DELHI PRIVATE SCHOOL
DUBAI

INFORMATICS PRACTICES - PYTHON

Code No. 065

2020-21

PROJECT FILE

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CLASS & SECTION: 12 - E

Source Code

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
pd.set_option('display.max_columns', None)
pd.set_option('display.max_colwidth', None)
pd.set_option('display.width', None)

print("----------------Airline Reservation System - Employee Table----------------")
print()
df = pd.read_csv ("IP Rare Project.csv")
print(df)
print()
while(True):
    print("----------Please Select an Option----------")
    print("1- Add new Coloumn")
    print("2- Add new Employee")
    print("3- Delete Row")
    print("4- Delete Coloumn")
    print("5- Update Values")
    print("6- Graph comparing salaries of employees")
    print("7- Data Analysis")
    print("8- Exit the Menu")
    print()
    a=int(input("Enter Choice:"))
    if a==1:
        l1=[]
        n=input("Enter Column Name:")
        for i in range(1,len(df.index)+1):
            print("Enter Value for",i,"row:",end="")
```

```
            h=input()
            l1.append(h)
        df[n] = l1


        print(df)
        print()
    elif a == 2:
        while True:
            ch = input("Add Row [y/n]")
            if ch.lower() == 'y':
                empid = int(input("Emp ID: "))
                name = input("Employee_Name: ")
                dept = input("Department: ")
                deptid =input("DeptNo: ")
                sal = int(input("Salary: "))
                sex = input("Sex (M/F): ")
                Age = int(input("Age: "))
                df = df.append({"EmpID": empid, "Employee_Name":name,
                        "Department": dept, "DeptNo": deptid, "Salary": sal,
                        "Sex": sex, "Age": Age}, ignore_index=True)
                print("The Updated Table is:")
                print(df)
                print()
            else:
                break
    elif a==3:
        print("1. Delete Row by Index")
        print("2. Delete Row by Emp ID.")
        ch = int(input("Select Option: "))
        if ch == 1:
            idx = int(input("Index to delete: "))
            df = df.drop(index = idx)
```

```
            print(df)
            print()
        elif ch == 2:
            y = int(input("Emp ID to delete: "))
            df = df.drop(df[df["EmpID"] == y].index)
            print(df)
            print()
        else:
            print("Wrong Option Selected! ")
    elif a==4:
        print("Delete coloumn by coloumn name")
        print("------------------------------")
        na=input("Enter Coloumn Name to be deleted:")
        df = df.drop(na,axis=1)
        print(df)
        print()
    elif a==5:
        while(True):
            ch = input("Update Values [y/n]:")
            if ch.lower() == 'y':
                row=int(input("Enter Index Label:"))
                col=input("Enter Column Name:")
                data1=input("Enter new Data:")
                df.at[row,col]=data1
                print(df)
                print()
            else:
                break
                print()

    elif a==6:
        while(True):
```

```
        ch = input("Plot Graphs [y/n]:")
        if ch.lower() == 'y':
            plt.title("Salary Chart")
            plt.xlabel("Names")
            plt.ylabel("Salary")
            plt.xticks(rotation=30)
            plt.grid(True)
            plt.plot(df['Employee_Name'], df['Salary'])
            plt.show()

        elif ch.lower() == 'n':
            break
elif a==7:
    while(True):
        print("--------------Data Analysis Menu---------------")
        print("1- Name Wise Analysis")
        print("2- Department Wise Analysis")
        print("3- Salary Wise Analysis")
        print("4- Exit")
        print()
        ch= int(input("Enter the option: "))
        if ch==1:
            print("--------------------")
            print("1- By Name")
            print("2- Exit")
            print()
            ch2= int(input("Enter your Choice: "))
            if ch2==1:
                print("-----------------------")
                da= input("Enter Name: ")
                print()
                print(df.loc[df.Employee_Name == da])
```

```
            print()
        else:
            break

    elif ch==2:
        print("-------------------------")
        print("1- By Department Name")
        print("2- Exit")
        print()
        ch3= int(input("Enter choice: "))
        if ch3 == 1:
            print("-------------------------")
            ad= input("Enter desired Department Name: ")
            print()
            print(df[df.Department == ad])
            print()
        else:
            break
    elif ch==3:
        print("----------------------------")
        print("Analysis based on Salary range")
        p1= int(input("Enter lower Salary: "))
        p2= int(input("Enter upper Salary: "))
        print()
        print(df.loc[(df.Salary>p1) & (df.Salary<p2)])
        print()
    else:
        break

else:
    print("Thank You!")
    break
```

CSV File

	A	B	C	D	E	F	G
1	EmpID	Employee_Name	Department	DeptNo	Salary	Sex	Age
2	1	Ramesh	Check-In	D01	15,000	M	25
3	2	Raveena	Air Hostess	D02	20,000	F	23
4	3	Rohan	Air Hostess	D03	18,750	M	30
5	4	Raj	Help - Desk	D05	22,000	M	32
6	5	Muskaan	Help - Desk	D05	21,420	F	29
7	6	Ranjan	Baggage Claim	D04	28,000	M	31
8	7	Krrish	Air Hostess	D02	25,500	M	29
9	8	Kavya	Check-In	D01	16,942	F	28
10	9	Karan	Security	D03	23,980	M	25
11	10	Aman	Check-In	D01	21,000	M	21

IP Rare Project - Notepad

File Edit Format View Help

```
EmpID,Employee_Name,Department,DeptNo,Salary,Sex,Age
1,Ramesh ,Check-In,D01,15000,M,25
2,Raveena,Air Hostess,D02,20000,F,23
3,Rohan,Air Hostess,D03,18750,M,30
4,Raj,Help - Desk,D05,22000,M,32
5,Muskaan,Help - Desk,D05,21420,F,29
6,Ranjan,Baggage Claim,D04,28000,M,31
7,Krrish,Air Hostess,D02,25500,M,29
8,Kavya,Check-In,D01,16942,F,28
9,Karan,Security,D03,23980,M,25
10,Aman,Check-In,D01,21000,M,21
```

Output

```
= RESTART: C:\Users\keyur\OneDrive\Desktop\Keyur\IP Project\Project Grade 12.py
----------------Airline Reservation System - Employee Table----------------

   EmpID Employee_Name     Department DeptNo  Salary Sex  Age
0      1        Ramesh       Check-In    D01   15000   M   25
1      2       Raveena    Air Hostess    D02   20000   F   23
2      3         Rohan    Air Hostess    D03   18750   M   30
3      4           Raj    Help - Desk    D05   22000   M   32
4      5       Muskaan    Help - Desk    D05   21420   F   29
5      6        Ranjan  Baggage Claim    D04   28000   M   31
6      7        Krrish    Air Hostess    D02   25500   M   29
7      8         Kavya       Check-In    D01   16942   F   28
8      9         Karan       Security    D03   23980   M   25
9     10          Aman       Check-In    D01   21000   M   21

----------Please Select an Option------------
1- Add new Coloumn
2- Add new Employee
3- Delete Row
4- Delete Coloumn
5- Update Values
6- Graph comparing salaries of employees
7- Data Analysis
8- Exit the Menu

Enter Choice:
```

```
Enter Choice:1
Enter Column Name:Shift(Day/Night)
Enter Value for 1 row:Day
Enter Value for 2 row:Night
Enter Value for 3 row:Day
Enter Value for 4 row:Day
Enter Value for 5 row:Day
Enter Value for 6 row:Night
Enter Value for 7 row:Night
Enter Value for 8 row:Day
Enter Value for 9 row:Night
Enter Value for 10 row:Night
   EmpID Employee_Name     Department DeptNo  Salary Sex  Age Shift(Day/Night)
0      1        Ramesh       Check-In    D01   15000   M   25              Day
1      2       Raveena    Air Hostess    D02   20000   F   23            Night
2      3         Rohan    Air Hostess    D03   18750   M   30              Day
3      4           Raj    Help - Desk    D05   22000   M   32              Day
4      5       Muskaan    Help - Desk    D05   21420   F   29              Day
5      6        Ranjan  Baggage Claim    D04   28000   M   31            Night
6      7        Krrish    Air Hostess    D02   25500   M   29            Night
7      8         Kavya       Check-In    D01   16942   F   28              Day
8      9         Karan       Security    D03   23980   M   25            Night
9     10          Aman       Check-In    D01   21000   M   21            Night

----------Please Select an Option------------
```

```
Enter Choice:2
Add Row [y/n]y
Emp ID: 11
Employee_Name: Suresh
Department: Security
DeptNo: D03
Salary: 24000
Sex (M/F): M
Age: 24
The Updated Table is:
    EmpID Employee_Name     Department DeptNo  Salary Sex  Age
0       1        Ramesh        Check-In    D01   15000   M   25
1       2        Raveena    Air Hostess    D02   20000   F   23
2       3          Rohan    Air Hostess    D03   18750   M   30
3       4            Raj    Help - Desk    D05   22000   M   32
4       5        Muskaan    Help - Desk    D05   21420   F   29
5       6         Ranjan  Baggage Claim    D04   28000   M   31
6       7         Krrish    Air Hostess    D02   25500   M   29
7       8          Kavya       Check-In    D01   16942   F   28
8       9          Karan       Security    D03   23980   M   25
9      10           Aman       Check-In    D01   21000   M   21
10     11         Suresh       Security    D03   24000   M   24

Add Row [y/n]n
----------Please Select an Option------------
```

```
Enter Choice:3
1. Delete Row by Index
2. Delete Row by Emp ID.
Select Option: 2
Emp ID to delete: 10
    EmpID Employee_Name     Department DeptNo  Salary Sex  Age
0       1        Ramesh        Check-In    D01   15000   M   25
1       2        Raveena    Air Hostess    D02   20000   F   23
2       3          Rohan    Air Hostess    D03   18750   M   30
3       4            Raj    Help - Desk    D05   22000   M   32
4       5        Muskaan    Help - Desk    D05   21420   F   29
5       6         Ranjan  Baggage Claim    D04   28000   M   31
6       7         Krrish    Air Hostess    D02   25500   M   29
7       8          Kavya       Check-In    D01   16942   F   28
8       9          Karan       Security    D03   23980   M   25
10     11         Suresh       Security    D03   24000   M   24

----------Please Select an Option------------
```

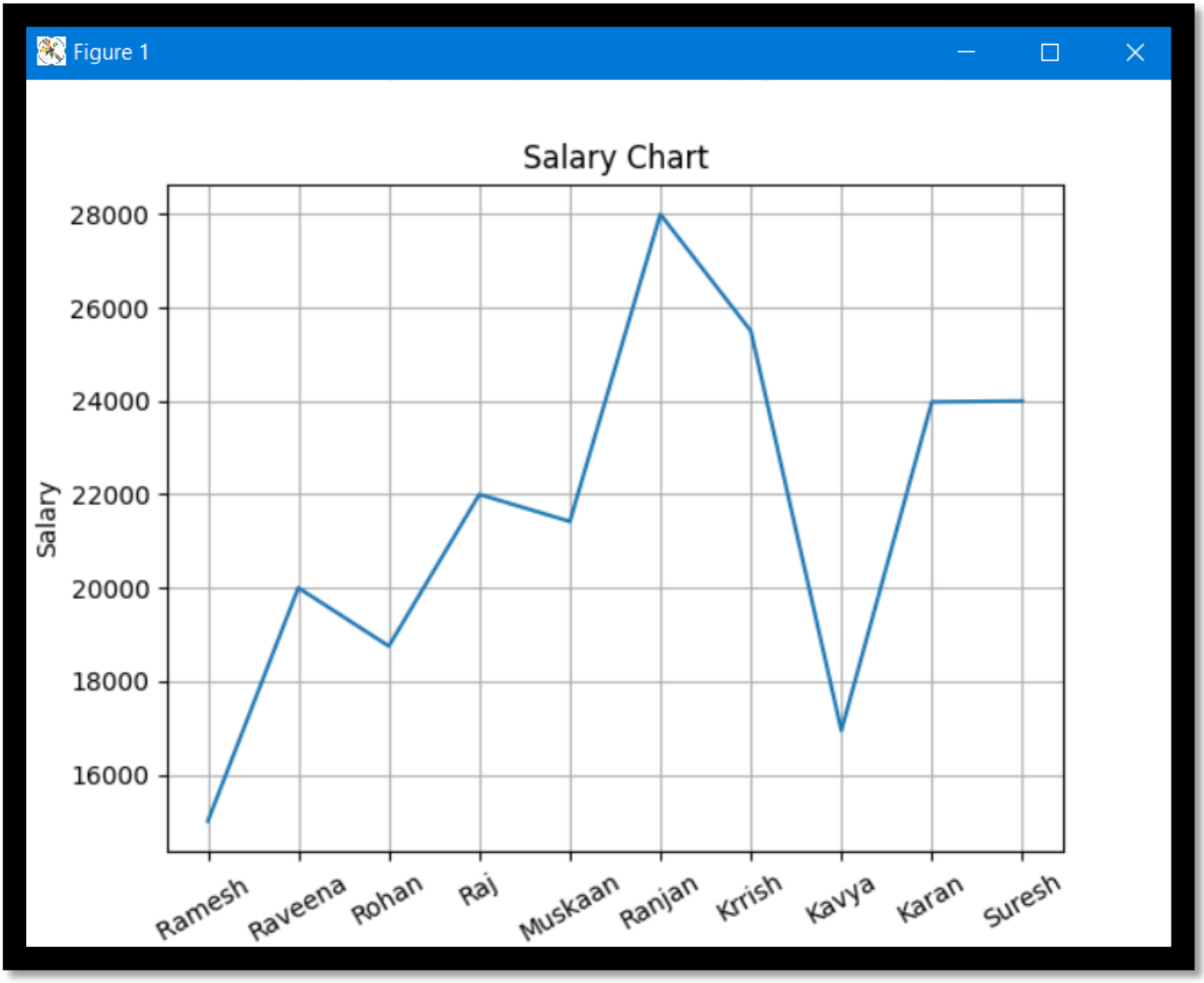
```
Enter Choice:4
Delete coloumn by coloumn name
------------------------------
Enter Coloumn Name to be deleted:Shift(Day/Night)
    EmpID Employee_Name     Department DeptNo  Salary Sex  Age
0       1        Ramesh        Check-In    D01   15000   M   25
1       2       Raveena    Air Hostess    D02   20000   F   23
2       3         Rohan    Air Hostess    D03   18750   M   30
3       4           Raj    Help - Desk    D05   22000   M   32
4       5       Muskaan    Help - Desk    D05   21420   F   29
5       6        Ranjan  Baggage Claim    D04   28000   M   31
6       7        Krrish    Air Hostess    D02   25500   M   29
7       8         Kavya        Check-In    D01   16942   F   28
8       9         Karan       Security    D03   23980   M   25
10     11        Suresh       Security    D03   24000   M   24

----------Please Select an Option------------
```

```
Enter Choice:5
Update Values [y/n]:y
Enter Index Label:2
Enter Column Name:Employee_Name
Enter new Data:Rohan
    EmpID Employee_Name     Department DeptNo  Salary Sex  Age
0       1        Ramesh        Check-In    D01   15000   M   25
1       2       Raveena    Air Hostess    D02   20000   F   23
2       3         Rohan    Air Hostess    D03   18750   M   30
3       4           Raj    Help - Desk    D05   22000   M   32
4       5       Muskaan    Help - Desk    D05   21420   F   29
5       6        Ranjan  Baggage Claim    D04   28000   M   31
6       7        Krrish    Air Hostess    D02   25500   M   29
7       8         Kavya        Check-In    D01   16942   F   28
8       9         Karan       Security    D03   23980   M   25
10     11        Suresh       Security    D03   24000   M   24

Update Values [y/n]:n
----------Please Select an Option------------
```

```
Enter Choice:6
Plot Graphs [y/n]:y
```



```
Enter Choice:7
--------------Data Analysis Menu---------------
1- Name Wise Analysis
2- Department Wise Analysis
3- Salary Wise Analysis
4- Exit

Enter the option: 3
----------------------------
Analysis based on Salary range
Enter lower Salary: 10000
Enter upper Salary: 20000

   EmpID Employee_Name   Department DeptNo  Salary Sex  Age
0      1       Ramesh     Check-In    D01   15000   M   25
2      3         Rohan  Air Hostess    D03   18750   M   30
7      8         Kavya     Check-In    D01   16942   F   28

--------------Data Analysis Menu---------------
1- Name Wise Analysis
2- Department Wise Analysis
3- Salary Wise Analysis
4- Exit
```

```
-----------Please Select an Option------------
1- Add new Coloumn
2- Add new Employee
3- Delete Row
4- Delete Coloumn
5- Update Values
6- Graph comparing salaries of employees
7- Data Analysis
8- Exit the Menu

Enter Choice:8
Thank You!
```