Use Case Specification

DMT/RM01/TMP

|  |  |
| --- | --- |
| Project Code | PRJ\_Airline\_Reservation\_01 |
| Project Name | Airline Reservation System |

|  |  |  |
| --- | --- | --- |
| Prepared/Modified by | Role | Date of Preparation |
| Prasanthi Thota | Test Engineer | 07/15/2018 |
| Reviewed by | Role | Date of Review |
|  | SME |  |
| Approved by | Role | Date of Approval |
|  | Test Manager |  |
| Circulation List |  | Version Number of the template:1.1 |
| Version Number | 1 |  |

<<Customer>> REVIEW HISTORY

<<Customer comments on the Use case along with the signed off is tracked here>>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Version | <<Version number>> |  |  |  |  |  |
| Date | <<Date of Review>> |  |  |  |  |  |
| Reviewed by | << Reviewer Name>> |  |  |  |  |  |
| Reviewed UI Specification doc | << Whether UI Specification doc is reviewed >> |  |  |  |  |  |
| All Open Queries/issues closed | << Whether all the open queries and issues resolved>> |  |  |  |  |  |
| Agreement on Assumptions | <<Whether all the assumptions have been agreed upon by the customer>> |  |  |  |  |  |
| Sign Off | <<Signature>> |  |  |  |  |  |

Disclaimer:

The scope of the project ‘**Airline Reservation System’** is restricted to the contents of this signed off use case.

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1. Use Case Name: Airline Reservation System

**Use Case ID:**  **PRJ\_Airline\_Reservation\_01**

**Brief Description:** This project is aimed at developing an online Airline Reservation System (ARS)for customers. This is a web based application that can be accessed throughout the web. This system can be used to search flight details, reserve flight, and update/cancel any reservation.

1. Actor(s)
2. Customer
3. Airline Executive
4. Administrator
5. Preconditions

CUSTOMER

1. Place a request for a Flight ticket.

2. User should be able to view the reservation details, update and cancel the booking.

AIRLINE EXECUTIVE

1. Login to the system using his/her credentials

2. View Flight-occupancy details.

ADMINISTRATOR:

1. Login to the system using his/her credentials

2. Update and manage flight schedules

3. Update and manage flight information

4. Generate various reports like:

* View List of flights on a particular day, to a particular destination etc.
* View Bookings of specific flight
* View passenger list of specific flight

1. Flow of Events

4.1 BASIC Flow

**4.1.1 Basic Flow:**

**Name:** Successful login of Airline Executive

1. Customer visits the Airline Reservation System (ARS)URL <http://ndafile:8081/AirlineReservationSystem/> using any standard browser.
2. User clicks on Executive or admin login.
3. User enters user-id and password.
4. User clicks on login button.
5. On successful login the Details page will be displayed with following options
6. Flights based on period
7. Flights based on place

**Name:** Successful login based on period

1. On clicking executive login option.
2. Executive enters the Username.
3. Executive enters the Password.
4. Executive clicks on Login Button.
5. Executive selects flight based on period
6. System displays Flights between webpage.
7. Executive selects from date.
8. Executive selects to date.
9. System displays the flights schedule based on period.
10. Executive clicks on logout button.

**Name:** Booking a Flight

1. Customer visits the Airline Reservation System (ARS)URL <http://ndafile:8081/AirlineReservationSystem/> using any standard browser.
2. User clicks on View Flights.
3. User clicks on book a flight after viewing flight details.
4. User enters number of passengers.
5. User clicks on economy class.
6. User clicks on submit button.
7. System displays the flight details of which you have booked.
8. User confirm those details after checking.
9. User clicks on make reservation after filling the details.
10. User selects net banking or debit/credit card in payment.
11. User enters the card details.
12. User clicks on make payment.
13. User logout from the account.
    1. Alternative Flows

Alternate Flow 1: Successful login based on place

1. On clicking executive login option.
2. Executive enters the Username.
3. Executive enters the Password.
4. Executive clicks on Login Button.
5. Executive selects flight based on place.
6. System displays Flights between webpage.
7. Executive selects enter the source city.
8. Executive selects enter the destination city
9. System displays the flights schedule based on place.
10. Executive clicks on logout button.

Alternate Flow 2: Booking a flight (business class)

1. User clicks on View Flights.
2. User clicks on book a flight after viewing flight details.
3. User enters number of passengers.
4. User clicks on business class.
5. User clicks on submit button.
6. System displays the flight details of which you have booked.
7. User confirm those details after checking.
8. User clicks on make reservation after filling the details.
9. User selects net banking or debit/credit card in payment.
10. User enters the card details.
11. User clicks on make payment.
12. User logout from the account.

Alternate Flow 3: CANCEL BOOKING

1. Customer accesses Intranet.
2. Customer clicks on view Booked Flight.
3. Customer clicks on un-approved booking.
4. Customer clicks on cancel to cancel the pending Booking.
5. Customer validates the details.
6. System cancels the respective Booking.

4.3 EXCEPTION FLOW

EXCEPTION FLOW 1: exceeding username character limit

1. Executive accesses Intranet.
2. Executive enters the Username more than 12 characters.
3. Executive enters the Password.
4. Executive clicks on Login Button.
5. System validates the details.
6. System validation fails since Username character limit exceeds
7. System displays error message regarding Username.

EXCEPTION FLOW 2: invalid password character limit

1. Executive accesses Intranet.
2. Executive enters the Username.
3. Executive enters the password less than 8 characters.
4. Executive clicks on Login Button.
5. System validates the details.
6. System validation fails since Password character limit.
7. System displays error message regarding Password

EXCEPTION FLOW 3: invalid search date details (more than to date)

1. Executive accesses Intranet.
2. Executive enters the Username.
3. Executive enters the Password.
4. Executive clicks on Login Button.
5. System validates the details.
6. On successful validation, Executive navigates to the ‘Flight Details’ web page.
7. Executive selects the Flight based on period.
8. Executive navigates to the ‘Flights Between’ web page
9. Executive selects the From date more than To date
10. Executive selects the to date.
11. Executive clicks on Search Button.
12. System validates the details.
13. System validation fails since to Date is more than from Date.
14. System displays error message search details invalid.

EXCEPTION FLOW 4: invalid from and to date(less than system date)

1. Executive accesses Intranet.
2. Executive enters the Username.
3. Executive enters the Password.
4. Executive clicks on Login Button.
5. System validates the details.
6. On successful validation, Executive navigates to the ‘Flight Details’ web page.
7. Executive selects the Flight based on period.
8. Executive navigates to the ‘Flights Between’ web page
9. Executive selects the from date less than System Date.
10. Executive selects the to date.
11. Executive clicks on Search Button.
12. System validates the details.
13. System validation fails since From Date is less than System Date.
14. System displays error message regarding From Date.
15. System validation fails since To Date is less than System Date.
16. System displays error message regarding To Date.

EXCEPTION FLOW 5: source and destination same place

1. Executive accesses Intranet.
2. Executive enters the Username.
3. Executive enters the Password.
4. Executive clicks on Login Button.
5. System validates the details.
6. On successful validation, Executive navigates to the ‘Flight Details’ web page.
7. Executive selects the Flight Based on Place.
8. Executive navigates to the ‘Flights Between’ web page
9. Executive selects the Source city.
10. Executive selects the Destination city same as Source city
11. Executive clicks on Go Button.
12. System validates the details.
13. System validation fails since Source city and Destination city are same.
14. System displays error message as source and destination place cannot be same.

EXCEPTION FLOW 6: Invalid number of passengers (greater than or equal to 1)

1. Customer accesses Intranet.
2. Customer clicks on View Flights.
3. Customer clicks on Book.
4. Customer navigates to the ‘Book a Flight’ web page
5. Customer enters the Number of Passengers as less than 1.
6. Customer selects the class.
7. Customer clicks on Submit button.
8. System validates the details.
9. System validation fails since Number of passengers is must be greater than or equal to 1.

EXCEPTION FLOW 7: selection of class

1. Customer accesses Intranet.
2. Customer clicks on View Flights.
3. Customer clicks on Book.
4. Customer navigates to the ‘Book a Flight’ web page
5. Customer enters the Number of Passengers.
6. Customer clicks on Submit button.
7. System validates the details.
8. System validation fails and displays error message as please make a selection.

EXCEPTION FLOW 8: invalid booking information details

1. Customer accesses Intranet.
2. Customer clicks on View Flights.
3. Customer clicks on Book.
4. Customer navigates to the ‘Book a Flight’ web page
5. Customer enters the Number of Passengers.
6. Customer selects the class.
7. Customer clicks on Submit button.
8. System validates the details
9. Customer navigates to the ‘Your Journey Details’ web page
10. Customer clicks on Confirm button.
11. Customer navigates to the ‘Booking Information’ web page
12. Customer enters the invalid Name.
13. Customer enters the invalid Email id.
14. Customer clicks on Make Reservation Button.
15. System validates fails the details.
16. System displays the error message to enter valid details.

EXCEPTION FLOW 9: card number exceeding limit

1. Customer accesses Intranet.
2. Customer clicks on View Flights.
3. Customer clicks on Book.
4. Customer navigates to the ‘Book a Flight’ web page
5. Customer enters the Number of Passengers.
6. Customer selects the class.
7. Customer clicks on Submit button.
8. System validates the details
9. Customer navigates to the ‘Your Journey Details’ web page
10. Customer clicks on Confirm button.
11. Customer navigates to the ‘Booking Information’ web page
12. Customer enters the Name.
13. Customer enters the Email id.
14. Customer clicks on Make Reservation Button.
15. System validates the details
16. On successful validation, customer navigates to the ‘Payment’ web page.
17. Customer selects the Net Banking or Debit/Credit.
18. Customer enters the card details.
19. Customer clicks on Make Payment Button
20. System validates the details.
21. System validation fails since card number is incorrect.
22. System displays the error message regarding Card Number as number should be 10 digit.
23. Post Conditions

| **Flow Name** | **Post Condition** |
| --- | --- |
| Successful login based on place | Successfully login of executive based on place. |
| Booking a flight (business class) | Successfully booking of business class flight ticket. |
| Cancel booking | Successfully canceling booked flight ticket. |
| Exceeding username character limit | *S*ystem displays invalid character limit. |
| Invalid password character limit | System displays password should be more than 8 characters. |
| Invalid search date details (more than to date) | System displays error message as search details invalid. |
| Invalid from and to date(less than system date) | System gives from and to date must be more than system date. |
| Source and destination same place | System displays an error message as source and destination cannot be same place. |
| Invalid number of passengers (greater than or equal to 1) | System displays an error message as number of passengers should not be less than 1. |
| Selection of class | System displays error message as please make a selection. |
| Invalid booking information details | System displays the error message to enter valid details. |
| Card number exceeding limit | System displays the error message to enter valid card number not more or less than 10 digits. |

1. Special Requirements

Performance

The applicant should receive the mail having the details of Flight name, number and journey details.

Availability

1. Application is up and running 24\*7.

# **USER INTERFACE**

1. The letters on Menus shall be bold and red in color.

2. The active links should be displayed in blue color.

3. The note field related to the rules to be followed should appear on the top of the application portal.

4. The calendar field for entering the dates should be present on the right side of date option.

# **SECURITY**

1. The system shall not allow the Customer to book the ticket for the future dates.

2. The system does not allow the customer to book the Ticket when the booking is already marked.

1. EXTENSION POINTS

EXTENSION IN: EXCEPTION flow 3

In step 2. If the user has entered wrong end date

* 1. The system prompts the user to re-enter the data.
  2. The system takes the user to the step2.
  3. User enters the correct data.
  4. The system allows the Customer to submit.

1. Business Rules

| Business Rule Name | Business Rule Description | System action (if BR fails) |
| --- | --- | --- |
| BR01 | Retrieve Flight Schedules | System displays the flights scheduled by Airline Company. |
| BR02 | Make a reservation | System allows the valid user to reserve tickets using the Airline Reservation System (ARS). |
| BR03 | View or change the booking | The customer should be able to view the booking or change the booking. |
| BR04 | Maintain Flight Information | Information including Flight Number, Origin, Destination, Departure Time, arrival Time, Days on which the flight is available displays. |
| BR05 | View Flight Occupancy Status Screen | Airline Executives gives the overall Occupancy from all flights flying from a particular source to destination. |

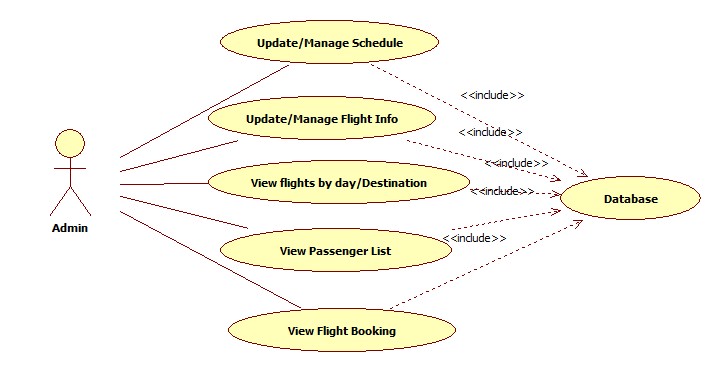
1. Diagrams

9.1 USECASE DIAGRAMS:

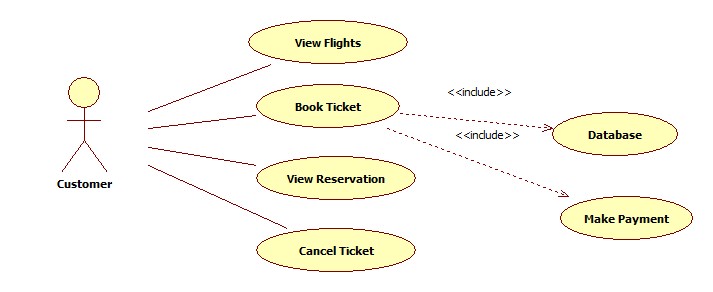
# **Airline Executive**

# **C:\Users\prasatho\Documents\My Received Files\Executive.jpg**

# **Admin**



**Customer**

****

# **10 Scenarios**

10.1 Success Scenarios

* Successful login for Airline-Executive.
* Successful Booking of ticket.
* Successful Cancellation of Booking.

10.2 Failure Scenarios

* From date more than to date.
* From date less than system date.
* To date less than system date.
* Negative number of passengers.
* Source and destination as same place.
* Invalid booking details.
* Exceeding card limit.

# **11. ISSUES**

* What if the customer marked the wrong option in the session section?
* What if the customer wants to book the ticket where booking is already closed?

# **12. INTER SYSTEM DEPENDENCIES**

**Module**: To Date gets impacted due to:

Use case name: Alternate Flow 1

**Impact:** If the Customer tries to enter the date without entering the from calendar option given the Booking is not accepted.

# **13.ASSUMPTIONS**

1. Customer is having access to internet.
2. The Booking form is available within 15 sec on entering the URL.
3. All the modules in the application are visible and functional.

**REVISION HISTORY OF THE WORK PRODUCT**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| # | Date | Version # | Section Changed | Details of changes made | Approved By |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |