**Aim:** generate Mail Freight report using final file.

**Input file:** Apr2019\_finalfile.csv

**Output file:** MailFreight\_Apr2019.csv and MailFreight\_Apr2019report.csv(result file)

**Working of program:**

**import pandas as pd  
import numpy as np  
# enter the name of file that is clean final file  
nof = input("enter the name of file ", )  
df = pd.read\_csv(nof+'\_finalfile.csv')  
group\_data = df.groupby(['Flight Number', 'Aircraft Registration Number', 'Departure Airport Code', 'Arrival Airport Code', 'Dom Intl Flag']).sum()  
group\_data = group\_data.drop(['Aircraft Payload', 'Available Payload', 'Maximum Zero Fuel Weight (Kgs)', 'Actual Zero Fuel Weight (Kgs)','Take Off Fuel','Maximum Take Off Weight (Kgs)','Actual Take Off Weight (Kgs)','Trip Fuel Leg','Maximum Landing Weight (Kgs)','Actual Landing Weight (Kgs)','First Class Flown Passenger','Business Class Flown Passenger','Economy Class Flown Passenger','Total Male','Total Female','Total Children','Total Infants','Total Passenger Weight (Kgs)','Total Compartment Weight (Kgs)','Total Baggage Weight Leg (Kgs)','Total Engg Weight Leg (Kgs)','Dry Operating Weight (Kgs)','Cockpit Crew Count','Cabin Crew Count','First Class Non Revenue Passenger','Business Class Non Revenue Passenger','Economy Class Non Revenue Passenger'],axis=1)  
group\_data.to\_csv('MailFreight\_'+nof+'.csv')**

the above code read the csv file and drop the unnecessary columns and generate a MailFreight\_nof.csv file having specific column.

**import csv  
f1 = open('MailFreight\_'+nof+'.csv', 'r')  
f2 = open('Distance.csv', 'r')  
f3 = open('MailFreight\_'+nof+'report.csv', 'w')  
c1 = csv.reader(f1)  
c2 = csv.reader(f2)  
c3 = csv.writer(f3)  
my\_file = list(c1)  
dist = list(c2)  
d = 0**  
**for i in range(1, len(my\_file)):  
 for j in range(1, len(dist)):  
 if my\_file[i][2:4] == dist[j][1:3]:  
 mail = (round((float(my\_file[i][6])\*float(dist[j][3]))/1000))  
 cargo = (round((float(my\_file[i][5])\*float(dist[j][3]))/1000))  
 #print(my\_file[i][0] + "\t\t\t" + my\_file[i][1] + "\t\t\t" + my\_file[i][2]+"\t\t\t" + my\_file[i][3]+"\t\t\t" + my\_file[i][4]+"\t\t\t" + my\_file[i][5]+"\t\t\t" + my\_file[i][6]+"\t\t\t"+ str(cargo)+"\t\t\t"+ str(mail))  
 res = my\_file[i] + [cargo] + [mail]  
 c3.writerow(res)  
 # print(res)  
 d = d+1  
print(d)  
f1.close()  
f2.close()  
f3.close()**

the above code use csv module and read the MailFreight\_nof.csv file and add the cargo and mail columns.

**mf = pd.read\_csv('MailFreight\_'+nof+'report.csv', header=None)  
mf.columns = ['Flight No','AC Type','From Sector','To Sector','Int:Dom Flag(Capacity)','Freight/Cargo Weight in Kg','Mail Weight in Kg','Freight/TKM/CTKMS','MTKMS']  
mf.to\_csv("MailFreight\_"+nof+"report.csv", index=False)  
new = open('MailFreight\_'+nof+'report.csv', 'r')  
new = ''.join([i for i in new]).replace("AI9", "9I0")  
x = open('MailFreight\_'+nof+'report.csv', 'w')  
x.writelines(new)  
x.close()**

the above code read the MailFreightnof.csv file to add the headers and replace ‘AI9’ with ‘9I0’ and save the data in same file.

**df1 = pd.read\_csv('MailFreight\_'+nof+'report.csv')  
# sorting the file  
df1.sort\_values(['Flight No'], axis=0, ascending=True, inplace=True)  
# saving the result file  
df1.to\_csv('MailFreight\_'+nof+'report.csv', index=False)**

the above code is to sort the csv file.

**Flow chart:**

