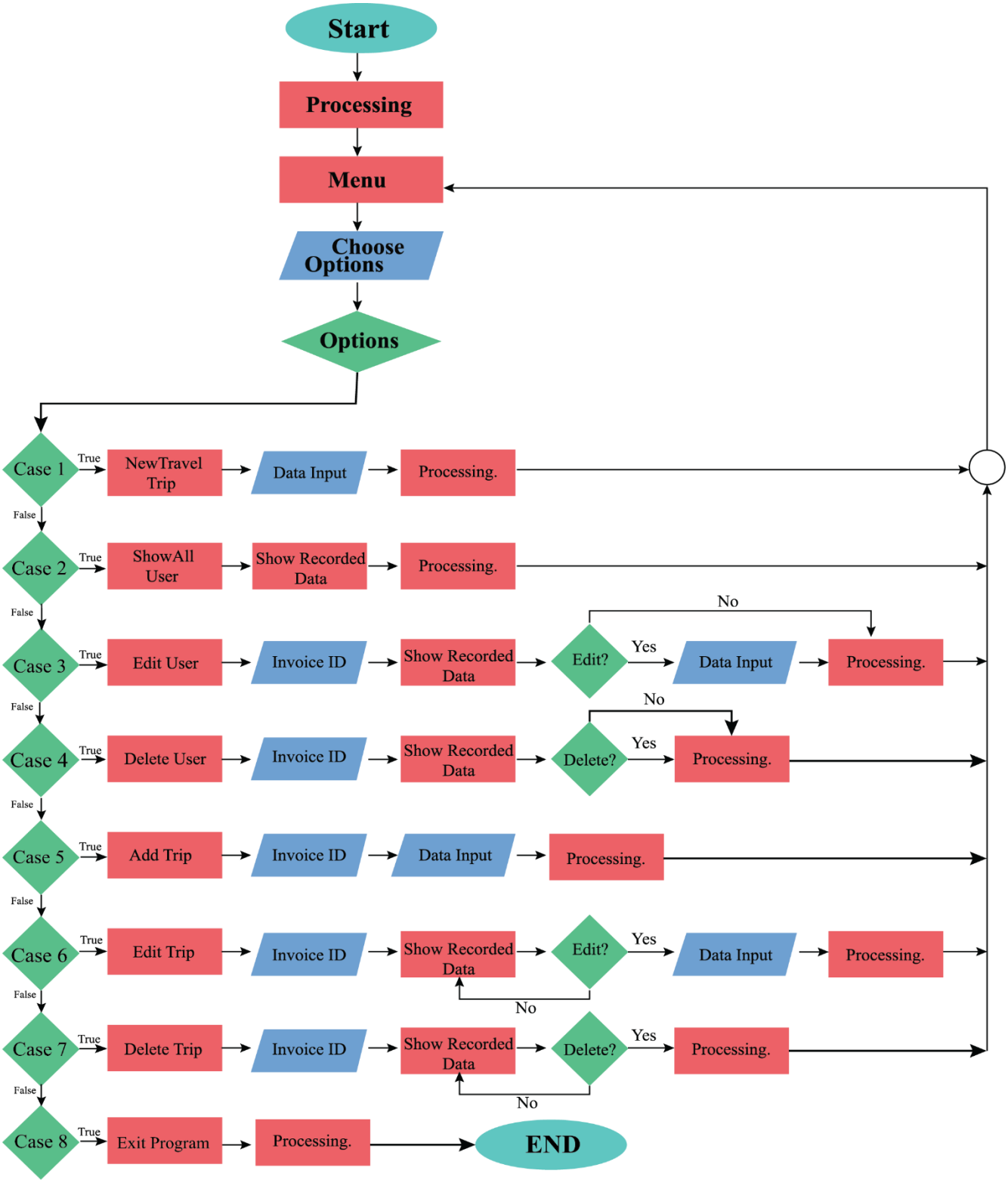
TRAVEL AGENCY MANAGEMENT SYSTEM

Presenter

Name: Farhan Muhib Efty
ID: 190105022
Lab Group: A1

Introduction: This project aims to create a C++ "Travel Agency Management System" program. Where I have to generate MENU options. This MENU option includes two classes named New Travel Trip and Show All User, two functions Edit User & Delete User under New Travel Trip, & three more functions Add Trip, Edit Trip & Delete Trip under the class of Show All User. But I have added a new MENU option called Exit Program to terminate the program.

Flow Chart: The flow chart of the program given below-



The Final Code:

```
//Project: Travel Agency Management System
//Name: Farhan Muhib Efty
//ID: 190105022, Lab Group: A1, Year: 2, Semester: 1.



#include<iostream>
#include<vector>
#include<conio.h>
#include<cstdlib>

using namespace std;

class NewTravelTrip             //Create a Class named NewTravelTrip
{
public:                     //Access specifier.
   NewTravelTrip();          //Default Constructor. Constructor is a type of Function.
   NewTravelTrip(int m)       //Parameterized Constructor.
   {


   }
   void AddTrip();           //This Function is Add data to the previous recorded user.
   string name;
   string date;
   string address;
```

```
    string phoneno;
    int invoice;
    string email;
    vector<string>tripdate;       //Format: vector<dataType>nameOfVector.
    void EditTrip();              //This Function is Edit the Previous recorded Trip
    void DeleteTrip();            //This Function is Delete the Previous recorded Trip
    vector<string>startlocation;
    vector<string>finaldestination;

};

class ShowAllUser               //Create a Class named ShowAllUser.
{
public:
    void showUser();            //This Function is show the previous recorded user data.
    int invoice;
    string name;
    string date;
    string address;
    string phoneno;
    string email;
    string tripdate;
    string triplocation;

    void DeleteUser();          //This Function is delete the previous recorded user data.
```

```
    void EditUser();            //This Function is Edit the previous recorded user data.


};

vector<NewTravelTrip>trips;      //Create a Global Vector.
int inv;

int main()
{
    int choice;
    inv = 1;
    while(1)
    {
        cout                                                                    <<
"================================================================
================" << endl;
        cout << "\t\tPlease choose your option between (1 to 7):"<<endl;
        cout                                                                    <<
"================================================================
================" << endl;
        cout << endl;
        cout << "\t1. New Travel Trip. "<<endl;
        cout << "\t2. Show All Users. "<<endl;
        cout << "\t3. Edit user. "<<endl;
        cout << "\t4. Delete user. "<<endl;
        cout << "\t5. Add Trip. "<<endl;
```

```
cout << "\t6. Edit Trip. "<<endl;
cout << "\t7. Delete Trip. "<<endl;
cout << "\t8. Exit Program. "<<endl;
cout << endl;
cout << "\tEnter Your Choice: ";
cin >> choice;
switch(choice)
{
case 1:
{
   cout << "================================================================" << endl;
   cout << "\t\tYou have chosen option 1."<<endl;
   cout << "================================================================" << endl;
   NewTravelTrip ad;     //Create an object of NewTravelTrip.

   trips.push_back(ad);
   cout << "================================================================" << endl;
   cout << "\t\tYour Data is Recorded. "<<endl;
   cout << "\tPress any key to go Back to the main menu... "<<endl;
   cout << "================================================================" << endl;
```

```
        getch();          //The function hold the output screen for sometime.
        break;
    }
    case 2:
    {
        cout << "================================================================================" << endl;
        cout << "\t\tYou have chosen option 2."<<endl;
        cout << "\tYour Previously recorded Data is showing Below." << endl;
        cout << "================================================================================" << endl;
        ShowAllUser show;    //Create an object of show.
        show.showUser();     //Function Calling.
        cout << "================================================================================" << endl;
        cout << "\tPress any key to go to the main menu... "<<endl;
        cout << "================================================================================" << endl;
        getch();
        break;
    }
    case 3:
    {
```

```
        cout                                                                    <<
"============================================================
============" << endl;
        cout << "\t\tYou have chosen option 3."<<endl;
        cout                                                                    <<
"============================================================
============" << endl;
        ShowAllUser edit;
        edit.EditUser();
        cout                                                                    <<
"============================================================
============" << endl;
        cout << "\t\tYour Data is Edited. "<<endl;
        cout << "\tPress any key to go Back to the main menu... "<<endl;
        cout                                                                    <<
"============================================================
============" << endl;
        getch();
        break;
    }
    case 4:
    {
        cout                                                                    <<
"============================================================
============" << endl;
        cout << "\t\tYou have chosen option 4."<<endl;
        cout                                                                    <<
"============================================================
============" << endl;
```

```
        ShowAllUser del;
        del.DeleteUser();
        cout << "============================================================" << endl;
        cout << "\t\tYour Data is Deleted. "<<endl;
        cout << "\tPress any key to go Back to the main menu... "<<endl;
        cout << "============================================================" << endl;
        getch();
        break;
    }
    case 5:
    {
        cout << "============================================================" << endl;
        cout << "\t\tYou have chosen option 5."<<endl;
        cout << "============================================================" << endl;
        NewTravelTrip tp(0);
        tp.AddTrip();
        cout << "============================================================" << endl;
        cout << "\t\tYour Trip is Added. "<<endl;
        cout << "\tPress any key to go Back to the main menu... "<<endl;
```

```
        cout                                                                    <<
"============================================================
============" << endl;
        getch();
        break;
    }
    case 6:
    {
        cout                                                                    <<
"============================================================
============" << endl;
        cout << "\t\tYou have chosen option 6."<<endl;
        cout                                                                    <<
"============================================================
============" << endl;
        NewTravelTrip tp(0);
        tp.EditTrip();
        cout                                                                    <<
"============================================================
============" << endl;
        cout << "\t\tYour Trip is Edited. "<<endl;
        cout << "\tPress any key to go Back to the main menu... "<<endl;
        cout                                                                    <<
"============================================================
============" << endl;
        getch();
        break;
    }
    case 7:
```

```
    {
        cout << "============================================================
============" << endl;
        cout << "\t\tYou have chosen option 7." << endl;
        cout << "============================================================
============" << endl;
        NewTravelTrip tp(0);
        tp.DeleteTrip();
        cout << "============================================================
============" << endl;
        cout << "\t\tYour Trip is Deleted. "<<endl;
        cout << "\tPress any key to go Back to the main menu... "<<endl;
        cout << "============================================================
============" << endl;
        getch();
        break;
    }
    case 8:
    {
        cout << "============================================================
============" << endl;
        cout << "\t\tPress Any key. "<<endl;
        cout << "\tIf you Want to Exit the Program..."<<endl;
```

```
        cout                                                                    <<
"============================================================
============" << endl;
        exit(0);
        break;
    }
    default:
    {
        cout                                                                    <<
"============================================================
==================" << endl;
        cout <<"\tSorry!Incorrect Option. Press any key to go to the main menu... "
<< endl;
        cout                                                                    <<
"============================================================
==================" << endl;
        getch();
        break;
    }
    }


  }




  return 0;
}
```

```
NewTravelTrip::NewTravelTrip()        // Default constructor called automatically.
{
   string t_date, s_loc, f_des;
   invoice = inv;
   cout << "\n            Invoice ID: " << invoice ;   //Auto Generated Invoice ID.
   getline(cin,date);                          //getline string for get the full line.
   cout << "\n            Enter Date: " ;
   getline(cin,date);
   cout << "\n        Enter User Name: " ;
   getline(cin, name);
   cout << "\n      Enter User Address: " ;
   getline(cin, address);
   cout << "\n    Enter User Phone No.: " ;
   cin >> phoneno;
   cout << "\nEnter User Email Address: " ;
   cin >> email;
   cout << "\n        Enter Trip Date: " ;
   cin >> t_date;
   cout << "\n     Enter Trip Location \n" ;
   cout << "\n     ------------------- " << endl;
   getline(cin, s_loc);
   cout <<"\n          Start Location: ";
   getline(cin, s_loc);
```

```
    cout <<"\n        Final Destination: ";
    getline(cin, f_des);

    //Adds a new element at the end of the vector.
    tripdate.push_back(t_date);
    startlocation.push_back(s_loc);
    finaldestination.push_back(f_des);
    inv++;            //++Invoice ID.
}


void ShowAllUser::showUser()
{
    int sz, i, j;
    sz = trips.size();      //Vector.size()Returns the number of elements in the vector.
    for(i = 0; i < sz; i++)
    {

        cout << "\n           Invoice ID: " << trips[i].invoice << endl ;
        cout << "\n                Date: " << trips[i].date << endl;
        cout << "\n           User Name: " << trips[i].name << endl;
        cout << "\n         User Address: " << trips[i].address << endl;
        cout << "\n        User Phone No: " << trips[i].phoneno << endl;
        cout << "\n    User Email Address: " << trips[i].email << endl;
```

```
        for(j = 0; j < trips[i].tripdate.size(); j++)
        {
            cout << "\n            Trip Date: " << trips[i].tripdate[j]<<endl;
            cout << "\n         Trip Location: " << endl;
            cout << "\n         ---------- " << endl;
            cout << "\n        Start Location: " << trips[i].startlocation[j] << endl;
            cout << "\n      Final Destination: " << trips[i].finaldestination[j] << endl << endl;
        }
        cout << endl << endl;
    }
}



void ShowAllUser::EditUser()          //The Edit User Function.
{
    int invc_id, i, j;
    string t_date, s_loc, f_des;
    cout<< "\n            Enter Invoice ID: ";
    cin>>invc_id;

    //To Find the User input Invoice ID.
    for(i = 0; i < trips.size(); i++)
    {
        if(trips[i].invoice == invc_id)
```

```
        j = i;
    }
    getline(cin, trips[j].date);
    cout << "\n              Enter New Date: " ;
    getline(cin, trips[j].date);
    cout << "\n          Enter New User Name: " ;
    getline(cin, trips[j].name);
    cout << "\n       Enter New User Address: " ;
    getline(cin, trips[j].address);
    cout << "\n      Enter New User Phone No: " ;
    cin >> trips[j].phoneno;
    cout << "\n Enter User New Email Address: " ;
    cin >> trips[j].email;

    trips[j].tripdate.clear();       //It is used to remove all the elements of the vector container
    trips[j].finaldestination.clear();
    trips[j].startlocation.clear();

    getline(cin, t_date);
    cout << "\n         Enter New Trip Date: " ;
    getline(cin, t_date);
    cout << "\n     Enter New Trip Location: \n" ;
    cout << "\n     ---------------------- " << endl;
    cout <<"\n          New Start Location: ";
    getline(cin, s_loc);
```

```
    cout <<"\n        New Final Destination: ";
    getline(cin, f_des);

    //Adds a new element at the end of the vector.
    trips[j].tripdate.push_back(t_date);
    trips[j].startlocation.push_back(s_loc);
    trips[j].finaldestination.push_back(f_des);
}




void ShowAllUser::DeleteUser()        //The Delete User Function.
{
    int invc_id, i, j;
    string t_date, s_loc, f_des;
    cout << "\n           Enter Invoice ID: ";
    cin >> invc_id;

    //To Find the User input Invoice ID.
    for(i = 0; i < trips.size(); i++)
    {
        if(trips[i].invoice == invc_id)
            j = i;
    }
```

```
    vector<NewTravelTrip>::iterator it;    //iterator is use like pointer.
    it = trips.begin();              //Reads Vector from the first element
    for(i = 0; i < j; i++)
        it++;
    trips.erase(it);                 // It is used to remove elements from a container
                                     //from the specified position or range.
}



void NewTravelTrip::AddTrip()      //This Function Add data to the Previous record.
{
    int invc_id, i, j;
    cout << "\n        Enter Invoice ID: ";
    cin >> invc_id;

    //To Find the User input Invoice ID.
    for(i = 0; i < trips.size(); i++)
    {
        if(trips[i].invoice == invc_id)
            j = i;
    }
    string t_date, s_loc, f_des;
    cout << "\n         Enter Trip Date: " ;
    cin >> t_date;
```

```
    cout << "\n     Enter Trip Location: \n" ;
    cout << "\n     ---------- " << endl;
    getline(cin, s_loc);
    cout <<"\n          Start Location: ";
    getline(cin, s_loc);
    cout <<"\n        Final Destination: ";
    getline(cin, f_des);

    //Adds a new element at the end of the vector.
    trips[j].tripdate.push_back(t_date);
    trips[j].startlocation.push_back(s_loc);
    trips[j].finaldestination.push_back(f_des);
}

void NewTravelTrip::EditTrip()    //This Function is Edit the Previous recorded Trip
{
    int invc_id, i, j, x;
    cout << "\n          Enter Invoice ID: ";
    cin >> invc_id;

    //To Find the User input Invoice ID.
    for(i = 0; i < trips.size(); i++)      //size() Returns the number of elements in the vector.
    {
        if(trips[i].invoice == invc_id)
            j = i;
```

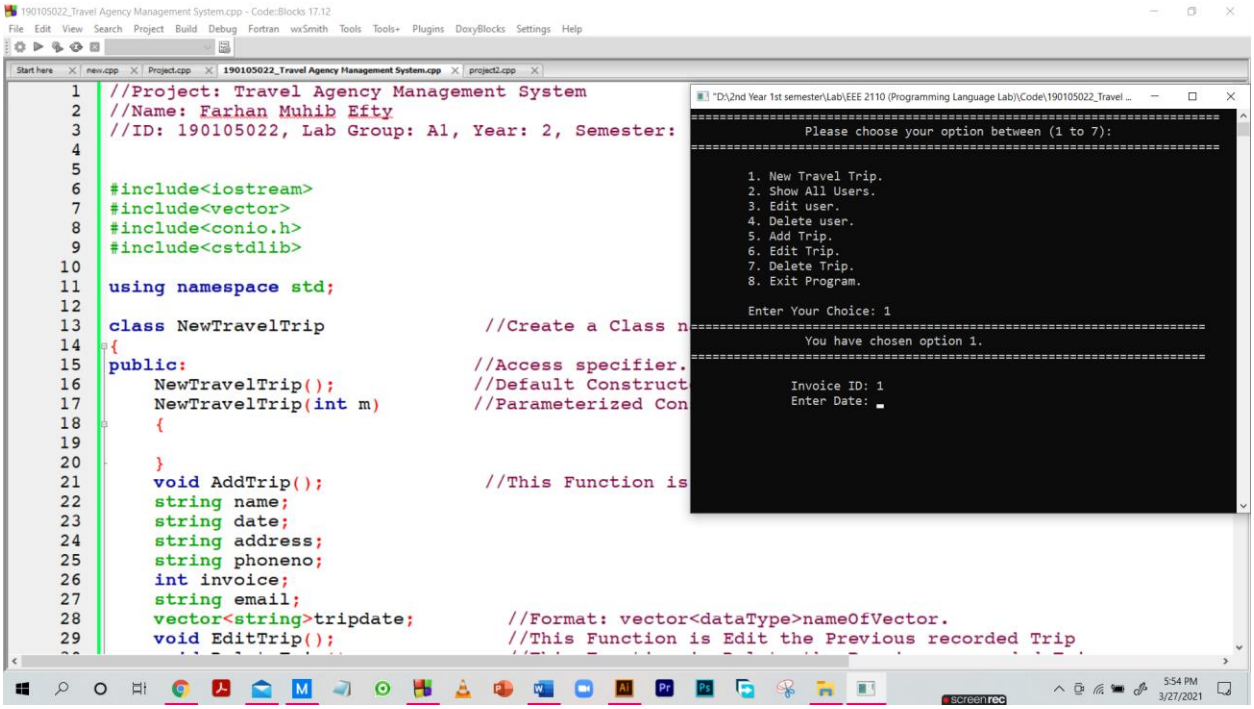
```
    }
    for(x = 0; x < trips[j].tripdate.size(); x++)
    {
        cout                                                                    <<
"=============================================================
============" << endl;
        cout << "Do you want to edit this Trip? Enter 'Y/y' for yes, 'N/n' for no."<<endl;
        cout                                                                    <<
"=============================================================
============" << endl;
        cout << "\n             Trip Date: " << trips[j].tripdate[x]<<endl;
        cout << "\n          Trip Location: " << endl;
        cout << "\n          ---------- " << endl;
        cout << "\n         Start Location: "<< trips[j].startlocation[x]<<endl;
        cout << "\n      Final Destination: "<< trips[j].finaldestination[x]<<endl<<endl;
        string inp;
        cin >> inp;
        if(inp == "Y" || inp == "y")
        {
            string t_date, s_loc, f_des;
            cout << "\n         Enter Trip Date: " ;
            cin >> t_date;
            cout << "\n     Enter Trip Location: \n" ;
            cout << "\n     ---------- " << endl;
            getline(cin, s_loc);
            cout <<"\n          Start Location: ";
            getline(cin, s_loc);
```

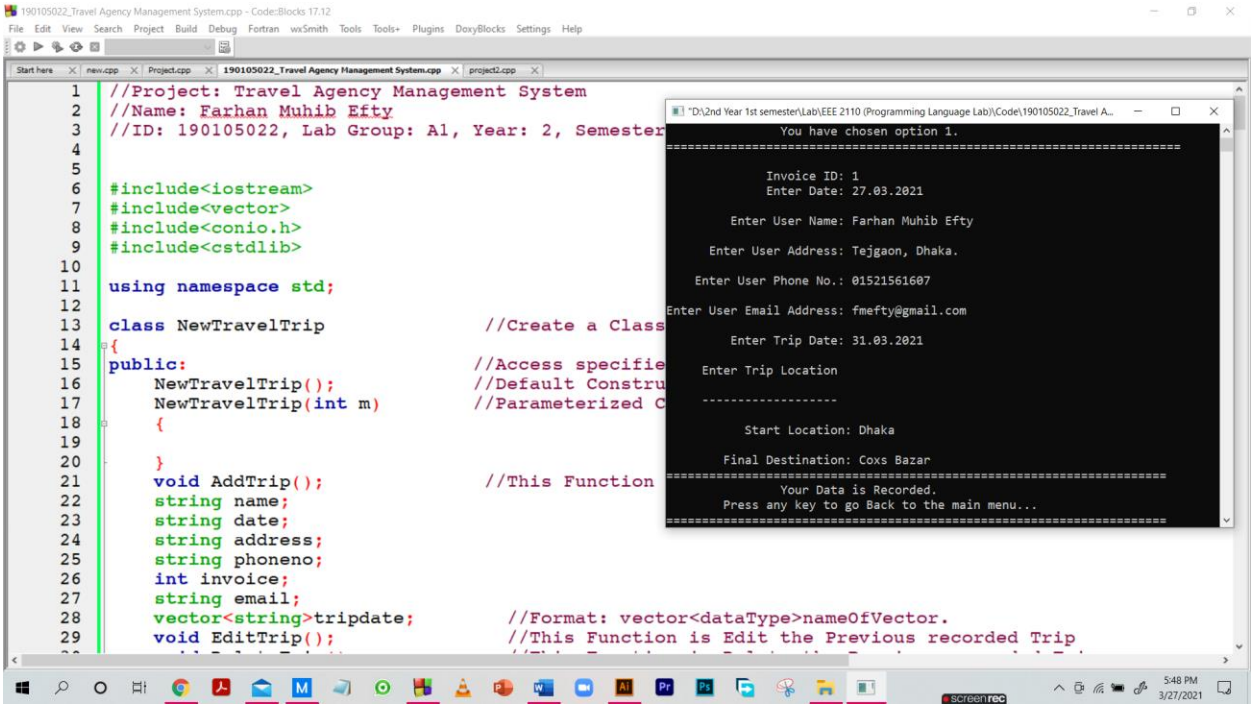
```
            cout <<"\n        Final Destination: ";
            getline(cin, f_des);

            trips[j].tripdate[x] = t_date;
            trips[j].startlocation[x] = s_loc;
            trips[j].finaldestination[x] = f_des;
            break;
        }
    }
}

void NewTravelTrip::DeleteTrip()    //This Function is Delete the Previous recorded Trip
{
    int invc_id, i, j, x, y;
    cout << "\n       Enter Invoice ID: ";
    cin >> invc_id;

    //To Find the User input Invoice ID.
    for(i = 0; i < trips.size(); i++)
    {
        if(trips[i].invoice == invc_id)
            j = i;
    }

    for(x = 0; x < trips[j].tripdate.size(); x++)
```

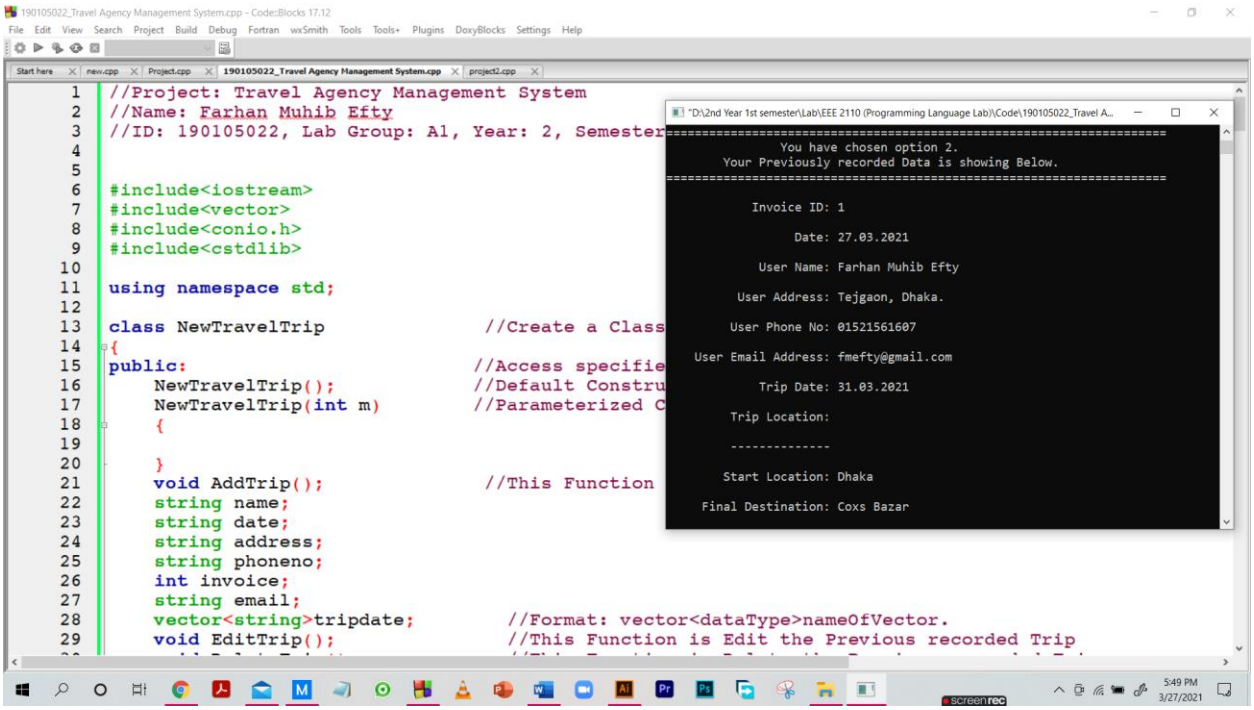
```
   {
      cout << "================================================================================" << endl;
      cout << "\nDo you want to delete this Trip? Enter 'Y/y' for yes, 'N/n' for no." << endl;
      cout << "================================================================================" << endl;
      cout << "\t       Trip Date: " << trips[j].tripdate[x] << endl;
      cout << "\t    Trip Location: " << endl;
      cout << "\t    ---------- " << endl;
      cout << "\t   Start Location: " << trips[j].startlocation[x] << endl;
      cout << "\tFinal Destination: " << trips[j].finaldestination[x] << endl << endl;
      string inp;
      cin >> inp;
      if(inp == "Y" || inp == "y")
      {
         vector<string>::iterator it;     //Iterators are used to point at the memory addresses

         it = trips[j].tripdate.begin();       //Reads Vector from the first element
         for(y = 0; y < x; y++)
            it++;
         trips[j].tripdate.erase(it);      // It is used to remove elements from a container
                                           //from the specified position or range.
         it = trips[j].startlocation.begin();
```

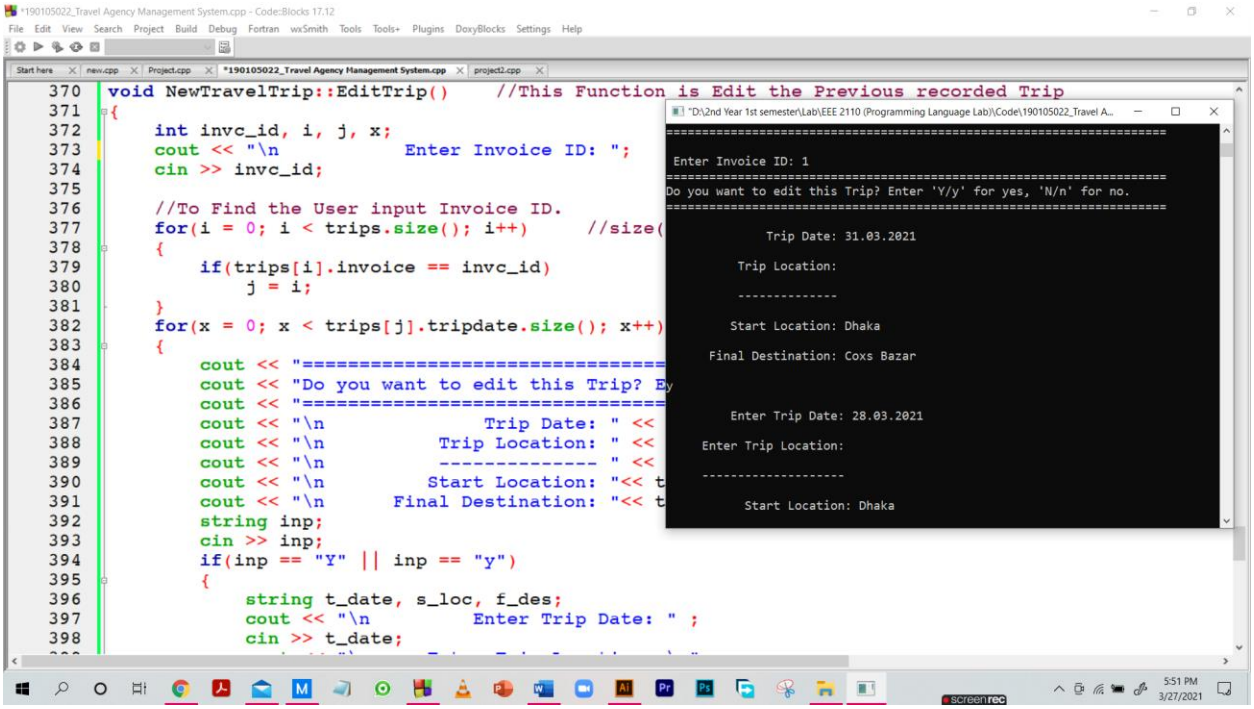
```
            for(y = 0; y < x; y++)
                it++;
            trips[j].startlocation.erase(it);

            it = trips[j].finaldestination.begin();
            for(y = 0; y < x; y++)
                it++;
            trips[j].finaldestination.erase(it);

            break;
        }
    }
}
```

Screenshot: The screenshot of the output of the following problem is given below-



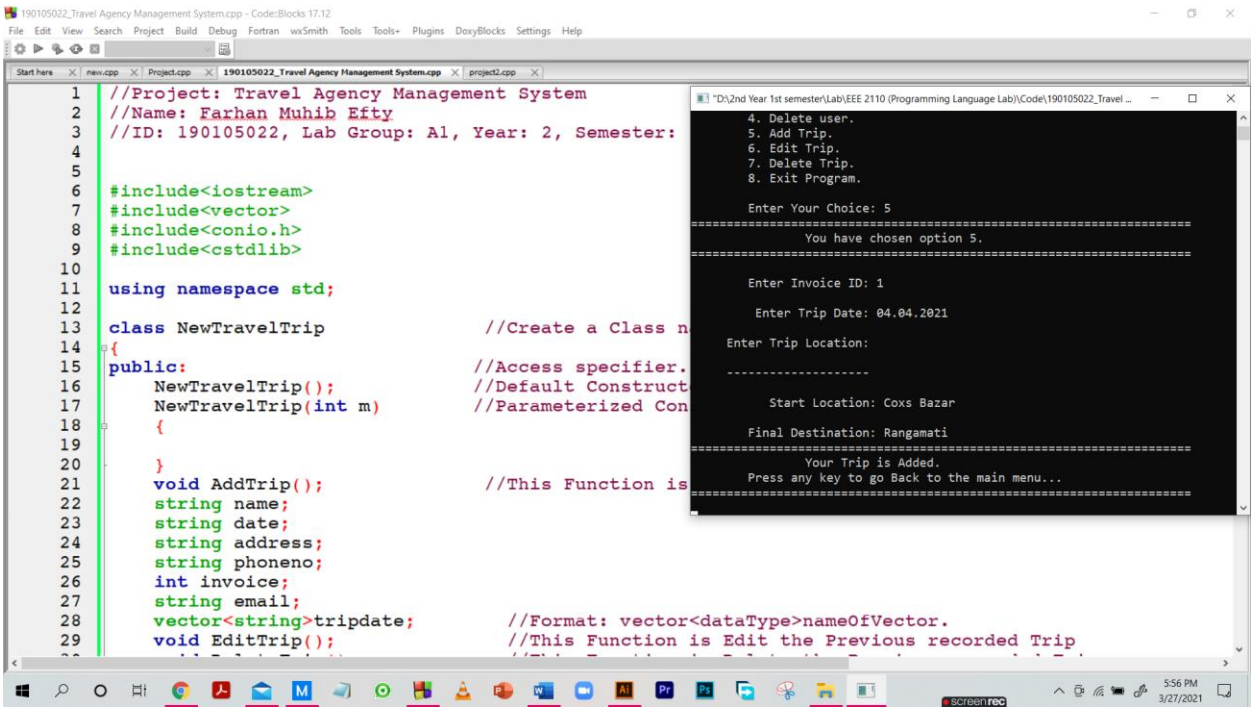

//Project: Travel Agency Management System
//Name: Farhan Muhib Efty
//ID: 190105022, Lab Group: A1, Year: 2, Semester
#include<iostream>
#include<vector>
#include<conio.h>
#include<cstdlib>
using namespace std;
class NewTravelTrip //Create a Class
{
public: //Access specifie
NewTravelTrip(); //Default Constru
NewTravelTrip(int m) //Parameterized C
void AddTrip(); //This Function
string name;
string date;
string address;
string phoneno;
int invoice;
string email;
vector<string>tripdate; //Format: vector<dataType>nameOfVector.
void EditTrip(); //This Function is Edit the Previous recorded Trip
"D:\2nd Year 1st semester\Lab\EEE 2110 (Programming Language Lab)\Code\190105022_Travel A...
You have chosen option 1.
Invoice ID: 1
Enter Date: 27.03.2021
Enter User Name: Farhan Muhib Efty
Enter User Address: Tejgaon, Dhaka.
Enter User Phone No.: 01521561607
Enter User Email Address: fmefty@gmail.com
Enter Trip Date: 31.03.2021
Enter Trip Location
Start Location: Dhaka
Final Destination: Coxs Bazar
Your Data is Recorded.
Press any key to go Back to the main menu...


//Project: Travel Agency Management System
//Name: Farhan Muhib Efty
//ID: 190105022, Lab Group: A1, Year: 2, Semester
#include<iostream>
#include<vector>
#include<conio.h>
#include<cstdlib>
using namespace std;
class NewTravelTrip //Create a Class
{
public: //Access specifie
NewTravelTrip(); //Default Constru
NewTravelTrip(int m) //Parameterized C
void AddTrip(); //This Function
string name;
string date;
string address;
string phoneno;
int invoice;
string email;
vector<string>tripdate; //Format: vector<dataType>nameOfVector.
void EditTrip(); //This Function is Edit the Previous recorded Trip
"D:\2nd Year 1st semester\Lab\EEE 2110 (Programming Language Lab)\Code\190105022_Travel A...
You have chosen option 2.
Your Previously recorded Data is showing Below.
Invoice ID: 1
Date: 27.03.2021
User Name: Farhan Muhib Efty
User Address: Tejgaon, Dhaka.
User Phone No: 01521561607
User Email Address: fmefty@gmail.com
Trip Date: 31.03.2021
Trip Location:
Start Location: Dhaka
Final Destination: Coxs Bazar



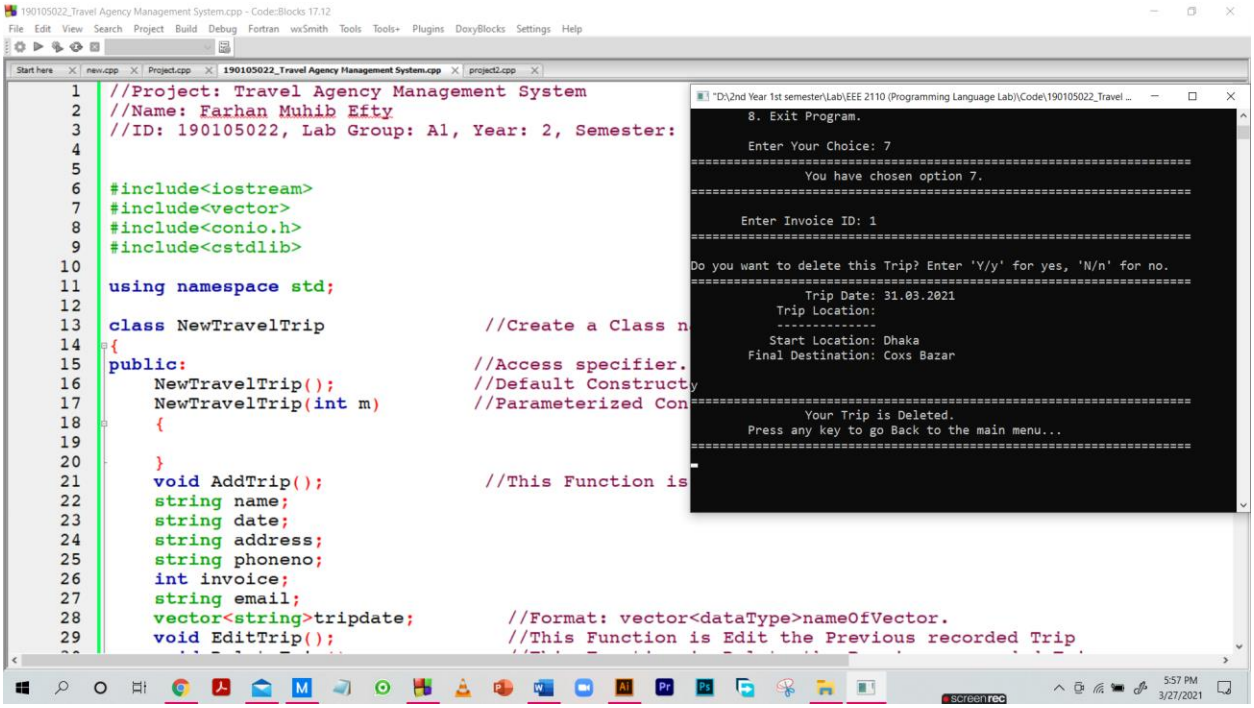
```
370 void NewTravelTrip::EditTrip()     //This Function is Edit the Previous recorded Trip
371 {
372     int invc_id, i, j, x;
373     cout << "\n            Enter Invoice ID: ";
374     cin >> invc_id;
375
376     //To Find the User input Invoice ID.
377     for(i = 0; i < trips.size(); i++)      //size(
378     {
379         if(trips[i].invoice == invc_id)
380             j = i;
381     }
382     for(x = 0; x < trips[j].tripdate.size(); x++)
383     {
384         cout << "================================
385         cout << "Do you want to edit this Trip? Ey
386         cout << "================================
387         cout << "\n              Trip Date: " <<
388         cout << "\n          Trip Location: " <<
389         cout << "\n          -------------- " <<
390         cout << "\n         Start Location: "<< t
391         cout << "\n       Final Destination: "<< t
392         string inp;
393         cin >> inp;
394         if(inp == "Y" || inp == "y")
395         {
396             string t_date, s_loc, f_des;
397             cout << "\n         Enter Trip Date: " ;
398             cin >> t_date;
```

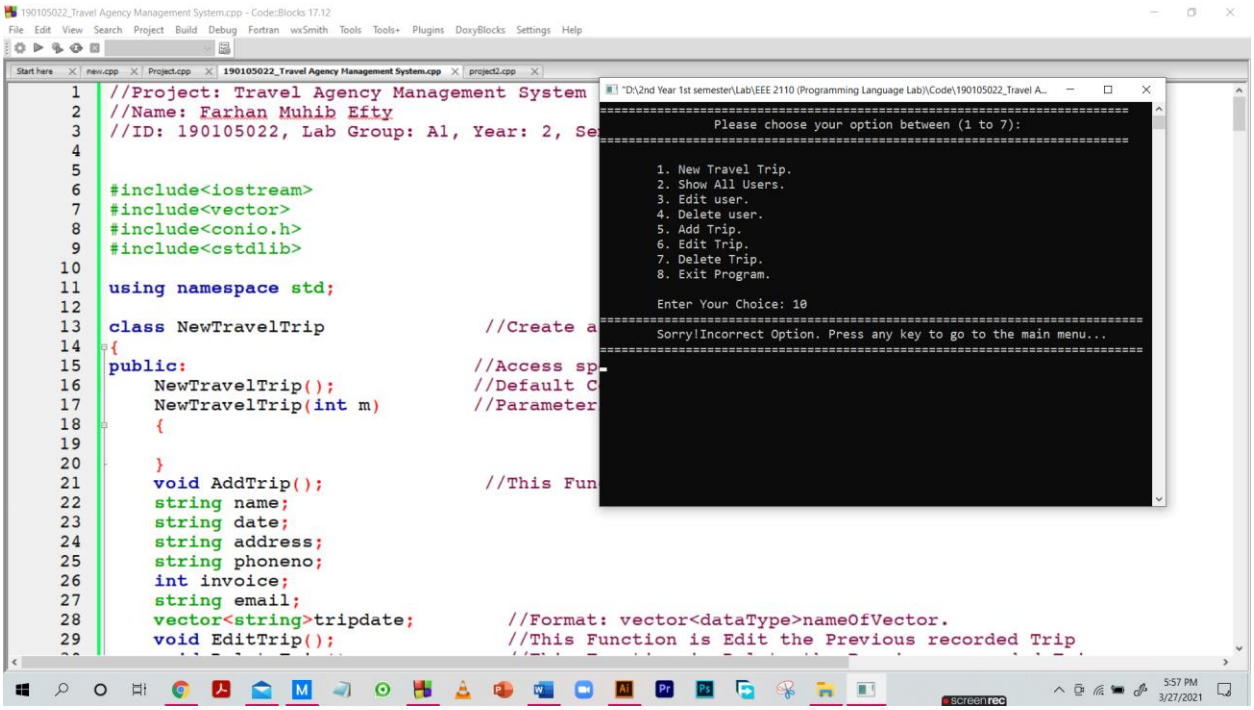
```
"D:\2nd Year 1st semester\Lab\EEE 2110 (Programming Language Lab)\Code\190105022_Travel A...
==========================================================================

 Enter Invoice ID: 1
==========================================================================
Do you want to edit this Trip? Enter 'Y/y' for yes, 'N/n' for no.
==========================================================================

            Trip Date: 31.03.2021

        Trip Location:

        --------------

       Start Location: Dhaka

     Final Destination: Coxs Bazar


       Enter Trip Date: 28.03.2021

    Enter Trip Location:

    --------------------

         Start Location: Dhaka
```



```
1  //Project: Travel Agency Management System
2  //Name: Farhan Muhib Efty
3  //ID: 190105022, Lab Group: A1, Year: 2, Semester:
4
5
6  #include<iostream>
7  #include<vector>
8  #include<conio.h>
9  #include<cstdlib>
10
11 using namespace std;
12
13 class NewTravelTrip              //Create a Class n
14 {
15 public:                         //Access specifier.
16     NewTravelTrip();             //Default Construct
17     NewTravelTrip(int m)         //Parameterized Con
18     {
19
20     }
21     void AddTrip();              //This Function is
22     string name;
23     string date;
24     string address;
25     string phoneno;
26     int invoice;
27     string email;
28     vector<string>tripdate;        //Format: vector<dataType>nameOfVector.
29     void EditTrip();               //This Function is Edit the Previous recorded Trip
```

```
"D:\2nd Year 1st semester\Lab\EEE 2110 (Programming Language Lab)\Code\190105022_Travel ...
      4. Delete user.
      5. Add Trip.
      6. Edit Trip.
      7. Delete Trip.
      8. Exit Program.

      Enter Your Choice: 5
==========================================================================
              You have chosen option 5.
==========================================================================

      Enter Invoice ID: 1

       Enter Trip Date: 04.04.2021

    Enter Trip Location:

    --------------------

         Start Location: Coxs Bazar

      Final Destination: Rangamati
==========================================================================
              Your Trip is Added.
      Press any key to go Back to the main menu...
==========================================================================
```


//Project: Travel Agency Management System
//Name: Farhan Muhib Efty
//ID: 190105022, Lab Group: A1, Year: 2, Semester:
#include<iostream>
#include<vector>
#include<conio.h>
#include<cstdlib>
using namespace std;
class NewTravelTrip
{
public:
NewTravelTrip();
NewTravelTrip(int m)
void AddTrip();
string name;
string date;
string address;
string phoneno;
int invoice;
string email;
vector<string>tripdate;
void EditTrip();
8. Exit Program.
Enter Your Choice: 7
You have chosen option 7.
Enter Invoice ID: 1
Do you want to delete this Trip? Enter 'Y/y' for yes, 'N/n' for no.
Trip Date: 31.03.2021
Trip Location:
Start Location: Dhaka
Final Destination: Coxs Bazar
Your Trip is Deleted.
Press any key to go Back to the main menu...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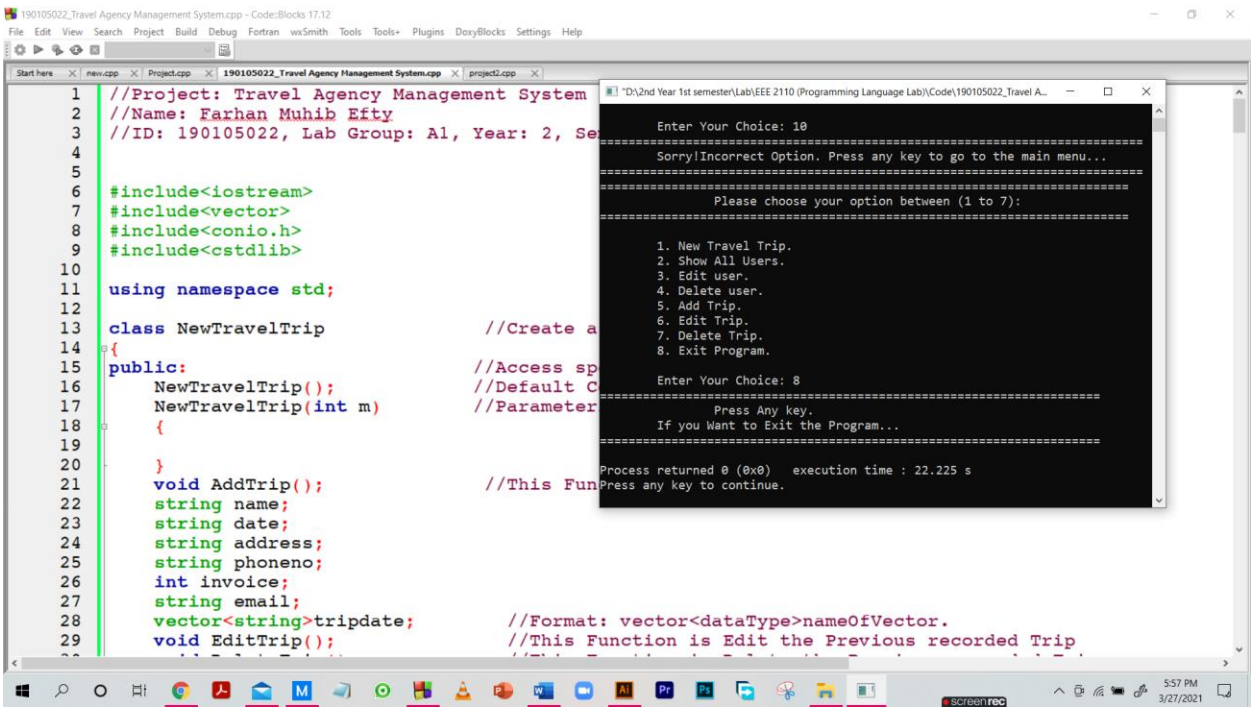
string email;
vector<string>tripdate;
void EditTrip();
Please choose your option between (1 to 7):
1. New Travel Trip.
2. Show All Users.
3. Edit user.
4. Delete user.
5. Add Trip.
6. Edit Trip.
7. Delete Trip.
8. Exit Program.
Enter Your Choice: 10
Sorry!Incorrect Option. Press any key to go to the main menu...



Discussion: To solve this project named "Travel Agency Management System," I have created a MENU that includes eight options such as New Travel, Show All User, Edit User, Delete User, Add Trip, Edit Trip, Delete Trip, and Exit Program. In this program, I have created two classes named New Travel Trip and Show All User. I have declared three function named Add Trip(), Edit Trip() & Delete Trip() in the New Travel Trip Class section. I have declared two constructors in the New Travel Trip class: the "Default Constructor" and another is "Parameterized Constructor." In the Show All User class, I have also declared three more functions, and these are Show User(), Delete User(), and Edit User(). In the main function, I have used a switch statement to show the option MENU. In this project, I have used four header files. The first one is <iostream>; this header file provides basic input and output services. The second one is <vector>; this header file is used for a contiguous storage location for their elements. The second last is <conio.h>; the CONIO stands for Console Input Output, which has functions like getch(). The getch() function holds the output screen for some time until the user passes a key from the keyboard to exit the console screen. And the last one is <cstdlib>; this header file declares a set of general-purpose functions such as exit() function. The exit() function works to terminate the program.