# DATABASE MANAGEMENT SYSTEM

# AIRLINE TICKET SIMULATION

**Project Review – 3**

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# ABSTRACT:

This Abstract report on a study about examining airlines' reservation services.

An apparatus, method, and program for determining a price of an option to purchase an airline ticket, and for facilitating the sale & exercise of those options.

Pricing of the options may be based on departure location criteria, destination location criteria, and travel criteria. The attributes selected for examination included....
(1) requirements of reservation services.
(2) provision of extra benefits.

(3) factors affecting reservation time.
(4) provision of additional services/facilities.

Empirical results indicated that some airlines did not provide all components in the chosen attributes and that airlines in these regions differed significantly in certain dimensions of the chosen attributes.

Disadvantages in existing system:->

- Time consuming
- Possibly of loosing data
- Lack of security
- Difficulties in maintaining records
- Human error will be frequent
- searching the records manually leads time consuming

# Introduction:

Airlines Reservation System is a system of airplane seat reservation. A user can reserve seat. Show user information, show user ticket, flight schedule and lot more.

Airlines Reservation System in C++ with MySQL Program Description:

The program can reserve seat of a user, show any user ticket, show flight schedule, display all passengers and user can add new flight and its details as well as edit and delete the record and there is an option for flight leave and arrive.

- Add Flight
- Edit Flight
- Delete Flight
- Flight Leave And Arrive

## *Airlines Reservation System in C++ with MySQL Program Detail:*

### Global variables

- qstate represent the state of the query. If 0 is successful 1 is failed.
- conn is the mysql connection variable.
- row is for getting the current row of the database.
- res is for getting all the values form the database.

### Class db_response

- This class contains connection of the database.
- mysql_init is the initializer of mysql_real_connect
- mysql_real_connect connects to the database. (MySql server should open while connecting)
- the if statement shows the successful or failed connection.

## Function main

- Here firstly the clear screen command then the title command and the color command.
- db_response::ConnectionFunction() is create the connection to the database.
- The program features
  - Reserve Seat.
  - User Ticket.
  - Flights Schedule.
  - Display Passenger.
  - Flight Details.
    - Add Flight.
    - Edit Flight.
    - Delete Flight.
    - Flight Leave And Arrive.
    - Back To Menu.
- The switch case is used for switching between this functions
- ReserveSeat();
- UserTicket();
- FlightSchedule();
- DisplayPassenger();
- FlightDetails();
- AddNewFlight();
- EditFlight();
- DeleteFlight();
- FlightLeaveArrive();

## Function ReserveSeat

- User can reserve seat for passenger.
- Some user details need to fill up then the data of the user stored in the database with “Insert” query.

- Finally success message ensures the data added in the database or the failed message show the error code.
- Now the Exit Code runs and ask the user for go to menu or Reserve seat again.

## Function UserTicket

- On start the function ask for a user name
- Only few words can find desired result of the user
- The “Select” query with “where” statement can find the result
- Finally if the result find by the program successfully it show the information of the user
- Now the Exit Core runs and ask the user want to go to menu search again.

## Function FlightSchedule

- Initially the “Select” SQL query get all the data from database.
- In flight schedule the flight no., arrival, leave and destination of the flight are shown in the console
- Lastly the Exit Code runs and ask the user for go to main menu.

## Function DisplayPassenger

- Display all the passengers
- In the console all the passenger details are displayed
- Finally the Exit Code runs and ask the user to go to main menu or exit from program.

## Function FlightDetails

- In the flight detail there is a switch case to go to different options
- Add Flight, Edit Flight, Delete Flight, Flight Leave And Arrive and Back to Menu
- This options are for manipulate the flight detail in C++ program

## Function AddNewFlight

- Here firstly the program get all the flight information from user
- Then the information insert into the database with “Insert” query
- If the operation successfully done then the program shows the Success message or found any error then the program show error message with error code
- Finally the Exit Code runs and ask the user to go to main menu, insert again or exit from C++ program

## Function EditFlight

- Firstly the program shows all the flights in the database
- Then ask for a flight id from the user
- After verification of the given id the program see the id is in the database or not if not then shows not found message
- If the ID found by the program then it shows the row of the corresponding id and ask for change the values that the user want if the user don’t want to change any value then they can simply type ”X”.
- Now the “Update” query runs and if no exception found the console shows the success message
- Now the Exit Code runs and ask for the user to choose go to menu, edit another item or exit from the C++ program.

## Function DeleteFlight

- Firstly the program shows all the flights are stored in the database
- Then ask for an Column ID
- If the ID verification successfully done then it will check the id is in the database or not
- Or if the id verification is not successful then it runs the Exit Code
- If the id found successfully then the “Delete” query delete the data from the database

- Finally the Exit Code runs.

## Function FlightLeaveArrive

- Firstly some important flight information are displayed in the console
- Then ask for an Column ID
- If the ID verification successfully done then it will check the id is in the database or not
- Or if the id verification is not successful then it runs the Exit Code
- Now if the id found then the program show the details of the flight and some inputs “Leave, Arrive, Available” are ask for edit by the user.
- Finally the Exit Code runs.

MODULES:

1.PASSENGER:

full name

date of birth

email address

Phone number

Passport

Nationality

2.PAYMENT:

Bank account type

Bank account no.

User of bank account

Amount payed

3.FLIGHT:

Arrival

Departure

Type of flight

Seat no.

4.TICKET:

Arrival

Departure

Time of arrival

Time of departure

Terminal no.

Seat no.

5.SPECIAL REQUIREMENTS:

Disability assistance

Old age assistance

Language assistance

Special food

Medical assistance

6.MODIFICATION:

Insert new seat

Changing seat no.

Changing of terminal

Changing of flight

## CONCLUSIONS:

- Maintaining safe records
- Should be easier to find for a record in the database
- The loss of data in any corruption of any files in the system will be avoided due to any

- natural case
- Minimizing errors of the information recorded in the system while entering to the
- system
- The new system should be user friendly
- Data entry should be fast
- There should be a method of keeping the information from unauthorized users.

## SOURCE 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;


// Global Variable
int qstate;
MYSQL* conn;
MYSQL_ROW row;
```

```
MYSQL_RES* res;
// Global Variable End


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", "",
"cpp_airlinereservation_db", 0, NULL, 0);
        if (conn==0)
        {
            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;
    }
};


// Functions
void ReserveSeat();
void UserTicket();
void FlightSchedule();
void DisplayPassenger();


void FlightDetails();
void AddNewFlight();
void EditFlight();
void DeleteFlight();
void FlightLeaveArrive();


// Functions End
```

```
int main()
{
    // Initial Load
    system("cls");
    system("title Airlines Reservation System Program");
    system("color 0f");
    // Initial Load End

    // Call Methods
    db_response::ConnectionFunction();
    // Call Methods End

    // Variables
    int chooseOneFromMenu = 0;
    char exitSurity;
    // Variables End

    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "Airlines Reservation System Menu" << endl;
    cout << "1. Reserve Seat." << endl;
    cout << "2. User Ticket." << endl;
    cout << "3. Flights Schedule." << endl;
    cout << "4. Display Passenger." << endl;
    cout << "5. Flight Details." << endl;
    cout << "6. Exit Program." << endl;
    cout << "Choose One: ";
    cin >> chooseOneFromMenu;


    switch (chooseOneFromMenu)
    {
    case 1:
        ReserveSeat();
        break;
    case 2:
        UserTicket();
        break;
    case 3:
        FlightSchedule();
        break;
    case 4:
        DisplayPassenger();
        break;
    case 5:
        FlightDetails();
        break;
    case 6:
        ExitProgram:
        cout << "Program terminating. Are you sure? (y/N): ";
        cin >> exitSurity;
        if (exitSurity == 'y' || exitSurity == 'Y') {
            return 0;
        }else if (exitSurity == 'n' || exitSurity == 'N') {
            system("cls");
            main();
        }else {
            cout << "Next time choose after read the corresponding line." <<
endl;
            goto ExitProgram;
        }
        break;
    default:
        cout << "Please choose between The Given Numbers. Press Enter
To Continue...";
        getch();
        system("cls");
        main();
        break;
    }
    return 0;
}
// Airlines Reservation System - CodeWithC.com
// Functions
void ReserveSeat()
{
    // Initial Load
    system("cls");
    // Initial Load End


    // Variables
    string userFlightNo = "";
    string userName = "";
    string userPhone = "";
    string userPassportNo = "";
    string userTicket = "";
    string userEmailAddress = "";
    string specialrequirement = "";
    char choose;
    // Variables End


     // Store Variables
    string store2dArray[500][500];
```

```
int storeIndex1 = 0, storeIndex2 = 0;
char ch='n';
// Store Variables End




cout << "Welcome To Airlines Reservation System" << endl << endl;
cout << "Reserve Seat Menu" << endl << endl;


cin.ignore(1, '\n');
cout << "Enter User Full Name: ";
getline(cin, userName);
cout << "Enter User Phone No: ";
getline(cin, userPhone);
cout << "Enter User Passport: ";
getline(cin, userPassportNo);
cout << "Enter User Ticket: ";
getline(cin, userTicket);
cout << "Enter User Address: ";
getline(cin, userEmailAddress);
cout<<"Do u want to enter any Special Requirements(y/n)"<<endl;
cin>>ch;
if(ch=='y')
```

```
    {
        cout << "Enter Special Requirements: ";
        getline(cin, specialrequirement);
    }
    else
    {
        specialrequirement="None";
    }


    qstate = mysql_query(conn, "select * from flightdetails_tb where
f_available = 'A'");
    if (!qstate)
    {
        res = mysql_store_result(conn);
        printf("------------------------------------------------------------------------
--------------------------------------------\n");
        printf("| %-20s | %-20s | %-20s | %-20s | %-20s |\n", "Flight No",
"From", "Destination", "Time", "Amount");
        while ((row = mysql_fetch_row(res)))
        {
            printf("| %-20s | %-20s | %-20s | %-20s | %-20s |\n", row[1],
row[3], row[4], row[5], row[6]);
        }
        printf("------------------------------------------------------------------------
--------------------------------------------\n");
```

```
}
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) <<
endl;
    }
    cout << "Enter Flight No: ";
    getline(cin, userFlightNo);


    string insert_query = "insert into userreservation_tb (u_name,
u_phone, u_passportno, u_ticket, u_flightno,
u_emailaddress,u_specialrequirement) values
('"+userName+"','"+userPhone+"','"+userPassportNo+"','"+userTicket+"'
,'"+userFlightNo+"','"+userEmailAddress+"','"+specialrequirement+"')";


    const char* q = insert_query.c_str(); // c_str converts string to
constant char and this is required


    qstate = mysql_query(conn, q);


    if (!qstate)
    {
        cout << endl << "Successfully added in database." << endl;
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) << endl;
    }


    // Exit Code
    cout << "Press 'm' to Menu and 'a' to Reserve Again Or Any Other key to exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        main();
    }
    else if (choose == 'a' || choose == 'A')
    {
        ReserveSeat();
    }
    else
    {
        exit(0);
    }
}
```

```
void UserTicket()
{
    // Initial Load
    system("cls");
    // Initial Load End


    // Variables
    string input = "";
    char choose;
    // Variables End


    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "User Ticket Menu" << endl << endl;


    cin.ignore(1, '\n');
    cout << "Enter User Name: ";
    getline(cin, input);
    string findbyname_query = "select * from userreservation_tb where u_name like '%"+input+"%'";
    const char* qn = findbyname_query.c_str();
    qstate = mysql_query(conn, qn);
    cout << endl;
    cout << "Showing Ticket of " << input << endl << endl;
    if (!qstate)
    {
        res = mysql_store_result(conn);
        while ((row = mysql_fetch_row(res)))
        {
            cout << "Ticket No.: " << row[4] << "\nUser Name: " << row[1] << "\nUser Phone No.: " << row[2] << "\nUser Passport: " << row[3] << "\nFlight No.: " << row[5] << "\nUser Address: " << row[6] << endl << endl;
        }
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) << endl;
    }


    // Exit Code
    ExitMenu:
    cout << "Press 'm' to Menu, 'a' to Search again and any other key to Exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        main();
    }
    else if (choose == 'a' || choose == 'A')
    {
        UserTicket();
    }
    else
    {
        exit(0);
    }
}


void FlightSchedule()
{
    // Initial Load
    system("cls");
    // Initial Load End


    // Variables
    char choose;
    // Variables End


    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "Flight Schedule" << endl << endl;


    qstate = mysql_query(conn, "select * from flightdetails_tb");
    if (!qstate)
    {
        res = mysql_store_result(conn);
        printf("--------------------------------------------------------------------------------
-------------------\n");
        printf("| %-15s | %-15s | %-15s | %-15s | %-15s |\n", "Flight No." ,
"From", "Destination", "Leave", "Arrive");
        while ((row = mysql_fetch_row(res)))
        {
            printf("| %-15s | %-15s | %-15s | %-15s | %-15s |\n", row[1],
row[3], row[4], row[7], row[8]);
        }
        printf("--------------------------------------------------------------------------------
-------------------\n");
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) <<
endl;
    }


    // Exit Code
    ExitMenu:
    cout << "Press 'm' to Menu and any other key to Exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        main();
    }
    else
    {
        exit(0);
    }
}


void DisplayPassenger()
{
    // Initial Load
    system("cls");
    // Initial Load End
    // Variables
    char choose;
    // Variables End


    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "Display Passenger Menu" << endl << endl;


    qstate = mysql_query(conn, "select * from userreservation_tb");
    if (!qstate)
    {
        res = mysql_store_result(conn);
        printf("------------------------------------------------------------------------
------------------------------------------\n");
        printf("| %-20s | %-15s | %-15s | %-15s | %-15s | %-15s |\n", "User
Name", "Phone No.", "Passport No.", "Ticket No.", "Flight No.",
"Address");
        while ((row = mysql_fetch_row(res)))
        {
            printf("| %-20s | %-15s | %-15s | %-15s | %-15s | %-15s |\n",
row[1], row[2], row[3], row[4], row[5], row[6]);
        }
        printf("-------------------------------------------------------------------
------------------------------------\n");
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) <<
endl;
    }


    // Exit Code
    ExitMenu:
    cout << "Press 'm' to Menu and any other key to Exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        main();
    }
    else
    {
        exit(0);
    }
}
```

```
void FlightDetails()
{
    // Initial Load
    system("cls");
    system("title Airlines Reservation System Program");
    system("color 0f");
    // Initial Load End


    // Call Methods
    db_response::ConnectionFunction();
    // Call Methods End


    // Variables
    int chooseOneFromMenu = 0;
    // Variables End


    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "Airlines Reservation System Menu" << endl;
    cout << "1. Add Flight." << endl;
    cout << "2. Edit Flight." << endl;
    cout << "3. Delete Flight." << endl;
    cout << "4. Flight Leave And Arrive." << endl;
    cout << "5. Back To Menu." << endl;
    cout << "Choose One: ";
    cin >> chooseOneFromMenu;


    switch (chooseOneFromMenu)
    {
    case 1:
        AddNewFlight();
        break;
    case 2:
        EditFlight();
        break;
    case 3:
        DeleteFlight();
        break;
    case 4:
        FlightLeaveArrive();
        break;
    case 5:
        main();
        break;
    default:
        cout << "Please choose between The Given Numbers. Press Enter To Continue...";
        getch();
        system("cls");
        FlightDetails();
        break;
    }
}
// Airlines Reservation System - CodeWithC.com
void AddNewFlight()
{
    // Initial Load
    system("cls");
    // Initial Load End


    // Variables
    string flightNo = "";
    string flightName = "";
    string flightFrom = "";
    string flightDestination = "";
    string flightTime = "";
    string flightAmount = "";
    string Bank_Account_Type="";
    string Bank_Account_No="";
    string User_Of_Bank_Account="";
    string flightAvailability = "";
    char choose;
    // Variables End


    // Store Variables
    // Store Variables End


    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "Add New Flight Menu" << endl << endl;


    cin.ignore(1, '\n');
    cout << "Enter Flight No: ";
    getline(cin, flightNo);
    cout << "Enter Flight Name: ";
    getline(cin, flightName);
    cout << "Enter Flight From: ";
    getline(cin, flightFrom);
    cout << "Enter User Destination: ";
    getline(cin, flightDestination);
    cout << "Enter Flight Time: ";
    getline(cin, flightTime);
    cout << "Enter Bank Account Type: ";
```

```
    getline(cin, Bank_Account_Type);
    cout << "Enter Bank Account No: ";
    getline(cin, Bank_Account_No);
    cout << "Enter User_Of_Bank_Account: ";
    getline(cin, User_Of_Bank_Account);
    cout << "Enter Amount: ";
    getline(cin, flightAmount);
    cout << "Enter Flight Availability (A (Available) / N (Not
Available)): ";
    getline(cin, flightAvailability);


    string insert_query = "insert into flightdetails_tb (f_no, f_name,
f_from, f_destination, f_time, f_BankAccountType, f_BankAccountNo,
f_UserOfBankAccount, f_amount, f_available) values
('"+flightNo+"','"+flightName+"','"+flightFrom+"','"+flightDestination+"
','"+flightTime+"','"+Bank_Account_Type+"','"+Bank_Account_No+"','"
+User_Of_Bank_Account+"','"+flightAmount+"','"+flightAvailability+"'
)";


    const char* q = insert_query.c_str(); // c_str converts string to
constant char and this is required


    qstate = mysql_query(conn, q);
    if (!qstate)
    {
        cout << endl << "Successfully added in database." << endl;
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) <<
endl;
    }


    // Exit Code
    cout << "Press 'm' to Flight Details Menu and 'a' to Insert Again Or
Any Other key to exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        FlightDetails();
    }
    else if (choose == 'a' || choose == 'A')
    {
        AddNewFlight();
    }
    else
    {
        exit(0);
    }
}


void EditFlight()
{
    system("cls");


    // Variables
    string flightNo = "";
    string flightName = "";
    string flightFrom = "";
    string flightDestination = "";
    string flightTime = "";
    string flightAmount = "";
    string items[5000];
    char choose;
    int itemId;
    bool HaveException = false;
    bool NotInDatabase = false;
    int indexForId = 0;
```

```
// Store Variables
string storeColumnId = "";
string storeFlightNo = "";
string storeFlightName = "";
string storeFlightFrom = "";
string storeFlightDestination = "";
string storeFlightTime = "";
string storeFlightAmount = "";
string storeUserTripPlan2d[500][500];
int storeIndex1 = 0, storeIndex2 = 0;
// Variables End


cout << "Welcome To Airlines Reservation System" << endl << endl;
cout << "Edit Flight Record" << endl;




qstate = mysql_query(conn, "select * from flightdetails_tb");
if (!qstate)
{
    res = mysql_store_result(conn);
```

```
        printf("------------------------------------------------------------------------
--------------------------------\n");
        printf("| %-10s | %-15s | %-15s | %-15s | %-15s | %-15s |\n",
"Column ID", "Flight No.", "Flight Name", "From", "Destination",
"Time");
        while ((row = mysql_fetch_row(res)))
        {
            printf("| %-10s | %-15s | %-15s | %-15s | %-15s | %-15s |\n",
row[0], row[1], row[2], row[3], row[4], row[5]);
            items[indexForId] = row[0];
            indexForId++;
        }
        printf("------------------------------------------------------------------------
--------------------------------\n");
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) <<
endl;
    }


    try
    {
        cout << endl;
        cout << "Enter Item Column ID: ";
    cin >> itemId;
    cout << endl;
}
catch (exception e)
{
    cout << "Please Enter a valid NUMBER." << endl;
    HaveException = true;
    goto ExitMenu;
}


if (HaveException == false)
{
    stringstream streamid;
    string strid;
    streamid << itemId;
    streamid >> strid;


    for (int i = 0; i < indexForId; i++)
    {
        if (strid != items[i])
        {
            NotInDatabase = true;
        }else
```

```
            {
                NotInDatabase = false;
                break;
            }
        }


        if (NotInDatabase == false)
        {
            string findbyid_query = "select * from flightdetails_tb where f_id
= '"+strid+"'";
            const char* qi = findbyid_query.c_str();
            qstate = mysql_query(conn, qi);


            if (!qstate)
            {
                cout << endl;


                res = mysql_store_result(conn);
                while ((row = mysql_fetch_row(res)))
                {
                    cout << "Flight No.: " << row[1] << "\nFlight Name: " <<
row[2] << "\nFlight From: " << row[3] << "\nFlight Destination: " <<
row[4] << "\nFlight Time: " << row[5] << "\nFlight Amount: " <<
row[6] << endl << endl;
                    storeColumnId = row[0];
                    storeFlightNo = row[1];
                    storeFlightName = row[2];
                    storeFlightFrom = row[3];
                    storeFlightDestination = row[4];
                    storeFlightTime = row[5];
                    storeFlightAmount = row[6];
                }
            }
            else
            {
                cout << "Query Execution Problem!" << mysql_errno(conn)
<< endl;
            }


            cin.ignore(1, '\n');
            cout << "Enter Flight No. (X to not change): ";
            getline(cin, flightNo);
            if (flightNo == "X")
            {
                flightNo = storeFlightNo;
            }
```

```
cout << "Enter Flight Name (X to not change): ";
getline(cin, flightName);
if (flightName == "X")
{
   flightName = storeFlightName;
}
cout << "Enter From (X to not change): ";
getline(cin, flightFrom);
if (flightFrom == "X")
{
   flightFrom = storeFlightFrom;
}
cout << "Enter Destination (X to not change): ";
getline(cin, flightDestination);
if (flightDestination == "X")
{
   flightDestination = storeFlightDestination;
}
cout << "Enter Time (X to not change): ";
cin >> flightTime;
if (flightTime == "X")
{
   flightTime = storeFlightTime;
}
```

```
    cout << "Enter Amount (X to not change): ";
    cin >> flightAmount;
    if (flightAmount == "X")
    {
        flightAmount = storeFlightAmount;
    }


    string update_query = "update flightdetails_tb set f_no =
'"+flightNo+"', f_name = '"+flightName+"', f_from = '"+flightFrom+"',
f_destination = '"+flightDestination+"', f_time = '"+flightTime+"',
f_amount = '"+flightAmount+"' where f_id = '"+strid+"'";
    const char* qu = update_query.c_str();
    qstate = mysql_query(conn, qu);


    if (!qstate)
    {
        cout << endl << "Successfully Saved In Database." << endl;
    }
    else
    {
        cout << "Failed To Update!" << mysql_errno(conn) << endl;
    }
```

```
        }
        else
        {
            cout << "Item Not Found in database." << endl;
        }
    }


    // Exit Code
    ExitMenu:
    cout << "Press 'm' to Menu, 'e' to edit another item and any other key to Exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        FlightDetails();
    }
    else if (choose == 'e' || choose == 'E')
    {
        EditFlight();
    }
    else
    {
        exit(0);
    }
```

```
}

void DeleteFlight()
{
    system("cls");

    // Variables
    char choose;
    int itemId;
    string items[5000];
    int indexForId = 0;
    bool HaveException = false, NotInDatabase = false;
    // Variables End

    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "Delete Flight Menu" << endl << endl;



    qstate = mysql_query(conn, "select * from flightdetails_tb");
    if (!qstate)
    {
        res = mysql_store_result(conn);
        printf("-------------------------------------------------------------------------
--------------------------------\n");
        printf("| %-10s | %-15s | %-15s | %-15s | %-15s | %-15s |\n",
"Column ID", "Flight No.", "Flight Name", "From", "Destination",
"Time");
        while ((row = mysql_fetch_row(res)))
        {
            printf("| %-10s | %-15s | %-15s | %-15s | %-15s | %-15s |\n",
row[0], row[1], row[2], row[3], row[4], row[5]);
            items[indexForId] = row[0];
            indexForId++;
        }
        printf("-------------------------------------------------------------------------
--------------------------------\n");
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) <<
endl;
    }


    try
    {
        cout << endl;
        cout << "Enter Item Column ID: ";
        cin >> itemId;
        cout << endl;
    }
    catch (exception e)
    {
        cout << "Please Enter a valid NUMBER." << endl;
        HaveException = true;
        goto ExitMenu;
    }

    if (HaveException == false)
    {
        stringstream streamid;
        string strid;
        streamid << itemId;
        streamid >> strid;

        for (int i = 0; i < indexForId; i++)
        {
            if (strid != items[i])
            {
                NotInDatabase = true;
            }else
            {
                NotInDatabase = false;
                break;
            }
        }


        if (NotInDatabase == false)
        {
            string delete_query = "delete from flightdetails_tb where f_id =
'"+strid+"'";
            const char* qd = delete_query.c_str();
            qstate = mysql_query(conn, qd);


            if (!qstate)
            {
                cout << "Successfully Deleted From Database." << endl;
            }
            else
            {
                cout << "Failed To Delete!" << mysql_errno(conn) << endl;
            }
        }
        else
        {
            cout << "Item Not Found in database." << endl;
        }
    }


    // Exit Code
    ExitMenu:
    cout << "Press 'm' to Flight Details Menu, 'd' to delete another record and any other key to Exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        FlightDetails();
    }
    else if (choose == 'd' || choose == 'D')
    {
        DeleteFlight();
    }
    else
    {
        exit(0);
    }
}
// Airlines Reservation System - CodeWithC.com
void FlightLeaveArrive()
{
    system("cls");


    // Variables
    string flightLeave = "";
    string flightArrive = "";
    string flightAvailable = "";
    string items[5000];
    char choose;
    int itemId;
    bool HaveException = false;
    bool NotInDatabase = false;
    int indexForId = 0;


    // Store Variables
    string storeFlightLeave = "";
    string storeFlightArrive = "";
    string storeFlightAvailable = "";
    // Variables End


    cout << "Welcome To Airlines Reservation System" << endl << endl;
    cout << "Flight Leave And Arrive Record" << endl;




    qstate = mysql_query(conn, "select * from flightdetails_tb");
    if (!qstate)
    {
        res = mysql_store_result(conn);
        printf("----------------------------------------------------------------------
-------------------------------\n");
        printf("| %-10s | %-15s | %-15s | %-15s | %-15s | %-15s |\n",
"Column ID", "Flight No", "From", "Destination", "Time", "Amount");
        while ((row = mysql_fetch_row(res)))
        {
            printf("| %-10s | %-15s | %-15s | %-15s | %-15s | %-15s |\n",
row[0], row[1], row[3], row[4], row[5], row[6]);
        }
        printf("----------------------------------------------------------------------
-------------------------------\n");
    }
    else
    {
        cout << "Query Execution Problem!" << mysql_errno(conn) <<
endl;
    }


    try
    {
        cout << endl;
        cout << "Enter Item Column ID: ";
        cin >> itemId;
        cout << endl;
    }
    catch (exception e)
    {
        cout << "Please Enter a valid NUMBER." << endl;
        HaveException = true;
        goto ExitMenu;
    }


    if (HaveException == false)
    {
        stringstream streamid;
        string strid;
        streamid << itemId;
        streamid >> strid;


        for (int i = 0; i < indexForId; i++)
        {
            if (strid != items[i])
            {
                NotInDatabase = true;
            }else
            {
                NotInDatabase = false;
                break;
            }
        }


        if (NotInDatabase == false)
        {
            string findbyid_query = "select * from flightdetails_tb where f_id
= '"+strid+"'";
            const char* qi = findbyid_query.c_str();
            qstate = mysql_query(conn, qi);
```

```
if (!qstate)
{
    cout << endl;


    res = mysql_store_result(conn);
    while ((row = mysql_fetch_row(res)))
    {
        cout << "Flight No.: " << row[1] << "\nFlight From: " << row[3] << "\nFlight Destination: " << row[4] << "\nFlight Time: " << row[5] << endl << endl;
        storeFlightLeave = row[7];
        storeFlightArrive = row[8];
        storeFlightAvailable = row[9];
    }
}
else
{
    cout << "Query Execution Problem!" << mysql_errno(conn) << endl;
}


cin.ignore(1, '\n');
cout << "Enter User Flight Leave (X to not change): ";
getline(cin, flightLeave);
```

```
        if (flightLeave == "X")
        {
            flightLeave = storeFlightLeave;
        }


        cout << "Enter User Flight Arrive (X to not change): ";
        getline(cin, flightArrive);
        if (flightArrive == "X")
        {
            flightArrive = storeFlightArrive;
        }


        cout << "Enter User Flight Available (A/U) (X to not change): ";
        getline(cin, flightAvailable);
        if (flightAvailable == "X")
        {
            flightAvailable = storeFlightAvailable;
        }


        string update_query = "update flightdetails_tb set f_leave = 
'"+flightLeave+"', f_arrive = '"+flightArrive+"', f_available = 
'"+flightAvailable+"' where f_id = '"+strid+"'";
        const char* qu = update_query.c_str();
```

```
            qstate = mysql_query(conn, qu);


            if (!qstate)
            {
                cout << endl << "Successfully Saved In Database." << endl;
            }
            else
            {
                cout << "Failed To Update!" << mysql_errno(conn) << endl;
            }


        }
        else
        {
            cout << "Item Not Found in database." << endl;
        }
    }


    ExitMenu:
    cout << "Press 'm' to Flight Details Menu, 'e' to edit another item and
any other key to Exit: ";
    cin >> choose;
    if (choose == 'm' || choose == 'M')
    {
        FlightDetails();
    }
    else if (choose == 'e' || choose == 'E')
    {
        FlightLeaveArrive();
    }
    else
    {
        exit(0);
    }
}
```