searching a pirticular data.

In [ ]:
```
#Defining a function for searching a detail.

def details_search():
    flag = 0

    #Taking the searching item from the user to be searched.
    search_detail = input("Enter the flight number for searching: ")

    #Opening the file.
    with open("Details.csv" , "r+") as file:

        #Iterating through all the elements in the file.
        for lines in file:

            #Taking a condition that if the searching element and the iterating ele
            if search_detail in lines:
                flag = 1

        #Checking the value of the flag. If the value is 1 , print the line, and th
        if flag == 1:
            print(lines)

        #If the value is 0, It will print the element that the user is searching fo
        else:
            print("Flight not found.")

    #Closing the file.
    file.close()
```

Menu Driven function calls

In [ ]:
```
while True:
    print("\nAirport Management System")
    print("1. Add Flight Details")
    print("2. List All Flight Details")
    print("3. search for specific flight")
    print("4. Exit")
    choice = input("Enter your choice: ")

    if choice == "1":
        add_details()    # 1. Function call for adding new detail
```

```
    elif choice == "2":
        list_details()   # 2. Function call for listing all the elements
    elif choice == "3":
        details_search() # 3. Function call for searching a pirticular data
    elif choice == "4":
        print("Exiting Airport Management System. Goodbye!")
        break
    else:
        print("Invalid choice. Please enter a valid option.")
```

```
Airport Management System
1. Add Flight Details
2. List All Flight Details
3. search for specific flight
4. Exit
Details entered successfully.

Airport Management System
1. Add Flight Details
2. List All Flight Details
3. search for specific flight
4. Exit
Exiting Airport Management System. Goodbye!
```

ANALYSIS PART STARTS

Analysing the maximum number of passngers travelled in a pirticular Airline

In [ ]:
```
#Initialising a list for storing the names of the airlines.
airlines = []
new_airlines = []
add_airlines = []

#Opening the file
with open("Details.csv" , "r+") as file:

    #Iterating through all the elements in the list.
    for line in file:

        #Splitting each word in a line for finding the airline name.
        lines = line.split()

        #Appending the airline names into the initialised list.
        airlines.append(lines[6])

        #Iterating through the airline list for taking only the unique names.
        for item in airlines:

            #Condition check for , if the name repeates , it denies to enter into t
            if item not in new_airlines:

                #Appending to the new list.
                new_airlines.append(item)

#Opening the file
with open("Details.csv" , "r+") as file:

#Setting the  variables to 0 for finding the sum of total passengers.
    airindia = 0
    spicejet = 0
    goafly = 0
    skyjet = 0
```

```
#Checking for Air India

#Iterating through all the words in the file to find the airline name in it.
    for line in file:

        #Condition for checking the availability of the given airline.
        if "Airindia" in line:

            #Splitting the line for easy access.
            lines = line.split()

            #Adding the total number of passengers in Air India
            airindia=airindia+int(lines[16])

    #Printing the sum of the total number of passengers in Air India.
    print("Total passengers who opted Air India is " , airindia)


#Checking for spicejet.

#OPening file.
with open("Details.csv" , "r+") as file:

    #Iterating through all the elements in the file
    for line in file:

        #Condition for checking the availability of the spicejet.
        if "Spicejet" in line:

            #Spliting the line for easy access
            lines = line.split()

            #Calculating the sum of the total number of passengers in spicejet.
            spicejet = spicejet+int(lines[16])

    #Printing the value
    print("Total passengers who opted Spicejet is " , spicejet)

    #Checking Goa fly

    #Opening the file.
    with open("Details.csv" , "r+") as file:

        #Iterating through all the elements in the file
        for line in file:

            #Condition for checking the availability of the Goa fly.
            if "Goafly" in line:

                #Spliting the line for easy access
                lines = line.split()

                #Calculating the sum of the total number of passengers in Goa fly.
                goafly = goafly+int(lines[16])

        #Printing the value
        print("Total passengers who opted Goa fly is " , goafly)


        #Checking Skyjet

    #Opening the file.
    with open("Details.csv" , "r+") as file:
```

```
        #Iterating through all the elements in the file
        for line in file:

            #Condition for checking the availability of the Skyjet.
            if "Skyjet" in line:

                #Spliting the line for easy access
                lines = line.split()

                #Calculating the sum of the total number of passengers in Goa fly.
                skyjet = skyjet+int(lines[16])

        #Printing the value
        print("Total passengers who opted skyjet is " , skyjet)
```

```
Total passengers who opted Air India is  0
Total passengers who opted Spicejet is  0
Total passengers who opted Goa fly is  0
Total passengers who opted skyjet is  0
```

Analysis for finding the which airline has maximum number of employees.

In [ ]:

```
#Initialising a list for storing the names of the airlines.
airlines = []
new_airlines = []
add_airlines = []

#Opening the file
with open("Details.csv" , "r+") as file:

    #Iterating through all the elements in the list.
    for line in file:

        #Splitting each word in a line for finding the airline name.
        lines = line.split()

        #Appending the airline names into the initialised list.
        airlines.append(lines[6])

        #Iterating through the airline list for taking only the unique names.
        for item in airlines:

            #Condition check for , if the name repeates , it denies to enter into t
            if item not in new_airlines:

                #Appending to the new list.
                new_airlines.append(item)

    #Opening the file
with open("Details.csv" , "r+") as file:

#Setting the  variables to 0 for finding the sum of total passengers.
    airindia = 0
    spicejet = 0
    goafly = 0
    skyjet = 0

#Checking for Air India

#Iterating through all the words in the file to find the airline name in it.
    for line in file:
```

```
        #Condition for checking the availability of the given airline.
        if "Airindia" in line:

            #Splitting the line for easy access.
            lines = line.split()

            #Adding the total number of passengers in Air India
            airindia=airindia+int(lines[18])

    #Printing the sum of the total number of passengers in Air India.
    print("Total crew members of Air India: " , airindia)

#Checking for spicejet.

#OPening file.
with open("Details.csv" , "r+") as file:

    #Iterating through all the elements in the file
    for line in file:

        #Condition for checking the availability of the spicejet.
        if "Spicejet" in line:

            #Spliting the line for easy access
            lines = line.split()

            #Calculating the sum of the total number of passengers in spicejet.
            spicejet = spicejet+int(lines[18])

    #Printing the value
    print("Total crew members of spicejet: " , spicejet)

#Checking Goa fly

    #Opening the file.
    with open("Details.csv" , "r+") as file:

        #Iterating through all the elements in the file
        for line in file:

            #Condition for checking the availability of the Goa fly.
            if "Goafly" in line:

                #Spliting the line for easy access
                lines = line.split()

                #Calculating the sum of the total number of passengers in Goa fly.
                goafly = goafly+int(lines[18])

        #Printing the value
        print("Total crew members of goafly: " , goafly)

    #Checking Skyjet

    #Opening the file.
    with open("Details.csv" , "r+") as file:

        #Iterating through all the elements in the file
        for line in file:

            #Condition for checking the availability of the Skyjet.
            if "Skyjet" in line:

                #Spliting the line for easy access
```

```
                lines = line.split()

                #Calculating the sum of the total number of passengers in Goa fly.
                skyjet = skyjet+int(lines[18])

        #Printing the value
        print("Total crew members of skyjet: " , skyjet)
```

```
Total crew members of Air India:  0
Total crew members of spicejet:  0
Total crew members of goafly:  0
Total crew members of skyjet:  0
```