

A REPORT ON
“AIRLINE RESERVATION SYSTEM USING C++”

PROJECT REPORT

IT WORKSHOP

BTCS-305-18

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE

DEGREE OF

BACHELOR OF TECHNOLOGY

(COMPUTER SCIENCE AND ENGINEERING)

(BATCH 2020-2024)

SUBMITTED BY

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3rd SEM, SECTION – D2

THE GUIDANCE OF

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CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the project report entitled "AIRLINE RESERVATION SYSTEM USING C++" by "Chetan and Supriya" in partial fulfilment of requirements for the award of degree of B.Tech(CSE) submitted in the Department of CSE at CGC – College of Engineering under Punjab Technical University, Jalandhar is an authentic record of my own work carried out under the supervision of Mr. Tejpal Singh.

Kandala Chetan Kumar (COE217029)

Supriya (2004274)

This is to certify that the above statement made by the candidates is correct to the best of our knowledge.

The B.Tech Viva-Voice Examination of Chetan and Supriya has been held on and accepted.

Name & Sign of Project Guide

Designation

CERTIFICATE

I hereby certify that the work which is being presented in the B.Tech Project Report entitled “ **AIRLINE RESERVATION SYSTEM USING C++**”, in partial fulfilment of the requirements for the award of the **Bachelor of Technology in Computer Science & Engineering** and submitted to the Department of Computer Science and Engineering of CGC – College of Engineering Landran, Punjab is an authentic record of my own work carried out during a period from **October – December 2021** under the supervision of **Mr. Tejpal Singh**.

The matter presented in this Project Report has not been submitted by me for the award of any other degree elsewhere.

Signature of Students

Kandala Chetan Kumar

Supriya

This is to certify that the above statement made by the students is correct to the best of my knowledge.

Signature of the Supervisor

CERTIFICATE OF PYTHON FUNDAMENTAL FOR BEGINNERS



CERTIFICATE OF COMPLETION

Presented to

Kandala Chetan Kumar

For successfully completing a free online course
Python Fundamentals for Beginners

Provided by

Great Learning Academy

(On December 2021)

CERTIFICATE OF PYTHON FOR MACHINE LEARNING



CERTIFICATE OF COMPLETION

Presented to

Kandala Chetan Kumar

For successfully completing a free online course
Python for Machine Learning

Provided by
Great Learning Academy
(On December 2021)

Certificate of participation on basic of managing money



CERTIFICATE OF PARTICIPATION

This Certificate is Awarded to

SUPRIYA

in formal recognition of the completion of
Basics of Managing Money - An Orientation 4 Hours Online Course

P. Venkatesh Athreya

Venkatesh Athreya
Director

Certificate Number : TI-MM-2252
Issued Date : 03rd August 2021

ABSTRACT

Airline reservation system is a type of system that can let you assign a reservation seat. Users can quickly create, cancel, and check for passengers, as well as display airline status reports, among other things. This is a very useful project for reservation, cancellation of seat. This mini project has fewer features, but they are the most important ones. This system displays the reservation number to the Passenger, shows status of acquired seats, search passenger and show their details.

Introduction

In today's world air planes are very important part for transportation people travel from one place to another place locally or international .So flight management system is required for easy seat reservation and cancellation. So we have created a basic Airline reservation system which helps travellers to reserve a seat or cancel seat or cancel their seat on urgent basis. Person can seat a book according to their requirements. This also helps to search passenger .You can search a passenger. You can cancel a reservation. You can change reservation. These are all features which we discuss further.

FEATURES OF THE SYSTEM

- **Make Reservation Menu**
 - This is where the customer's flight reservation seat is registered and a reservation number is given.
- **Cancel Reservation Menu**
 - You can cancel a reservation seat from this menu by entering the customer reservation number.
- **Search Passenger Menu**
 - By entering the customer reservation number, you can cancel a reservation seat from this menu.
- **Change Reservation Menu**
 - You can change your reservation by entering the reservation seat in this menu.
- **Print a List Menu**
 - You can see a list of passengers who have been reserved in this menu.
- **Search Status Report Menu**
 - You can see the complete reservation for a single flight from here.

Used Languages

C

C++

SECURITY

This is a secured program where every passenger detail is secured inside private class.

Only authorized person can access details of passengers. Because of security there are less chances of data leak.

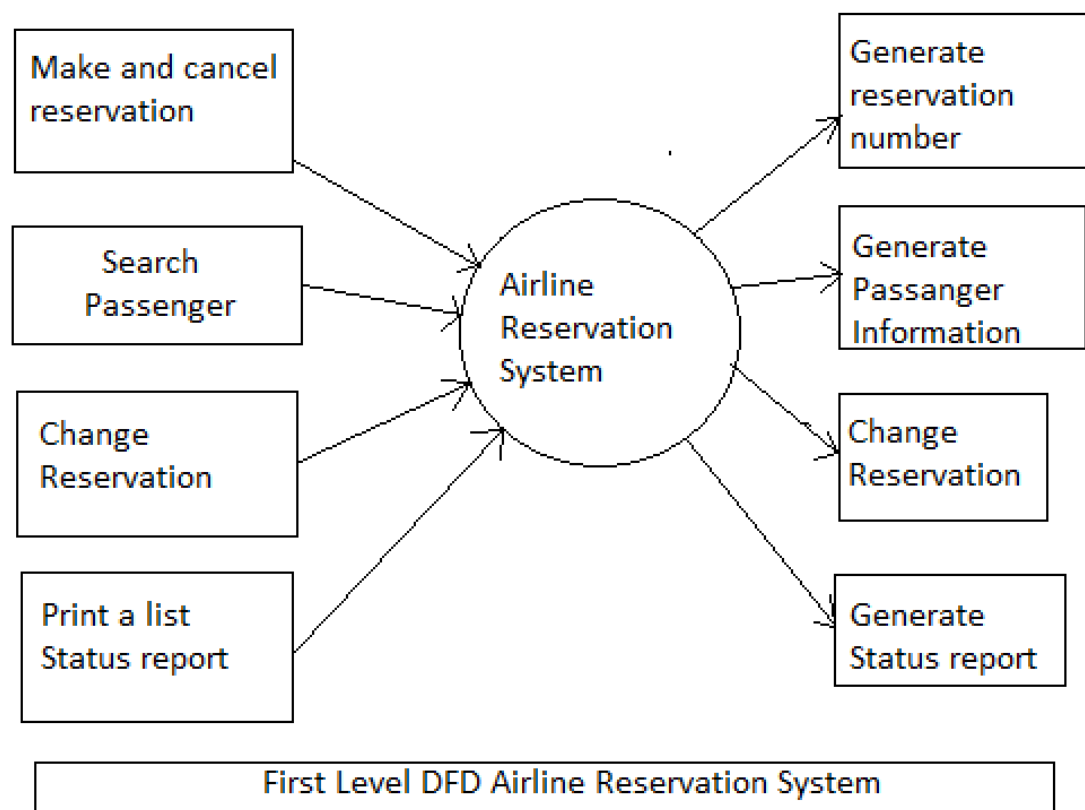
HARDWARE REQUIREMENTS

- 1.8 ghz CPU with four or more cores
- 256 gb of storage
- Min Core i3 processor
- Min 4 gb ram
- Windows 7,8,10

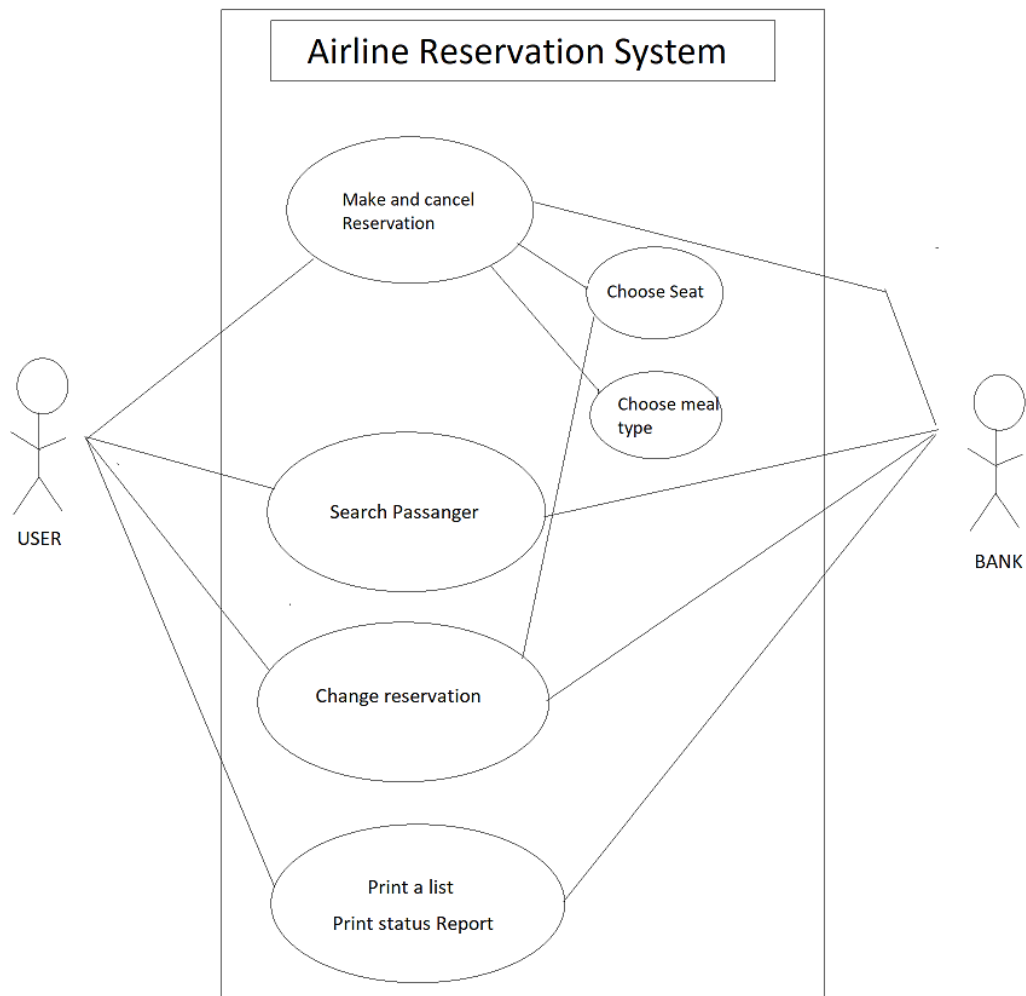
SOFTWARE REQUIREMENTS

- DEV C++
- VS Code
- Code Blocks

DFD DIAGRAM FOR AIRLINE RESERVATION SYSTEM



UML DIAGRAM FOR AIRLINE RESERVATION SYSTEM



Source code

Divided in two files

1st cpp file

[illegible]

2nd cpp file

```
#include <iostream>
#include <iomanip>
#include "bluesky.h"
using namespace std;

int reserve = 999;
```

```
int seat[size];
void seat_fill()
{
    for (int i = 0; i < size; i++)
    {
        seat[i] = 0;
    }
}

bool taken=false;
bool seat_no(int y)
{
    for (int i = 0; i < size; i++ )
    {
        if( seat[i] == -1 )
        {
            taken=true;
            cout << "The seat is taken already. \n";
            cout << "Please choose another seat number from
below."<<endl;

            int j = 1;
            while ( j < size+1 )
            {
                if ( seat[j-1] == -1)
                    j++;
                else
                {
                    cout <<"|" << j << "|";
                    if ( j%10 == 0 )
                        cout << endl;
                    j++;
                }
            }
        }
    }
}

void menu()
{
    char choice;

do{
cout <<"\t
\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\xcd\n";
cout <<"\t Make Reservation      ----- [1] \n";
```


[illegible]

[illegible]

[illegible]

```

        seat[0] = 0;
        cancel++;
        return;
    }
    else
    {
        node *pre, *cur;
        pre = start;
        cur = start->next;
        while(cur != NULL)
        {
            if ( cur->reserve_num == num )
                break;
            pre = cur;
            cur = cur->next;
        }
        seat[cur->seat_num-1] = 0;
        if (cur != NULL )
            pre->next = cur->next;
    }

    cancel++;

}
else
{
    cout<<"!!! *** Nothing to delete or invalid entry *** !!! \n"<<endl;
}

}
//*****
*****
void airlines:: search_passenger()
{
    string fakename;
    cout << "Please enter your first name here: ";
    cin >> fakename;

    node *cur = start;
    while (cur != NULL)
    {
        if (cur->fname == fakename)
        {
            cout << "First Name : " << cur->fname << endl;
            cout << "Last Name : " << cur->lname << endl;
            cout << "ID " << cur->ID << endl;
            cout << "Phone number: " << cur->phone_num << endl;
            cout << "Seat Number: " << cur->seat_num << endl;
            cout << "Reservation No. " << cur->reserve_num<< endl;
            return;
        }
        cur = cur->next;
    }
}

```

```

        }    cout << " Sorry!!! NOT FOUND \n\n";

    }

//*****
*****

void airlines:: change_reservation()

{
    int option , next_seat;
    cout << " Please enter your seat number: ";
    cin >> option;
    node *cur;
    cur = start;

    while(cur != NULL)
    {
        if ( cur->seat_num == option )
            break;
        cur = cur->next;
    }
    cout << "Please choose another seat number from below.";
    int j = 1;
    while ( j < size+1 )
    {
        if ( seat[j-1] == -1)
            j++;
        else
        {
            cout <<"| " << j << "|";
            if ( j%10 == 0 )
                cout << endl;
            j++;
        }
    }
    cin >> next_seat;
    seat[cur->seat_num-1]=0;
    cur->seat_num = next_seat;
    seat[next_seat-1] = -1;

}

//*****
*****

void airlines:: print_list()
{
    temp=start;
    if(temp == NULL)
        cout<<" End of lists"<<endl;
    else
    {
        int cnt = 1;
        cout << "\tNumber\t First Name\t Last Name\t ID\t";
        cout << "Phone Number\t Seat Number\t Reservation No\t Menu\n";
    }
}

```

```

        while(temp != NULL)
        {
            cout << "\t" << cnt <<setw(15);
            cout << temp->fname <<setw(15);
            cout << temp->lname << setw(12);
            cout << temp->ID << setw(12);
            cout << temp->phone_num <<setw(15);
            cout << temp->seat_num <<setw(15);
            cout << temp->reserve_num <<setw(12);
            cout << temp->menu << "\n";

            temp=temp->next;
            cnt++;
        }
        cout << "\n\n";
    }
}

//*****

void airlines:: print_report()
{
    int count = 0;
    for (int i =0; i < size; i++ )
    {
        if (seat[i] == -1)
            count++;
    }
    cout<<"The number of reserved seats are: " << count <<endl;
    cout<<"The number of cancellations are: " << cancel <<endl;
}

//*****

```

OUTPUTS

Open up screen

```
=====
AIRLINE RESERVATION SYSTEM
=====

===== MENU OPTIONS =====
=====
Make Reservation      ----- [1]
Cancel Reservation   ----- [2]
Search Passenger     ----- [3]
Change Reservation    ----- [4]
Print a list         ----- [5]
Print status Report  ----- [6]
Quit                 ----- [7]
=====

Option : █
```

Making reservation screen

```
Enter First Name of person: Chetan
Enter Last Name of Person: kumar
Enter ID of the person: 217029
Enter Phone Number of Person: 147852369
Please Enter the Seat Number: 25
Please Enter Your Menu Preference from below:

Veg      ..... '1'
Non-Veg  ..... '2'
No meal  ..... '3'

Your Choice :: 1

YOUR RESERVATION NUMBER IS :: 1000

PROCESS COMPLETED...
```

```
Enter First Name of person: supriya
Enter Last Name of Person: -----
Enter ID of the person: 2004274
Enter Phone Number of Person: 963852741
Please Enter the Seat Number: 26
Please Enter Your Menu Preference from below:

Veg      ..... '1'
Non-Veg  ..... '2'
No meal  ..... '3'

Your Choice :: 2

YOUR RESERVATION NUMBER IS :: 1001

PROCESS COMPLETED...
```

Cancel Reservation screen

Please Enter your reservation Number here: 1000

PROCESS COMPLETED...

Search passenger screen

```
Please enter your first name here: supriya
First Name : supriya
Last Name : -----
ID 2004274
Phone number: 963852741
Seat Number: 26
Reservation No. 1001

PROCESS COMPLETED...
```

Change reservation screen

```
Please enter your seat number: 25
Please choose another seat number from below. 1| 2| 3| 4| 5| 6| 7| 8| 9| 10|
| 11| 12| 13| 14| 15| 16| 17| 18| 19| 20|
| 21| 22| 23| 24| 27| 28| 29| 30|
| 31| 32| 33| 34| 35| 36| 37| 38| 39| 40|
| 41| 42| 43| 44| 45| 46| 47| 48| 49| 50|
| 51| 52| 53| 54| 55| 56| 57| 58| 59| 60|
| 61| 62| 63| 64| 65| 66| 67| 68| 69| 70|
| 71| 72| 73| 74| 75| 76| 77| 78| 79| 80|
| 81| 82| 83| 84| 85| 86| 87| 88| 89| 90|
| 91| 92| 93| 94| 95| 96| 97| 98| 99| 100|
64
PROCESS COMPLETED...
```

Print a list screen

Number	First Name	Last Name	ID	Phone Number	Seat Number	Reservation No	Menu
1	chetan	kumar	217029	147852369	64	1000	veg
2	supriya	-----	2004274	963852741	26	1001	Non-Veg

PROCESS COMPLETED...

Print status report screen

```
The number of reserved seats are: 2
The number of cancellations are: 0

PROCESS COMPLETED...
```

Quit screen

```
=====
AIRLINE RESERVATION SYSTEM
=====

===== MENU OPTIONS =====
=====
Make Reservation  ----- [1]
Cancel Reservation ----- [2]
Search Passenger  ----- [3]
Change Reservation ----- [4]
Print a list      ----- [5]
Print status Report ----- [6]
Quit             ----- [7]
=====

Option : 7

Thank you come again

PROCESS COMPLETED...
```

Conclusion

- Airline Reservation system is a Reservation system which enable to check the availability of ticket and reserve a seat .
- It makes the customer easy to get ticket online instead of Queue up to buy the ticket
- It also shows total number of acquired seats to the admin so that he can manage seats according to fulfilment
- It is a very useful for project for customers to reserve and cancel a seat.

REFERENCES

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- Object-Oriented Programming with C++(Mc Graw Hill)