**CODE:**

#include<iostream>

#include<cstdio>

#include<fstream>

#include<sstream>

#include<string>

#include<cstdlib>

#include<conio.h>

#include<windows.h>

#include<mysql.h>

using namespace std;

int qstate;

MYSQL\* conn;

MYSQL\_ROW row;

MYSQL\_RES\* res;

class db\_response

{

public:

static void ConnectionFunction()

{

conn = mysql\_init(0);

if (conn)

{

cout << "Database Connected" << endl;

cout << "Press any key to continue..." << endl;

// getch();

system("cls");

}

else

cout << "Failed To Connect!" << mysql\_errno(conn) << endl;

conn = mysql\_real\_connect(conn, "localhost", "root", "123456", "railway", 0, NULL, 0);

if (conn)

{

cout << "Database Connected To MySql" << conn << endl;

cout << "Press any key to continue..." << endl;

// getch();

system("cls");

}

else

cout << "Failed To Connect!" << mysql\_errno(conn) << endl;

}

};

void Welcome()

{

cout << "Welcome To Railway Reservation System" << endl << endl;

}

void admin();

void user();

void new\_user();

void disp\_user();

void block\_user();

void disp\_pas();

void reserve();

void cancel();

void enquire();

int main()

{

//clrscr();

system("cls");

db\_response::ConnectionFunction();

int choice;

//string u,p;

do

{

Welcome();

cout<<"^^^^^^^^^^^^^^^^^^^^^^MAIN MENU^^^^^^^^^^^^^^^^^^^^\n";

cout<<"1.Admin mode\n2.User mode\n3.New User\n4.Exit\n";

cout<<"Enter your choice:";

cin>>choice;

cout<<endl;

switch(choice)

{

case 1:admin();

break;

case 2:user();

break;

case 3:new\_user();

break;

case 4:break;

}

}while(choice!=4);

return 0;

}

void admin()

{

string u,p;

cout<<"Enter User-Id:"<<endl;

cin>>u;

cout<<"Enter Password:"<<endl;

cin>>p;

system("cls");

qstate = mysql\_query(conn, "SELECT \* FROM login where ROLE='admin'");

if(!qstate)

{

res = mysql\_store\_result(conn);

while ((row = mysql\_fetch\_row(res)))

{

if(row[1]==u && row[2]==p)

{

cout<<"Login Successfull"<<endl;

int choice;

do

{

cout<<"...........ADMINISTRATOR MENU...........\n";

cout<<"1. Display User Details\n2. Block User\n3. Display Passenger Details\n4. Return to Main Menu"<<endl;

cout<<"Enter your choice:";

cin>>choice;

cout<<endl;

switch(choice)

{

case 1:disp\_user();

break;

case 2:block\_user();

break;

case 3:disp\_pas();

break;

case 4:break;

}

}while(choice!=4);

}

else

{

cout<<"Password Incorrect"<<endl;

}

}

}

}

void user()

{

string u,p;

int c=0;

cout<<"Enter User-Id:"<<endl;

cin>>u;

cout<<"Enter Password:"<<endl;

cin>>p;

system("cls");

qstate = mysql\_query(conn, "SELECT \* FROM login where ROLE='user'");

if(!qstate)

{

res = mysql\_store\_result(conn);

while ((row = mysql\_fetch\_row(res)))

{

if(row[1]==u && row[2]==p)

{

c++;

}

}

}

if(c==1)

{

cout<<"Login Successful"<<endl;

int choice;

do

{

cout<<"...........USER MENU...........\n";

cout<<"1. Book Ticket\n2. Cancel Ticket\n3. Enquire\n4. Return to Main Menu"<<endl;

cout<<"Enter your choice:";

cin>>choice;

switch(choice)

{

case 1:reserve();

break;

case 2:cancel();

break;

case 3:enquire();

break;

case 4:break;

}

}while(choice!=4);

}

else

{

cout<<"Incorrect Password"<<endl;

}

}

void new\_user()

{

string name,pswrd,role;

cout<<"Create a User Name:"<<endl;

cin>>name;

cout<<"Create a Password:"<<endl;

cin>>pswrd;

role="user";

system("cls");

string create\_user ="INSERT INTO login(USER\_NAME,PASSWORD,ROLE) VALUES ('"+name+"','"+pswrd+"','"+role+"')";

const char\* q = create\_user.c\_str();

qstate = mysql\_query(conn, q);

if (!qstate)

{

cout<<"Account Successfully Created"<< endl;

}

else

{

cout<<"User Name Already Exists"<<endl;

}

}

void disp\_user()

{

system("cls");

qstate = mysql\_query(conn, "SELECT \* FROM login");

if (!qstate)

{

res = mysql\_store\_result(conn);

printf("| %-15s | %-15s | %-15s | %-15s |\n", "User ID", "User Name", "Password", "Role");

while ((row = mysql\_fetch\_row(res)))

{

printf("| %-15s | %-15s | %-15s | %-15s |\n", row[0], row[1], row[2], row[3]);

}

}

}

void block\_user()

{

string id;

cout<<"Enter User Id whose Account needs to be Blocked:";

cin>>id;

cout<<endl;

system("cls");

string delete\_record ="DELETE FROM login WHERE USER\_ID = '"+id+"'";

const char\* q = delete\_record.c\_str();

qstate = mysql\_query(conn, q);

if (!qstate)

{

cout<<"Account Successfully Blocked"<<endl;

}

else

{

cout<<"Error Occured" << mysql\_errno(conn)<<endl;

}

}

void disp\_pas()

{

system("cls");

qstate = mysql\_query(conn, "SELECT p.P\_ID,p.P\_NAME,p.AGE,p.TRAIN\_ID,t.T\_NAME,p.CLASS,p.COST FROM passenger p INNER JOIN train t ON p.TRAIN\_ID=t.PNR");

if (!qstate)

{

res = mysql\_store\_result(conn);

printf("| %-5s | %-10s | %-5s | %-8s | %-10s | %-5s | %-5s |\n", "Pass ID", "Pass Name", "Age", "Train ID", "Train Name", "Class", "Cost");

while ((row = mysql\_fetch\_row(res)))

{

printf("| %-5s | %-10s | %-5s | %-8s | %-10s | %-5s | %-5s |\n", row[0], row[1], row[2], row[3], row[4], row[5], row[6],row[7]);

}

}

}

void reserve()

{

string name,cl;

int age,pnr,costf,costs,cf,cs;

cout<<endl;

cout<<"Enter name:";

cin>>name;

cout<<"Enter age:";

cin>>age;

cout<<"Enter PNR number:";

cin>>pnr;

cout<<"Enter class - First or Second:";

cin>>cl;

system("cls");

qstate = mysql\_query(conn, "SELECT FC\_T,FC\_C,SC\_T,SC\_C FROM train WHERE PNR='pnr'");

if(!qstate)

{

res = mysql\_store\_result(conn);

while ((row = mysql\_fetch\_row(res)))

{

cf=int(row[0]);

costf=int(row[1]);

cs=int(row[2]);

costs=int(row[3]);

}

}

if(cl=="First")

{

//cout<<cf<<endl;

//cout<<costf<<endl;

if(cf!=0)

{

system("cls");

string add\_book ="INSERT INTO passenger(P\_NAME,AGE,TRAIN\_ID,CLASS,COST) VALUES ('"+name+"','+age+','+pnr+','"+cl+"','+costf+')";

const char\* q1 = add\_book.c\_str();

qstate = mysql\_query(conn, q1);

cout<<"Payment to be made:"<<costf<<endl;

cf--;

string update\_avail="UPDATE train SET FC\_T=cf WHERE PNR='pnr'";

const char\* q2 = update\_avail.c\_str();

qstate = mysql\_query(conn, q2);

}

else

{

cout<<"No Tickets Available in this class"<<endl;

}

}

if(cl=="Second")

{

if(cs!=0)

{

system("cls");

string add\_booking="INSERT INTO passenger(P\_NAME,AGE,TRAIN\_ID,CLASS,COST) VALUES ('"+name+"','+age+','+pnr+','"+cl+"','+costs+')";

const char\* q3 = add\_booking.c\_str();

qstate = mysql\_query(conn, q3);

cout<<"Payment to be made:"<<costs<<endl;

cs--;

string update\_avail="UPDATE train SET SC\_T=cs WHERE PNR='pnr'";

const char\* q4 = update\_avail.c\_str();

qstate = mysql\_query(conn, q4);

}

else

{

cout<<"No Tickets Available in this class"<<endl;

}

}

}

void cancel()

{

string cl;

int id,tid;

cout<<endl;

cout<<"Enter Passenger ID:";

cin>>id;

system("cls");

qstate = mysql\_query(conn, "SELECT CLASS,TRAIN\_ID FROM passenger WHERE PNR='pnr'");

if(!qstate)

{

res = mysql\_store\_result(conn);

while ((row = mysql\_fetch\_row(res)))

{

cl=row[0];

tid=int(row[1]);

}

}

system("cls");

string remove\_booking="DELETE FROM passenger WHERE P\_ID='id'";

const char\* q = remove\_booking.c\_str();

qstate = mysql\_query(conn, q);

if(cl=="First")

{

system("cls");

string update\_avail="UPDATE train SET FC\_T=(FC\_T+1) WHERE PNR='tid'";

const char\* q1 = update\_avail.c\_str();

qstate = mysql\_query(conn, q1);

}

if(cl=="Second")

{

system("cls");

string update\_avail="UPDATE train SET SC\_T=(SC\_T+1) WHERE PNR='tid'";

const char\* q2 = update\_avail.c\_str();

qstate = mysql\_query(conn, q2);

}

cout<<"Ticket Successfully Cancelled"<<endl;

}

void enquire()

{

int pnr;

cout<<endl;

cout<<"Enter PNR Number:";

cin>>pnr;

system("cls");

qstate = mysql\_query(conn, "SELECT \* FROM train WHERE PNR=pnr");

if (!qstate)

{

res = mysql\_store\_result(conn);

printf("| %-3s | %-8s | %-5s | %-5s | %-3s | %-3s | %-3s | %-3s |\n", "PNR", "Train Name", "Source", "Dest", "Ist Avail", "Ist Cost", "IInd Avail", "IInd Cost");

while ((row = mysql\_fetch\_row(res)))

{

printf("| %-3s | %-8s | %-5s | %-5s | %-3s | %-3s | %-3s | %-3s |\n", row[0], row[1], row[2], row[3], row[4], row[5], row[6],row[7],row[8]);

}

}

}