**Practical No:7**

***Program:***

#include<iostream>

#include<cstring>

using namespace std;

class flight

{

public:

int am[10][10];

char city\_index[10][10];

flight();

int create();

void display(int city\_count);

};

flight::flight() {

int i, j;

for(i=0;i<10;i++)

{

strcpy(city\_index[i],"xx");

}

for(i=0;i<10;i++)

{

for(j=0;j<10;j++)

{

am[i][j] = 0;

}

}

}

int flight::create()

{

int city\_count = 0,j,si,di,wt;

char s[10],d[10],c;

do {

cout<<"\n\tEnter Source City : ";

cin>>s;

cout<<"\n\tEnter Destination City : ";

cin>>d;

for(j=0;j<10;j++)

{

if (strcmp(city\_index[j],s)==0)

break;

}

if(j==10)

{

strcpy(city\_index[city\_count], s);

city\_count++;

}

for(j=0;j<10;j++)

{

if (strcmp(city\_index[j], d) == 0) break;

}

if(j==10)

{

strcpy(city\_index[city\_count], d);

city\_count++;

}

cout<<"\n\tEnter Distance From " << s << " And " << d << ": ";

cin >> wt;

for (j = 0; j < 10; j++)

{

if (strcmp(city\_index[j], s) == 0) si = j;

if (strcmp(city\_index[j], d) == 0) di = j;

}

am[si][di] = wt;

cout<<"\n\tDo you want to add more cities.....(y/n) : ";

cin>>c;

} while (c=='y'||c =='Y');

return city\_count;

}

void flight::display(int city\_count)

{

int i, j;

cout << "\n\tDisplaying Adjacency Matrix :\n\t";

for (i = 0;i< city\_count; i++)

cout << "\t" << city\_index[i];

cout << "\n";

for (i=0;i<city\_count;i++)

{

cout<<"\t"<<city\_index[i];

for(j=0;j<city\_count;j++)

{

cout <<"\t"<< am[i][j];

}

cout<<"\n";

}

}

int main()

{

flight f;

int n, city\_count = 0;

char c;

do {

cout<<"\n\t\*\*\*\*\* Flight Main Menu \*\*\*\*\*";

cout << "\n\t1. Create \n\t2. Adjacency Matrix\n\t3. Exit";

cout << "\n\t.....Enter your choice : ";

cin >> n;

switch (n) {

case 1: city\_count = f.create(); break;

case 2: f.display(city\_count);

break;

case 3:

return 0;

}

cout << "\n\tDo you want to continue in Main Menu....(y/n) : ";

cin >> c;

} while (c=='y'||c=='Y');

return 0;

}

**OUTPUT:-**

\*\*\*\*\* Flight Main Menu \*\*\*\*\*

1. Create

2. Adjacency Matrix

3. Exit

.....Enter your choice : 1

Enter Source City : PUNE

Enter Destination City : JALGOAN

Enter Distance From PUNE And JALGOAN: 450

Do you want to add more cities.....(y/n) : Y

Enter Source City : PUNE

Enter Destination City : LONAVALA

Enter Distance From PUNE And LONAVALA: 60

Do you want to add more cities.....(y/n) : Y

Enter Source City : PUNE

Enter Destination City : NAGPUR

Enter Distance From PUNE And NAGPUR: 750

Do you want to add more cities.....(y/n) :y

Enter Source City : HUIGFY

Enter Destination City : JI

Enter Distance From HUIGFY And JI: 84768

Do you want to add more cities.....(y/n) : N

Do you want to continue in Main Menu....(y/n) : Y

\*\*\*\*\* Flight Main Menu \*\*\*\*\*

1. Create

2. Adjacency Matrix

3. Exit

.....Enter your choice : 2

Displaying Adjacency Matrix :

PUNE JALGOAN LONAVALA NAGPUR

PUNE 0 450 60 750

JALGOAN 0 0 0 0 0

LONAVALA 0 0 0 0

NAGPUR 0 0 0 0 0

Do you want to continue in Main Menu....(y/n) : Y

\*\*\*\*\* Flight Main Menu \*\*\*\*\*

1. Create

2. Adjacency Matrix

3. Exit

.....Enter your choice :3