Source Code for Project:

**Bus Reservation System**

#include <iostream>

#include <stdlib.h>

#include <string>

using namespace std;

//Global Variables

string Bus\_no;

int fare;

string Bus\_class;

string Departure\_Time;

string Arrival\_Time;

string Source\_City;

string Destination\_City;

string Driver\_Name;

int Seats;

class Node

{

public:

string Bus\_no;

int fare;

string Bus\_class;

string Departure\_Time;

string Arrival\_Time;

string Source\_City;

string Destination\_City;

string Driver\_Name;

int Seats;

string Passenger\_name;

Node\* next;

};

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Linked\_List \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

class Linked\_list

{

private:

Node \*head, \*tail;

public:

Linked\_list()

{

head = NULL;

tail = NULL;

}

void Add\_bus(string a, string b, string c, string d, string e, string f, int g, string h, int i)

{

Node\* ptr = new Node;

ptr->Bus\_no = a;

ptr->Bus\_class = b;

ptr->Departure\_Time = c;

ptr->Arrival\_Time = d;

ptr->Source\_City = e;

ptr->Destination\_City = f;

ptr->fare = g;

ptr->Driver\_Name = h;

ptr->Seats = i;

ptr->next = NULL;

if(head == NULL)

{

head = ptr;

tail = ptr;

}

else

{

tail->next = ptr;

tail = tail->next;

}

}

void Dispaly\_Buses\_Record() //funtion to display nodes/record

{

Node \*ptr = head;

while(ptr!=NULL)

{

cout<<endl<<"\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t \*\*\* Detail of Bus number '"<<ptr->Bus\_no<<"' ! \*\*\*"<<endl<<endl;

cout<<"\t\t Fare :" <<ptr->fare<<" PKR only"<<endl;

cout<<"\t\t Driver Name: "<<ptr->Driver\_Name<<"\t\t Class : "<<ptr->Bus\_class<<endl;

cout<<"\t\t Departure Time: "<<ptr->Departure\_Time<<"\t\t Arrival Time : "<<ptr->Arrival\_Time<<endl;

cout<<"\t\t From: "<<ptr->Source\_City<<"\t\t\t to : "<<ptr->Destination\_City<<endl;

cout<<endl<<"\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

ptr=ptr->next;

}

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

}

void Reservation(string user\_dest)

{

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

Node \*ptr = head;

while (ptr!=NULL)

{

if (ptr->Destination\_City == user\_dest)

{

cout << "\t Departure Time: " << ptr->Departure\_Time << "\t\t Arrival Time : " << ptr->Arrival\_Time << endl << endl; //access node of specific bus

loop:

cout << "\t\t\t Booked Seats = " << ptr->Seats << "/36" << endl << endl;

cout << "\t\t\t>> Enter Number of seats to reserve! <<" << endl;

cout << "\t\t\t>> OR <<" << endl;

cout << "\t\t\t>> Enter '0' to go back to main menu! <<" << endl << endl;

cout << "\t\t\t Please Enter -> ";

int choice\_for\_seats;

cin >> choice\_for\_seats;

if(choice\_for\_seats == 0)

{

goto main;

}

else if(ptr->Seats + choice\_for\_seats >= 37)

{

cout<<endl<<"\t\t\t !!! Warning: Entering seat more than empty seats !!!"<<endl;

cout<<"\t\t\t > Please select another bus or reduce the number of seats <"<<endl<<endl;

cout<<endl<<"\t\* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*"<<endl<<endl;

goto loop;

}

else

{

ptr->Seats = ptr->Seats + choice\_for\_seats;

cout<<endl<<"\t\t\t \*\*\* You have successfully reserved '"<<choice\_for\_seats<<"' seats \*\*\*"<<endl;

}

cout<<endl<<"\t\t\t>> Now Total reserved seats are "<<ptr->Seats<<" <<"<<endl<<endl;

cout<<endl<<"\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

}

ptr=ptr->next;

}

main:

cout<<endl;

}

void Show\_Specific\_Bus(string user\_dest)

{

Node \*ptr = head;

while(ptr!=NULL)

{

if(ptr->Destination\_City == user\_dest)

{

cout<<endl<<"\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t \*\*\* Detail of Bus number '"<<ptr->Bus\_no<<"' ! \*\*\*"<<endl<<endl;

cout<<"\t\t Fare (In PKR):" <<ptr->fare<<endl;

cout<<"\t\t Driver Name: "<<ptr->Driver\_Name<<"\t\t Class : "<<ptr->Bus\_class<<endl;

cout<<"\t\t Departure Time: "<<ptr->Departure\_Time<<"\t\t Arrival Time : "<<ptr->Arrival\_Time<<endl;

cout<<"\t\t From: "<<ptr->Source\_City<<"\t\t\t to : "<<ptr->Destination\_City<<endl;

cout<<endl<<"\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

}

ptr =ptr->next;

}

}

void Update\_Bus\_Record(string user\_bus\_no)

{

Node \*ptr = head;

while (ptr!=NULL)

{

if(user\_bus\_no == ptr->Bus\_no)

{

Loop:

cout<<endl<<"\t\t What you want to update in Bus '"<< ptr->Bus\_no <<"'? "<<endl<<endl;

cout<<"\t\t 1.Bus Class"<<endl;

cout<<"\t\t 2.Departure Time"<<endl;

cout<<"\t\t 3.Arrival Time"<<endl;

cout<<"\t\t 4.Source (City)"<<endl;

cout<<"\t\t 5.Destination (City)"<<endl;

cout<<"\t\t 6.Fare"<<endl;

cout<<"\t\t 7.Driver Name"<<endl;

cout<<endl<<"\t\t Your Choice -> ";

char choice\_for\_update;

//cin.ignore();

cin>>choice\_for\_update;

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

if (choice\_for\_update == '1')

{

string new\_Bus\_class;

cout<<"\t\t\t Enter New Bus Class -> ";

cin.ignore();

getline(cin,new\_Bus\_class);

ptr->Bus\_class = new\_Bus\_class;

}

else if (choice\_for\_update == '2')

{

string new\_Departure\_Time;

cout<<"\t\t\t Enter New Departure Time -> ";

cin.ignore();

getline(cin,Bus\_no);

ptr->Departure\_Time = new\_Departure\_Time;

}

else if (choice\_for\_update == '3')

{

string new\_Arrival\_Time;

cout<<"\t\t\t Enter New Arrival Time -> ";

cin.ignore();

getline(cin,new\_Arrival\_Time);

ptr->Arrival\_Time = new\_Arrival\_Time;

}

else if (choice\_for\_update == '4')

{

string new\_Source\_City;

cout<<"\t\t\t Enter New Source(City) -> ";

cin.ignore();

getline(cin,new\_Source\_City);

ptr->Source\_City = new\_Source\_City;

}

else if (choice\_for\_update == '5')

{

string new\_Destination\_City;

cout<<"\t\t\t Enter New Destination (City) -> ";

cin.ignore();

getline(cin,new\_Destination\_City);

ptr->Destination\_City = new\_Destination\_City;

}

else if (choice\_for\_update == '6')

{

int new\_fare;

cout<<"\t\t\t Enter New fare -> ";

cin.ignore();

cin>>new\_fare;

ptr->fare = new\_fare;

}

else if (choice\_for\_update == '7')

{

string new\_Driver\_Name;

cout<<"\t\t\t Enter New Driver Name -> ";

cin.ignore();

getline(cin,new\_Driver\_Name);

ptr->Driver\_Name = new\_Driver\_Name;

}

else

{

cout<<"\t\t\t !!!Error,Invalid choice !!!"<<endl;

goto Loop;

}

cout<<endl<<"\t\t\t \*\*\* Record is Updated Successfuly \*\*\*"<<endl<<endl;

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

return ;

}

ptr=ptr->next;

}

cout<<endl<<"\t\t\t \*\*\*Bus of that Number not found!\*\*\*"<<endl<<endl;

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

}

void Delete\_Bus\_Record(string user\_bus\_no)

{

Node \*temp = head;

Node \*prev = NULL;

if (temp != NULL && head->Bus\_no == user\_bus\_no) //if required node is at first

{

head = temp->next;

cout<<endl<<"\t\t\t \*\*\* Data of Bus "<<temp->Bus\_no<<" is Deleted Successfully \*\*\* "<<endl <<endl;

delete(temp);

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

return;

}

else //if required node is at any position except first

{

while (temp != NULL)

{

prev = temp;

temp = temp-> next;

if(temp->Bus\_no == user\_bus\_no && temp->next != NULL) //if required node is at any except head & tail

{

prev->next = temp->next;

cout<<endl<<"\t\t\t \*\*\* Data of Bus "<<temp->Bus\_no<<" is Deleted successfully \*\*\*"<<endl<<endl;

delete(temp);

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

return;

}

else if(temp->Bus\_no == user\_bus\_no && temp->next == NULL ) //if required node is at last

{

prev->next= NULL;

cout<<endl<<"\t\t\t \*\*\* Data of Bus "<<temp->Bus\_no<<" is Deleted Successfully \*\*\*"<<endl<<endl;

delete(temp);

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

return;

}

}

}

cout<<"\t\t\t \*\*\* Data of Bus "<<user\_bus\_no<<" is Not Found! "<<endl;

cout<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

return;

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Linked\_List ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*//

};

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Supportig Functions \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

class to\_check\_class

{

//Linked\_list ll\_obj;

public:

char Main\_Menu\_Primary() //Not in use

{/\*

cout<<endl<<endl; // Get Primary Choice

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t\t\t 1.Employee"<<endl;

cout<<"\t\t\t\t\t 2.Passenger"<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\t\t\t Enter your choice -> ";

char primary\_choice = NULL;

cin>>primary\_choice;

return primary\_choice;

\*/}

char Main\_Menu\_Secondary(char a) //Not in use

{/\*

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Menu for Employee starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

char secondary\_choice\_E = NULL;

char secondary\_choice\_P = NULL;

if (a == '1')

{

cout<<endl<<endl; // Get secondary\_choice\_E

cout<< "\t\t\t\t \*\*\* Welcome as Employee \*\*\*"<<endl<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t\t 1.Install a New Bus"<<endl;

cout<<"\t\t\t\t 2.Show Available Bus"<<endl;

cout<<"\t\t\t\t 3.Update Bus Record"<<endl;

cout<<"\t\t\t\t 4.Delete Bus Record"<<endl;

cout<<"\t\t\t\t 5.Exit"<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\t\t\t Enter your choice -> ";

cin>>secondary\_choice\_E;

return 1;

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Menu for Employee ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Menu for client starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

else if (a == '2')

{

cout<<endl<<endl; // Get secondary\_choice\_P

cout<< "\t\t\t\t \*\*\* Welcome as Passenger \*\*\*"<<endl<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t\t 1.Reserve Bus Seats"<<endl;

cout<<"\t\t\t\t 2.Show Specific Bus Detail"<<endl;

cout<<"\t\t\t\t 3.Show Available Bus"<<endl;

cout<<"\t\t\t\t 4.Exit"<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\t\t\t Enter your choice -> ";

cin>>secondary\_choice\_P;

return 2;

}

else

{

cout<<endl<<"\t\t\t\t !!! Error, Invalid Choice !!!"<<endl;

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Menu for client ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*/}

void Install\_a\_Bus() //Not in use

{/\*

cout<<endl<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"Enter Bus number: ";

cin.ignore();

getline(cin,Bus\_no);

cout<<"Enter Bus Class: ";

//cin.ignore();

getline(cin,Bus\_class);

cout<<"Enter Departure Time: ";

//cin.ignore();

getline(cin,Departure\_Time);

cout<<"Enter Arrival Time: ";

//cin.ignore();

getline(cin,Arrival\_Time);

cout<<"Enter Source City: ";

//cin.ignore();

getline(cin,Source\_City);

cout<<"Enter Destination City: ";

//cin.ignore();

getline(cin,Destination\_City);

cout<<"Enter Fare (In PKR): ";

//cin.ignore();

cin>>fare;

cout<<"Enter Driver Name: ";

cin.ignore();

getline(cin,Driver\_Name);

cout<<endl<<endl<<"+++ Information of new Bus has been installed in BR System! +++"<<endl;

cout<<endl<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

ll\_obj.add\_node( Bus\_no, Bus\_class, Departure\_Time, Arrival\_Time, Source\_City, Destination\_City, fare, Driver\_Name,0);

\*/}

string Menu\_Select\_City() //Operational

{

Loop:

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t Where you want to go?"<<endl<<endl;

cout<<"\t\t 1.Lahore"<<endl;

cout<<"\t\t 2.Peshawar"<<endl;

cout<<"\t\t 3.Islamabad"<<endl;

cout<<"\t\t 4.Sialkot"<<endl;

cout<<"\t\t 5.Sahiwal"<<endl;

cout<<endl<<"\t\t Your Choice -> ";

char choice\_for\_reservaion;

cin.ignore();

cin>>choice\_for\_reservaion;

if(choice\_for\_reservaion == '1')

{

return "Lahore";

}

else if(choice\_for\_reservaion == '2')

{

return "Peshawar";

}

else if(choice\_for\_reservaion == '3')

{

return "Islamabad";

}

else if(choice\_for\_reservaion == '4')

{

return "Sialkot";

}

else if(choice\_for\_reservaion == '5')

{

return "Sahiwal";

}

else

{

cout<<endl<<"\t\t !!! Error: Invalid Choice !!!"<<endl<<endl;

goto Loop;

}

}

string Access\_Bus\_Record() //operational

{

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t Enter Bus no. to Access Record -> ";

string bus\_to\_access ;

cin.ignore();

getline(cin,bus\_to\_access);

return bus\_to\_access;

}

void Terminate\_Program() //Operational

{

cout<<endl<<endl;

cout<<endl<<"\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t \*\*\*\*\*Thanks for using Program, See you Soon!\*\*\*\*\* "<<endl;

cout<<endl<<"\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

}

};

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* int main() \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

int main()

{

to\_check\_class obj;

Linked\_list ll\_obj;

char primary\_choice;

char secondary\_choice\_E = NULL;

char secondary\_choice\_P = NULL;

//Built-in Data of Buses

ll\_obj.Add\_bus("ABS 1523","Business","06:45 am","09:15 am","Faisalabad","Lahore",800,"Mr. Absaar",20);

ll\_obj.Add\_bus("AKS 1132","Executive","01:10 pm","06:10 am","Faisalabad","Peshawar",1250,"Mr. Hashir",12);

ll\_obj.Add\_bus("FSD 0012","Business","06:45 am","10:15 pm","Faisalabad","Islamabad",900,"Mr. Rehman",15);

ll\_obj.Add\_bus("FDL 5824","Executive","07:00 am","10:00 pm","Faisalabad","Sialkot",700,"Mr. Farooq",5);

ll\_obj.Add\_bus("FSB 5012","Executive","02:30 am","06:30 pm","Faisalabad","Sahiwal",300,"Mr. Zawaar",11);

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* User menu starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Label\_Start:

//system("CLS");

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Primary Menu starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//obj.Main\_Menu\_Primary();

cout<<endl<<endl; // Get Primary Choice

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t\t\t 1.Employee"<<endl;

cout<<"\t\t\t\t\t 2.Passenger"<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\t\t\t Enter your choice -> ";

cin>>primary\_choice;

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Primary Menu ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//obj.Main\_Menu\_Secondary(obj.Main\_Menu\_Primary());

//Individual Choices Begins here

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Employee Portion starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

if (primary\_choice == '1') // Get secondary\_choice\_E

{

system("CLS");

cout<<endl<<endl;

cout<<"\t\t\t \*\*\*\*\*\* Welcome as Employee \*\*\*\*\*\*"<<endl<<endl;

Label\_Sec\_E:

cout<<endl<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t\t 1.Install a New Bus"<<endl;

cout<<"\t\t\t\t 2.Show Available Bus"<<endl;

cout<<"\t\t\t\t 3.Update Bus Record"<<endl;

cout<<"\t\t\t\t 4.Delete Bus Record"<<endl;

cout<<"\t\t\t\t 5.Exit"<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\t\t\t Enter your choice -> ";

cin>>secondary\_choice\_E;

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec E operations Starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

if (secondary\_choice\_E == '1')

{

//obj.Install\_a\_Bus();

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"\t\t >Enter Bus number -> ";

cin.ignore();

getline(cin,Bus\_no);

cout<<"\t\t >Enter Bus Class -> ";

//cin.ignore();

getline(cin,Bus\_class);

cout<<"\t\t >Enter Departure Time -> ";

//cin.ignore();

getline(cin,Departure\_Time);

cout<<"\t\t >Enter Arrival Time -> ";

//cin.ignore();

getline(cin,Arrival\_Time);

cout<<"\t\t >Enter Source City -> ";

//cin.ignore();

getline(cin,Source\_City);

cout<<"\t\t >Enter Destination City -> ";

//cin.ignore();

getline(cin,Destination\_City);

cout<<"\t\t >Enter Fare (In PKR) -> ";

//cin.ignore();

cin>>fare;

cout<<"\t\t >Enter Driver Name -> ";

cin.ignore();

getline(cin,Driver\_Name);

cout<<endl<<endl<<"\t\t>> Information of new Bus has been installed in BR System! <<"<<endl;

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\t\t Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

ll\_obj.Add\_bus( Bus\_no, Bus\_class, Departure\_Time, Arrival\_Time, Source\_City, Destination\_City, fare, Driver\_Name,0);

}

else if (secondary\_choice\_E == '2') //copy 2

{

ll\_obj.Dispaly\_Buses\_Record();

}

else if (secondary\_choice\_E == '3')

{

ll\_obj.Update\_Bus\_Record(obj.Access\_Bus\_Record());

}

else if (secondary\_choice\_E == '4')

{

ll\_obj.Delete\_Bus\_Record(obj.Access\_Bus\_Record());

}

else if (secondary\_choice\_E == '5') //copy 2

{

obj.Terminate\_Program();

goto Exit;

}

else

{

cout<<endl<<">> Error: Invalid Selection"<<endl;

}

goto Label\_Sec\_E;

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec E operations Ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Employee Portion ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Passenger Portion starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

else if (primary\_choice == '2') // Get secondary\_choice\_P

{

system("CLS");

cout<<endl<<endl;

cout<<"\t\t\t \*\*\*\*\*\* Welcome as Passenger \*\*\*\*\*\*"<<endl<<endl;

Label\_Sec\_P:

cout<<endl<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl<<endl;

cout<<"\t\t\t\t 1.Reserve Bus Seats"<<endl;

cout<<"\t\t\t\t 2.Show Specific Bus Detail"<<endl;

cout<<"\t\t\t\t 3.Show Available Bus"<<endl;

cout<<"\t\t\t\t 4.Exit"<<endl;

cout<<endl<<"\t\t\t\t \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"\t\t\t\t Enter your choice -> ";

cin>>secondary\_choice\_P;

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec P operations Starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

if (secondary\_choice\_P == '1') //take 2

{

ll\_obj.Reservation(obj.Menu\_Select\_City());

}

else if (secondary\_choice\_P == '2') //take 2

{

ll\_obj.Show\_Specific\_Bus(obj.Menu\_Select\_City());

}

else if (secondary\_choice\_P == '3') //copy 2

{

ll\_obj.Dispaly\_Buses\_Record();

}

else if (secondary\_choice\_P == '4') //copy 2

{

obj.Terminate\_Program();

goto Exit;

}

else

{

cout<<endl<<">> Error: Invalid Selection"<<endl;

}

goto Label\_Sec\_P;

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec P operations Ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Passenger Portion ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

else

{

cout<<endl<<"\t\t\t\t !!! Error, Invalid Choice !!!"<<endl;

}

goto Label\_Start;

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* User menu ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Operation on User menus starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec E operations Starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

/\*if (secondary\_choice\_E == '1') //ok

{

//obj.Install\_a\_Bus();

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<"\t\t >Enter Bus number -> ";

cin.ignore();

getline(cin,Bus\_no);

cout<<"\t\t >Enter Bus Class -> ";

//cin.ignore();

getline(cin,Bus\_class);

cout<<"\t\t >Enter Departure Time -> ";

//cin.ignore();

getline(cin,Departure\_Time);

cout<<"\t\t >Enter Arrival Time -> ";

//cin.ignore();

getline(cin,Arrival\_Time);

cout<<"\t\t >Enter Source City -> ";

//cin.ignore();

getline(cin,Source\_City);

cout<<"\t\t >Enter Destination City -> ";

//cin.ignore();

getline(cin,Destination\_City);

cout<<"\t\t >Enter Fare (In PKR) -> ";

//cin.ignore();

cin>>fare;

cout<<"\t\t >Enter Driver Name -> ";

cin.ignore();

getline(cin,Driver\_Name);

cout<<endl<<endl<<"\t\t>> Information of new Bus has been installed in BR System! <<"<<endl;

cout<<endl<<"\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*"<<endl;

cout<<endl<<"Enter any key to proceed to main menu -> ";

char to\_proceed;

cin>>to\_proceed;

ll\_obj.add\_node( Bus\_no, Bus\_class, Departure\_Time, Arrival\_Time, Source\_City, Destination\_City, fare, Driver\_Name,0);

}

else if (secondary\_choice\_E == '2') //copy 2

{

ll\_obj.Dispaly\_Buses\_Record();

}

else if (secondary\_choice\_E == '3')

{

ll\_obj.Update\_Bus\_Record(obj.Access\_Bus\_Record());

}

else if (secondary\_choice\_E == '4')

{

ll\_obj.Delete\_Bus\_Record(obj.Access\_Bus\_Record());

}

else if (secondary\_choice\_E == '5') //copy 2

{

obj.Terminate\_Program();

goto Exit;

}

else

{

cout<<endl<<">> Error: Invalid Selection"<<endl;

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec E operations Ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*/

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec P operations Starts here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

/\*

else if (secondary\_choice\_P == '1') //take 2

{

ll\_obj.Reservation(obj.Menu\_Select\_City());

}

else if (secondary\_choice\_P == '2') //take 2

{

ll\_obj.Show\_Specific\_Bus(obj.Menu\_Select\_City());

}

else if (secondary\_choice\_P == '3') //copy 2

{

ll\_obj.Dispaly\_Buses\_Record();

}

else if (secondary\_choice\_P == '4') //copy 2

{

obj.Terminate\_Program();

goto Exit;

}

else

{

cout<<endl<<">> Error: Invalid Selection"<<endl;

}

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Sec P operations Ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*/

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Operation on User menu ends here \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Exit:

system ("pause");

return 0;

}