Use Case Specification

DMT/RM01/TMP

|  |  |
| --- | --- |
| Project Code | PRO\_AIRLINE\_RESERVATIONSYSTEM\_APPLICATION\_01 |
| Project Name | AIRLINE\_RESERVATIONSYSTEM\_ APPLICATION |

|  |  |  |
| --- | --- | --- |
| Prepared/Modified by | Role | Date of Preparation |
| SRI VANI BOBBILI | Test Engineer | 7/11/2018 |
| Reviewed by | Role | Date of Review |
|  |  |  |
| Approved by | Role | Date of Approval |
|  |  |  |
| Circulation List |  | Version Number of the template:1.1 |
| Version Number | 1.0 |  |

<<Customer>> REVIEW HISTORY

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Version | 1.0 |  |  |  |  |  |
| 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 Application’** is restricted to the contents of this signed off use case.

TABLE OF CONTENTS

[1.Use Case Name: <<Use Case Name>> 4](#_Toc302030199)

[2.Actor(s) 4](#_Toc302030200)

[3.Preconditions 4](#_Toc302030201)

[4.Flow of Events 4](#_Toc302030202)

[4.1 Basic Flow 4](#_Toc302030203)

[4.2 Alternative Flows 5](#_Toc302030204)

[4.2.1 Alternate Flow 1 5](#_Toc302030205)

[4.3 Sub Flows 6](#_Toc302030206)

[4.3.1 Sub Flow 1 6](#_Toc302030207)

[5.Post Conditions 6](#_Toc302030208)

[6.Special Requirements 7](#_Toc302030209)

[7.Extension Points 7](#_Toc302030210)

[<Name of extension point> 7](#_Toc302030211)

[8.Business Rules 7](#_Toc302030212)

[9.Diagrams 8](#_Toc302030213)

[Use Case Diagram 8](#_Toc302030214)

[Activity Diagram 9](#_Toc302030215)

[10.Scenarios 10](#_Toc302030216)

[Success Scenarios 10](#_Toc302030217)

[Failure Scenarios 10](#_Toc302030218)

[11.Issues 10](#_Toc302030219)

[12.UI Specifications 10](#_Toc302030220)

[13.Inter System Dependencies 11](#_Toc302030221)

[14.Integration with an already existing System of the <<Customer>> 11](#_Toc302030222)

[15.Assumptions 11](#_Toc302030223)

REVISION HISTORY OF THE WORK PRODUCT…………………………….. .. 12

Use Case Name: LEAVE APPLICATION

**Use Case ID:**  PRO.AIRLINE\_RESERVATION\_APPLICATION\_001

**Brief Description:** This Use case here describes about the process by which customer can reserve flight ticket, update and cancel reservation

Actor(s)

1. CUSTOMER
2. AIRLINE EXECUTIVE
3. ADMINISTRATOR

Preconditions

1. The Airline Executive will be the registered user of the process.
2. Customer should access to Intranet.
3. Airline Executive has a valid user id and password.
4. Occupancy should be available for the customers before booking.

Flow of Events

4.1 Basic Flow 1

4.1.1 Name: SUCCESSFUL BOOKING OF FLIGHT

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. On successful payment, Customer gets the conformation Message.

4.1 Basic Flow 2

4.1.2 Name: SUCCESSFUL LOGIN OF AIRLINE EXECUTIVE (period)

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.
10. Executive selects the To date.
11. Executive clicks on Search Button.
12. System validates the details.
13. On successful validation, Executive navigates to the Flight details display web page.
14. Executive clicks on the Logout Button.

4.1 Basic Flow 3

4.1.3 Name: SUCCESSFUL LOGIN OF AIRLINE EXECUTIVE (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.
11. Executive clicks on Go Button.
12. System validates the details.
13. On successful validation, Executive navigates to the Flight schedule Based on Place web page.
14. Executive clicks on the Logout Button.

4.1 Basic Flow 4

4.1.4 Name: SUCCESSFUL LOGIN OF ADMIN

1. Admin accesses Intranet.
2. Admin enters the Username.
3. Admin enters the Password.
   1. Alternative Flows
      1. Alternate Flow 1 : ½ DAY LEAVE FROM END DATE
4. User accesses Intranet.
5. User clicks on Employee Corner.
6. User clicks on Attendance System.
7. User selects Leave Application.
8. User selects Start Date of leave from the Calendar
9. User chooses the Half-Day check box in end date.
10. User select the session for half day in end date.
11. User selects End Date same as Start Date.
12. User selects Type of Leave
13. User enters the reason for leave.
14. User clicks on submit button to submit leave application.
15. System validates the details
16. System submits the leave request for approval.
    * 1. Alternate Flow 2 : 1 OR MORE DAYS’ LEAVE
17. User accesses Intranet.
18. User clicks on Employee Corner.
19. User clicks on Attendance System.
20. User selects Leave Application.
21. User selects Start Date of leave from the Calendar
22. User selects End Date of leave from the Calendar
23. User selects Type of Leave.
24. User enters the reason for leave.
25. User clicks on Submit button to submit leave application.
26. System validates the details
27. System submits the leave request for approval.
    * 1. Alternate Flow 3 : CANCEL PENDING LEAVE
28. User accesses Intranet.
29. User clicks on Employee Corner.
30. User clicks on Attendance System.
31. User selects Leave Application.
32. User selects an un-approved leave.
33. User clicks on cancel to cancel the pending leave.
34. System validates the details
35. System cancels the respective leave.
    * 1. Alternate Flow 4 : FF Leave Against Comp.Off
36. User accesses Intranet.
37. User clicks on Employee Corner.
38. User clicks on Attendance System.
39. User selects Leave Application.
40. User selects Start Date of leave from the Calendar
41. User selects End Date of leave from the Calendar
42. User selects FF Type of Leave.
43. System provides a link ‘Select Comp. Off dates’
44. User clicks on the link ‘Select Comp. Off dates’
45. User selects the Comp. Off dates
46. System navigates back to Leave Application
47. User enters the reason for leave
48. User clicks on Submit button
49. System validates the details
50. System submits the leave request for approval
    * 1. Alternate Flow 5

EXCEPTION FLOW 1: invalid username

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.
11. Executive clicks on Go Button.
12. System validates the details.
13. On successful validation, Executive navigates to the Flight schedule Based on Place web page.
14. Executive clicks on the Logout Button.

EXCEPTION FLOW 2: CL Combined With Other Type Of Leave

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects Start Date of leave from the Calendar
6. User selects End Date of leave from the Calendar
7. User selects CL Type of Leave combined with Holidays/Weekends.
8. User enters the reason for leave.
9. User clicks on submit button.
10. System validates the details
11. System validation fails since CL is attached with other type of leave.
12. System displays an error message regarding the end date selection.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 3: SL Suffixed With PL (PL is already submitted)

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects Start Date of leave from the Calendar
6. User selects End Date of leave from the Calendar
7. User selects Type of Leave SL
8. User enters the reason for leave.
9. User clicks on submit button.
10. System validates the details
11. System validation fails since SL cannot be suffixed with PL.
12. System displays an error message regarding the Start date selection and SL suffixed with PL.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 4: PL Prefixed With SL (SL is already submitted)

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects Start Date of leave from the Calendar
6. User selects End Date of leave from the Calendar
7. User selects Type of Leave PL
8. User enters the reason for leave.
9. User clicks on submit button.
10. System validates the details
11. System validation fails since PL cannot be prefixed with SL
12. System displays an error message regarding the End date selection and PL prefixed with SL.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 5: ML prefixed with SL (SL is already submitted)

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects Start Date of leave from the Calendar
6. User selects End Date of leave from the Calendar
7. User selects Type of Leave ML
8. User enters the reason for leave.
9. User clicks on submit button.
10. System validates the details
11. System validation fails since ML cannot be prefixed with SL
12. System displays an error message regarding the End date selection and ML prefixed with SL.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 6: ML prefixed with PL (PL is already submitted)

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects Start Date of leave from the Calendar
6. User selects End Date of leave from the Calendar
7. User selects Type of Leave ML
8. User enters the reason for leave.
9. User clicks on submit button.
10. System validates the details
11. System validation fails since ML cannot be prefixed with PL
12. System displays an error message regarding the End date selection and ML prefixed with PL.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 7: FF Sandwiched Between Any Leave (CL/SL/PL/holidays)

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects Start Date of leave from the Calendar
6. User selects End Date of leave from the Calendar
7. User selects Type of Leave FF between 1st and 2nd CL.
8. User enters the reason for leave.
9. User clicks on submit button.
10. System validates the details
11. System fails since FF is sandwiched between two leaves.
12. System displays an error message regarding the sandwiched FF.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 8: FF Applied in Break ups

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects Start Date of leave from the Calendar
6. User choses Half-Day check box in start date.
7. User selects session.
8. User selects End Date same as Start Date.
9. User choses Half-Day check box in end date.
10. User selects session.
11. User selects Type of Leave FF.
12. User enters the reason for leave.
13. User clicks on submit button.
14. System validates the details
15. System fails since FF is applied in break-ups.
16. System displays an error message regarding FF applied in breaks-ups.
17. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 9: Cancel Approved Leave- Cancel request not Submitted

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects an approved leave.
6. User clicks Cancel button.
7. System validates the details
8. System fails to cancel the leave since cancellation of leave request is not submitted.
9. System displays an error message regarding leave cancellation.
10. System navigates back to Leave Application.

EXCEPTION FLOW 10: Cancel approve leave- NOT Sanctioned

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects an approved leave.
6. User clicks Cancel button.
7. System validates the details
8. System fails to cancel the leave since cancellation request not sanctioned.
9. System displays an error message regarding leave cancellation.
10. System navigates back to Leave Application.

EXCEPTION FLOW 11: Leave For Future Dates (Next Year)

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects next year date as Start Date from Calendar
6. User selects next year date as End Date from Calendar.
7. User selects Type of Leave
8. User enters the reason for leave.
9. User clicks on Submit button.
10. System validates details
11. System fails since start date of leave requested for next year.
12. System displays error message regarding Future date selection.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 12: Leave Against Marked Attendance Dates

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects marked attendance date as Start Date of leave .
6. Select End Date of leave.
7. User selects Type of Leave
8. User enters the reason for leave.
9. User clicks on Submit button.
10. System validates details
11. System fails since start date of leave requested against marked attendance.
12. System displays error message for selecting marked attendance date as Leave date.
13. System takes user to step 5 of Alternative Flow 2.

EXCEPTION FLOW 13: Leave For Week-Offs and Holidays

1. User access Intranet.
2. User clicks on Employee Corner.
3. User clicks on Attendance System.
4. User selects Leave Application.
5. User selects week offs and holidays as Start Date of leave.
6. User selects Type of Leave
7. User enters the reason for leave.
8. User clicks on Submit button.
9. System fails since start date of leave is in Week-offs or holidays.
10. System displays error message for selecting week offs or holiday dates as leave start date.
11. System takes user to step 5 of Alternative Flow 2.

Post Conditions

| Flow Name | Post Condition |
| --- | --- |
| Successful Leave application for ½ day | The leave request is submitted for approval |
| Successful application for 1 or more days leaves. | The leave request is submitted for approval |
| Successful Cancellation of Pending leave | The system cancels the leave |
| Successful Leave application for FF against Comp.Off | System submits the leave request for approval |
| CL Exceeds 3 Continues Days | System displays an error message regarding the end date selection.  Leave request is not accepted |
| CL Combined with other type of leave | System displays an error message regarding the end date selection.  Leave request is not accepted |
| SL Suffixed With PL (PL is already submitted) | System displays an error message regarding the Start date selection and SL suffixed with PL.  Leave request is not accepted |
| PL Prefixed With SL (SL is already submitted) | System displays an error message regarding the End date selection and PL prefixed with SL.  Leave request is not accepted |
| ML prefixed with SL (SL is already submitted) | System displays an error message regarding the End date selection and ML prefixed with SL.  Leave request is not accepted |
| ML prefixed with PL (PL is already submitted) | System displays an error message regarding the End date selection and ML prefixed with PL.  Leave request is not accepted |
| FF Sandwiched Between Any Leave (CL/SL/PL/holidays) | System displays an error message regarding the sandwiched FF.  Leave request is not accepted |
| FF Applied in Break ups | System displays an error message regarding FF applied in breaks-ups.  Leave request is not accepted |
| Cancel Approved Leave- Cancel request not Submitted | System displays an error message regarding leave cancellation.  Leave cancellation is not accepted |
| Cancel approve leave- NOT Sanctioned | System displays an error message regarding leave cancellation.  Leave cancellation is not accepted |
| leave For Future Dates (Next Year) | System displays error message regarding Future date selection.  Leave request is not accepted |
| Leave Against Marked Attendance Dates | System displays error message for selecting marked attendance date as Leave date.  Leave request is not accepted |
| Leave For Week-Offs and Holidays | System displays error message for selecting week offs or holiday dates as leave start date.  Leave request is not accepted |

# 6. SPECIAL REQUIREMENTS

# 7. PERFORMANCE

1. The visibility of the date on clicking the “From Date” (Calendar Option) shall be displayed within 15 seconds of customer request.

# AVAILABILITY

1. The user can apply leave on the “Apply Leave” portal on all working days 24\*7 but cannot register on national holidays.

# 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 user to cancel the approved leaves unless cancellation of leaves is submitted and is sanctioned.

2. The system shall not allow the user to apply the leave for the future dates.

3. The system doesnot allow the user to apply the leave when the attendance is already marked.

4. The system shall not allow the user to apply the leave on weekoffs and holidays.

1. EXTENSION POINTS

EXTENSION IN: EXCEPTION flow1

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 user to submit the leave.

1. Business Rules:

|  |  |  |
| --- | --- | --- |
| Business Name | Business rules Description | Response of the Business Rules |
| BR01 | Leave Cannot be cancelled once approved | System displays error message that leave cannot be cancelled. |
| BR02 | Leave cannot be applied for future dates(Dates in the next Year) | System displays error message that  Please select valid dates |
| BR03 | Leave cannot be applied for the dates already attendance is marked. | System displays error message that attendance is already given for selected date. |
| BR04 | Leave cannot be applied for weekoffs and holidays. | System displays error message that leave cannot be applied. |

1. Usecase diagrams:

# 11. Scenarios

Success Scenarios

* Successful application for ½ Day Leave
* Successful application for 1 or more days leaves.
* Successful Cancellation of Pending leave
* Successful Leave application for FF against Comp.Off

Failure Scenarios

* CL Exceeds 3 Continues Days
* CL Combined with other type of leave
* SL Suffixed With PL (PL is already submitted)
* PL Prefixed With SL (SL is already submitted)
* ML prefixed with SL (SL is already submitted)
* ML prefixed with PL (PL is already submitted)
* FF Sandwiched Between Any Leave (CL/SL/PL/holidays)

# 12. ISSUES

* What if the user marked the wrong option in the session section.
* What if the user wants to apply the leave where attendance is already marked.

# 13. INTER SYSTEM DEPENDENCIES

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

Use case name : Alternate Flow 1

**Impact:** If the user tries to enter the to date without entering the from calendar option given the permission is not granted.

# 14. ASSUMPTIONS

1. User is having an acess to Organization’s Intranet.

2.The leave application form is available within 15 sec on entering the URL.

3. All the modules on the Leave application form are visible and fuctional.

REVISION HISTORY OF THE WORK PRODUCT

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