#include <iostream>

#include<string>

#include<windows.h>

using namespace std;

class Node

{

public:

string name,address,bus\_no,reservation,contact,fare,vehicle\_model,color,Driver,to,from,seat;

Node\* next;

};

class bus

{

public:

Node\* head;

Node\* rear;

Node\* top;

Node\* front;

public:

bus()

{

head= NULL;

rear=NULL;

top=NULL;

front=NULL;

}

void main\_menu();

void add\_bus();

void Deletee();

void modifyy();

void searchh();

void route();

void update\_route();

void bus\_fare();

void Reservation();

void cancel\_Resrvation();

void Display\_Stack();

void display();

};

void bus::main\_menu()

{

system("cls");

cout<<"\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

cout<<"\t\t\t\t\t\* MAIN MENU \*\n";

cout<<"\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

cout<<endl;

cout<<endl;

cout << "\t\t<1>. Add Bus" << endl;

cout << "\t\t<2>. Delete Record " << endl;

cout << "\t\t<3>. Modify Record " << endl;

cout << "\t\t<4>. Search Record " << endl;

cout << "\t\t<5>. Define Bus Route " << endl;

cout << "\t\t<6>. Update Routes " << endl;

cout << "\t\t<7>. Define Bus Fare " << endl;

cout << "\t\t<8>. Seat Reservation STACK " << endl;

cout << "\t\t<9>. Cancel Reservation STACK " << endl;

cout << "\t\t<10>. Display " << endl;

cout << "\t\t<11>. Display in Stack" << endl;

cout << "\t\t<12>. Exit " << endl;

int choice1;

cin>>choice1;

switch(choice1)

{

case 1:

{

add\_bus();

main\_menu();

break;

}

case 2:

{

Deletee();

main\_menu();

break;

}

case 3:

{

modifyy();

main\_menu();

break;

}

case 4:

{

searchh();

main\_menu();

break;

}

case 5:

{

route();

main\_menu();

break;

}

case 6:

{

update\_route();

main\_menu();

break;

}

case 7:

{

bus\_fare();

main\_menu();

break;

}

case 8:

{

Reservation();

main\_menu();

break;

}

case 9:

{

cancel\_Resrvation();

main\_menu();

break;

}

case 10:

{

display();

break;

}

case 11:

{

Display\_Stack();

main\_menu();

break;

}

case 12:

{

system("pause");

break;

}

default:

{

cout<<">> Wrong Choice!!!! \n>> Enter Valid Choice"<<endl;

system("pause");

main\_menu();

break;

}

}

} // end of main menu

void bus::add\_bus()

{

system("cls");

Node\*temp = new Node;

cout<<"Enter Bus NUmber"<<endl;

cin>>temp->bus\_no;

cout<<"Enter Model Number"<<endl;

cin>>temp->vehicle\_model;

cout<<"Enter Driver name"<<endl;

cin>>temp->Driver;

cout<<"Enter bus color"<<endl;

cin>>temp->color;

temp->next=NULL;

if(head==NULL)

{

head=temp;

cout<<"Information inserted sucessfully"<<endl;

}

else //if head is not NUll we will make pointer of head

{

Node\* ptr= head;

while(ptr->next!=NULL)

{

ptr=ptr->next; // this statment check all nodes till NULL

}

ptr->next=temp; // new node inserted when find NULL

cout<<"Information inserted sucessfully"<<endl;

}

system("pause");

main\_menu();

}// End of ADD BUS

//

//

void bus::Deletee()

{

system("cls");

string no;

Node \*temp=new Node();

if(head==NULL)

{

cout<<"No record found || Linklist is empty"<<endl;

system("pause");

main\_menu();

}

else

{

cout<<"Enter Bus number to Delete Record "<<endl;

cin>>no;

if(head->bus\_no==no)

{

temp=head;

head=head->next;

delete(temp);

cout<<"Delete Record Successfully......."<<endl;

system("pause");

main\_menu();

}

else

{

temp=head;

while(temp!=NULL)

{

if(temp->next->bus\_no==no)

{

Node \*new\_node=new Node();

new\_node=temp->next;

temp->next=temp->next->next;

delete(new\_node);

system("pause");

main\_menu();

}

temp=temp->next;

}

cout<<"Delete Record Successfully......."<<endl;

system("pause");

main\_menu();

}

}

}

//End of DELETE bus

//

void bus::modifyy()

{

system("cls");

string no;

if(head==NULL)

{

cout<<"No record found || Linklist is empty"<<endl;

system("pause");

main\_menu();

}

else

{

cout<<"Enter Bus number to Modify Record "<<endl;

cin>>no;

Node\* ptr=head;

while(ptr!=NULL)

{

if(ptr->bus\_no==no)

{

cout<<"Enter Model Number"<<endl;

cin>>ptr->vehicle\_model;

cout<<"Enter Driver name"<<endl;

cin>>ptr->Driver;

cout<<"Enter bus color"<<endl;

cin>>ptr->color;

cout<<"\n\n\t\t RECORD MODIFY Sucessfully \t\t\n\n";

system("pause");

main\_menu();

}

ptr=ptr->next;

if(ptr->bus\_no!=no)

{

cout<<"No record found enter correct Bus Number "<<endl;

system("pause");

main\_menu();

}

}

}

}//END OF MODIFY RECORD

//

//

void bus::searchh()

{

system("cls");

string no;

if(head==NULL)

{

cout<<"No record exist"<<endl;

system("pause");

main\_menu();

}

else

{

cout<<"Enter Bus Number to search record "<<endl;

cin>>no;

Node\* ptr=head;

while(ptr!=NULL)

{

if(ptr->bus\_no==no)

{

cout<<"Bus NUMBER "<<ptr->bus\_no<<endl;

cout<<"Driver Name "<<ptr->Driver<<endl;

cout<<"Bus Model NUMBER "<<ptr->vehicle\_model<<endl;

cout<<"Bus COLOR "<<ptr->color<<endl;

system("pause");

main\_menu();

}

ptr=ptr->next;

if(ptr->bus\_no!=no)

{

cout<<"No record found enter correct Bus Number "<<endl;

system("pause");

main\_menu();

}

}

}

}// END OF SEARCH

//

//

void bus::route()

{

system("cls");

string no;

if(head==NULL)

{

cout<<"No record exist"<<endl;

system("pause");

main\_menu();

}

else

{

cout<<"Enter Bus Number to Define Route "<<endl;

cin>>no;

Node\* ptr=head;

while(ptr!=NULL)

{

if(ptr->bus\_no==no)

{

cout<<"FROM! Enter place where do you want to GO "<<endl;

cin>>ptr->from;

cout<<"TO! Enter you Destination "<<endl;

cin>>ptr->to;

cout<<"\n\n\t\t ROUTE INSERTED Sucessfully \t\t\n\n";

system("pause");

main\_menu();

}

ptr=ptr->next;

if(ptr->bus\_no!=no)

{

cout<<"No record found enter correct Bus Number "<<endl;

system("pause");

main\_menu();

}

}

}

}// END OF ROUTE

void bus::update\_route()

{

system("cls");

string no;

if(head==NULL)

{

cout<<"No record found || Linklist is empty"<<endl;

system("pause");

main\_menu();

}

else

{

cout<<"Enter Bus number to Update ROUTE "<<endl;

cin>>no;

Node\* ptr=head;

while(ptr!=NULL)

{

if(ptr->bus\_no==no)

{

cout<<"FROM! Enter place where do you want to GO "<<endl;

cin>>ptr->from;

cout<<"TO! Enter you Destination "<<endl;

cin>>ptr->to;

cout<<"\n\n\t\t RECORD Update Sucessfully \t\t\n\n";

system("pause");

main\_menu();

}

ptr=ptr->next;

if(ptr->bus\_no!=no)

{

cout<<"No record found enter correct Bus Number "<<endl;

system("pause");

main\_menu();

}

}

}

}// END OF UPDATE ROUTES

void bus::bus\_fare()

{

system("cls");

Node\* temp=new Node;

temp=head;

cout<<"\n We are offering bus survices in follwing cities \n"<<endl;

cout<<"Want to check fare press 1/2/3/4/5/6"<<endl;

cout << "<1>. islamabad to lahore " << endl;

cout << "<2>. Islamabad to karachi " << endl;

cout << "<3>. isalmabad to Hunza " << endl;

cout << "<4>. lahore to karachi " << endl;

cout << "<5>. lahore to Hunza " << endl;

cout << "<6>. karachi to HUnza " << endl;

int choice;

cin>>choice;

if(choice==1)

{

cout << "\t\t islamabad to lahore \t\t" << endl;

cout<<"RS: 3000"<<endl;

system("pause");

main\_menu();

}

else if(choice==2)

{

cout << "\t\t Islamabad to karachi \t\t" << endl;

cout<<"RS: 7000"<<endl;

system("pause");

main\_menu();

}

else if(choice==3)

{

cout << "\t\t isalmabad to Hunza \t\t" << endl;

cout<<"RS: 6000 "<<endl;

system("pause");

main\_menu();

}

else if(choice==4)

{

cout << "\t\t lahore to karachi \t\t" << endl;

cout<<"RS: 5000 "<<endl;

system("pause");

main\_menu();

}

else if(choice==5)

{

cout << "\t\t lahore to Hunza \t\t" << endl;

cout<<"RS: 8000 "<<endl;

system("pause");

main\_menu();

}

else if(choice==6)

{

cout << "\t\t karachi to HUnza \t\t" << endl;

cout<<"RS: 10000 "<<endl;

system("pause");

main\_menu();

}

else

{

cout<<"please make correct choice between 1 to 6 "<<endl;

system("pause");

main\_menu();

}

system("pause");

main\_menu();

}//End of bus fare

//

//

void bus::Reservation()

{

system("cls");

Node\* temp=new Node;

cout<<"Enter your name"<<endl;

cin>>temp->name;

cout<<"Enter your contact "<<endl;

cin>>temp->contact;

cout<<"Enter your address "<<endl;

cin>>temp->address;

temp->next=top;

top=temp;

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

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

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

}//END of reservation

void bus::cancel\_Resrvation()

{

system("cls");

Node\* ptr=top;

if(top==NULL)

{

cout<<"Stack is empty"<<endl;

system("pause");

main\_menu();

}

else

{

top=top->next;

delete(ptr);

cout<<"\t\t Delete Sucessfully"<<endl;

system("pause");

main\_menu();

}

}//END of cancel reservation

//

//

void bus::display()

{

system("cls");

string no;

if(head==NULL)

{

cout<<"No record found || Linklist is empty"<<endl;

system("pause");

main\_menu();

}

else

{

cout<<"Enter Bus number to Display Details "<<endl;

cin>>no;

Node \*ptr = head;

while(ptr != NULL)

{

if(ptr->bus\_no==no)

{

system("cls");

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

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

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

cout<<endl;

cout<<"Bus NUMBER "<<ptr->bus\_no<<endl;

cout<<"Driver Name "<<ptr->Driver<<endl;

cout<<"Bus Model NUMBER "<<ptr->vehicle\_model<<endl;

cout<<"Bus COLOR "<<ptr->color<<endl;

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

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

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

cout<<endl;

cout<<"FROM "<<ptr->from<<endl;

cout<<"TO "<<ptr->to<<endl;

cout<<endl;

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

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

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

cout<<endl;

cout << " islamabad to lahore ->-> RS 3000 " << endl;

cout << " Islamabad to karachi ->-> RS 7000 " << endl;

cout << " isalmabad to Hunza ->-> RS 6000 " << endl;

cout << " lahore to karachi ->-> RS 5000 " << endl;

cout << " lahore to Hunza ->-> RS 8000 " << endl;

cout << " karachi to HUnza ->-> RS 10000" << endl;

cout<<endl;

system("pause");

main\_menu();

}

ptr=ptr->next;

if(ptr->bus\_no!=no)

{

cout<<"No record found enter correct Bus Number "<<endl;

system("pause");

main\_menu();

}

}

}

}

void bus::Display\_Stack()

{

system("cls");

Node\* ptr=top;

if(top==NULL)

{

cout<<"Stack is empty"<<endl;

}

else

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

cout<<"\t\t\t\* Display in STACK \*"<<endl;

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

cout<<endl;

cout<<"Name "<<ptr->name<<endl;

cout<<"Contact "<<ptr->contact<<endl;

cout<<"Address "<<ptr->address<<endl;

system("pause");

main\_menu();

}

}

int main()

{

bus b;

cout<<endl;

cout<<"\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

cout<<"\t\t\t\t\t\* Wel Come \*\n";

cout<<"\t\t\t\t\t\* To \*\n";

cout<<"\t\t\t\t\t\* FLASH BUS SERVICE \*\n";

cout<<"\t\t\t\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

cout<<endl;

cout<<endl;

cout<<endl;

cout<<"\t\t\t\t\tLoading ";

Sleep(100);

cout<<"<";

Sleep(100);

cout<<">";

Sleep(100);

cout<<"<";

Sleep(100);

cout<<">";

Sleep(100);

cout<<"<";

Sleep(100);

cout<<">";

Sleep(100);

cout<<"<";

Sleep(100);

cout<<">";

Sleep(100);

cout<<"<";

Sleep(100);

cout<<">";

Sleep(100);

cout<<"<";

Sleep(100);

cout<<">";

Sleep(100);

cout<<"<";

Sleep(100);

cout<<">";

Sleep(100);

cout<<"\n\n\t SUCCESSFULL\n";

Sleep(600);

system("CLS");

aa:

system("cls");

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

cout<<"\t\t\t\* SIGN UP/ CREATE ACCOUNT \*"<<endl;

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

cout<<endl;

string name,password,name1,password1;

cout<<"Enter username"<<endl;

cin>>name;

cout<<"Enter Password"<<endl;

cin>>password;

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<endl;

cout<<"Account create sucessfully"<<endl;

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<"\*";

Sleep(100);

cout<<endl;

system("cls");

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

cout<<endl;

cout<<endl;

cout<<"Enter username"<<endl;

cin>>name1;

cout<<"Enter Password"<<endl;

cin>>password1;

if(name==name1 && password== password1)

{

b.main\_menu();

}

else

{

cout<<"Wrong USERNAME or password !!!!! Please Enter Correct Login ID"<<endl;

system("pause");

goto aa;

}

}