#include <iostream> #include <string.h>

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) // if source city is already available in that city index then break

break;

}

if (j == 10)

{

strcpy(city\_index[city\_count], s); // if not already present then copy that source city at current index

city\_count++;

}

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

{

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

}

if (j == 10)

{

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

city\_count++;

}

cout << "\n\t Enter 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; // insert wt to that new index si and di in array am cout << "\n\t Do 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\t Displaying Adjacency Matrix :\n\t";

for (i = 0; i < city\_count; i++) // display horizontal matrix

cout << "\t" << city\_index[i]; // print value which is at city index 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]; // adding weight

}

cout << "\n";

}

}

int main()

{

flight f;

int n, city\_count; 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\t Do you Want to Continue in Main Menu. (y/n) : ";

cin >> c;

} while (c == 'y' || c == 'Y'); return 0;

}