



UE21CS341A - Software Engineering
Test Plan Documentation

FLIGHT BOOKING SYSTEM

Team #: 7

PES2UG21CS449	SACHIN RAMESH KULKARNI
PES2UG21CS441	S RAMANUJAN

PES2UG21CS456	SAI LITHISH DEGAPUDI
PES2UG21CS458	SAI RAHUL REDDY KONA

Formatting Guidelines : Submit in pdf format

Naming convention : **TestDoc SRN1-SRN2-SRN3-SRN4** (Write SRNs in ascending order)

Instructions:

- 1: Prepare at least 8-10 test cases for each implemented use case (functional requirements) as per the below given template which should include Unit, Integration and System Test cases.
- 2: Carry out manual testing for all the test cases and populate the columns Actual Result and Test Result.

Template of a Test case:

Test Case ID	Name of Module	Test Case Description	Pre-conditions	Test Steps	Test Data	Expected Results	Actual Results	Test Result

- Test Case ID : Each test case should be represented by a unique ID. To indicate test types, follow some convention like "UT_01" indicating "Unit Testing - Test Case#1."

- Name of the module : Specify the name of the main module or submodule being tested
- Test Case Description : Specify the summary or test purpose in brief
- Pre- Conditions : Any requirement that needs to be done before execution of this test case.
- Test Steps : Mention all the steps in detail and specify the order in which it is to be executed.
- Test Data : Input for the test case to be executed. Specify different data sets with precise values to be used as input. (create test case for both valid and invalid inputs)
- Expected Results : Mention the expected results including error or precise messages that should be displayed on screen
- Actual Results : After execution of test case fill this column with the result obtained
- Test Result (Pass/Fail) : Mark this field as “fail” if the actual result is not same as expected result else mark as “pass”.

TEST CASES:

i) **Unit test cases (UTC):** all the test cases mentioned below for individual modules.

1.USER REGISTRATION AND AUTHENTICATION

Test Case ID	Module	Description	Pre-conditions	Test Steps	Expected Result	Actual Result	Test Result
UTC_01	user authentication module	Valid Login	User has an existing account with a known password.	User enters a correct username and password and logs in.	User is successfully authenticated and gains access to the account.	User is successfully authenticated and gains access to the account.	Pass
UTC_02	user authentication module	Invalid Password	User has an existing account.	User enters a valid username but an incorrect password.	Authentication fails, and an error message about incorrect password is shown.	Authentication fails, and an error message about incorrect password is shown.	Pass
UTC_03	user authentication module	Non-existent User	User does not have an account in the system.	User attempts to log in with an email that	Authentication fails, and a message about non-existent	Authentication fails, and a message about non-existent	Pass

				is not registered.	account is displayed.	account is displayed.	
UTC_04	user authentication module	Account Locked	User's account is locked due to multiple failed login attempts.	User attempts to log in to a locked account.	Login attempt is denied, and a message about the locked account is shown.	Login attempt is denied, and a message about the locked account is shown.	Pass
UTC_05	user authentication module	Session Persistence	User has successfully logged in and has an active session.	User closes the browser and reopens it to check if the session persists.	Session persists, and the user does not need to log in again.	Session persists, and the user does not need to log in again.	Pass

2. BOOKING CONFIRMATION

Test Case ID	Module	Description	Pre-conditions	Test Steps	Expected Result	Actual Result	Test Result
UTC_06	Booking Module	Valid Flight Booking	User is authenticated and selects a valid flight.	User completes all steps in the booking process and confirms the booking.	Booking is successful and a confirmation is provided.	Booking is successful and a confirmation is provided.	Pass
UTC_07	Booking Module	Booking with Invalid Credit Card	User selects a flight and enters payment details.	User tries to pay with an invalid credit card number.	Booking fails and a payment error is displayed.	Booking fails and a payment error is displayed.	Pass
UTC_08	Booking Module	Booking without Selecting Seat	User goes through the booking process but doesn't select a seat.	User attempts to complete the booking without seat selection.	Booking is completed but without a seat assignment, prompting for seat selection.	Booking is completed but without a seat assignment, prompting for seat selection.	Pass
UTC_09	Booking Module	Booking with Special Requests	User selects a flight and requests special services (e.g., wheelchair).	User adds special requests to the booking and proceeds to payment.	Booking is successful with special requests noted.	Booking is successful with special requests noted.	Pass
UTC_10	Booking Module	Booking for Multiple Passengers	User is booking flights for	User enters details for multiple passengers	Booking is successful for all passengers and	Booking is successful for all passengers and	Pass

			more than one person.	and completes the booking.	confirmation is sent.	confirmation is sent.	
UTC_11	Booking Module	Booking with Expired Promo Code	User selects a flight and applies a promo code that is expired.	User applies an expired promo code during the booking process.	Booking process alerts the user that the promo code is expired.	Booking process alerts the user that the promo code is expired.	Pass
UTC_12	Booking Module	Booking without Enough Balance	User selects a flight but the account balance is insufficient for the booking.	User attempts to finalize the booking without enough balance in the payment method.	Booking cannot be completed due to insufficient funds and an error message is displayed.	Booking cannot be completed due to insufficient funds and an error message is displayed.	Pass
UTC_13	Booking Module	Booking with Incorrect Passenger Details	User enters incorrect details for one or more passengers.	User enters incorrect passenger details and tries to complete the booking.	Booking is halted and a message requests the correction of passenger details.	Booking is halted and a message requests the correction of passenger details.	Pass

3. ADMIN FUNCTIONALITIES

Test Case ID	Module	Description	Pre-conditions	Test Steps	Expected Result	Actual Result	Test Result
UTC_14	Admin Module	Valid Admin Login	Admin is on the login page.	Admin enters correct credentials and logs in.	Admin is granted access and directed to the admin dashboard.	Admin is granted access and directed to the admin dashboard.	Pass
UTC_15	Admin Module	Admin Access to User Management	Admin is logged in and has access to the user management panel.	Admin navigates to the user management section.	Admin can view and manage all user accounts.	Admin can view and manage all user accounts.	Pass
UTC_16	Admin Module	Admin Creation of a New Flight	Admin is logged in and has permissions to create flights.	Admin fills in the new flight details and saves the entry.	New flight is successfully added to the system.	New flight is successfully added to the system.	Pass
UTC_17	Admin Module	Admin Edits a Flight	Admin has selected an	Admin updates flight	The selected flight details	The selected flight details are	Pass

			existing flight to edit.	details and commits the changes.	are updated in the system.	updated in the system.	
UTC_18	Admin Module	Admin Deletes a Flight	Admin has selected an existing flight to delete.	Admin confirms the deletion of a flight entry.	The flight is successfully removed from the system.	The flight is successfully removed from the system.	Pass
UTC_19	Admin Module	Admin Generates Reports	Admin is logged in and requires to generate reports for the company.	Admin selects criteria for report generation and initiates the process.	Reports are generated based on the selected criteria.	Reports are generated based on the selected criteria.	Pass
UTC_20	Admin Module	Admin Manages Promotions	Admin has the authority to manage promotional offers.	Admin creates a new promotional offer and publishes it.	The new promotion is available to users.	The new promotion is available to users.	Pass
UTC_21	Admin Module	Admin Responds to Customer Inquiries	Customer inquiries are pending and admin panel has functionality to respond.	Admin selects a customer inquiry and responds appropriately.	Customer receives a response to their inquiry.	Customer receives a response to their inquiry.	Pass

4. PAYMENT PROCESSING

Test Case ID	Module	Description	Pre-conditions	Test Steps	Expected Result	Actual Result	Test Result
UTC_22	Payment Module	Credit Card Payment Success	User has selected a flight and entered valid passenger details.	User enters valid credit card details and confirms payment.	Payment is processed successfully and a confirmation message with ticket details is displayed.	Payment is processed successfully and a confirmation message with ticket details is displayed.	Pass
UTC_23	Payment Module	Debit Card Payment Success	User has chosen a flight and provided valid passenger information.	User inputs valid debit card information and completes payment.	Payment goes through successfully and a ticket confirmation is shown.	Payment goes through successfully and a ticket confirmation is shown.	Pass
UTC_24	Payment Module	Payment with	User has enough reward	User selects to pay with reward	Payment is accepted and a confirmation	Payment is accepted and a confirmation	Pass

		Reward Points	points for a flight ticket.	points and confirms the transaction.	message is displayed.	message is displayed.	
UTC_25	Payment Module	Promo Code Application	User has a valid promo code.	User applies the promo code before making the payment.	The promo code is applied, discount is received, and the payment is successful.	The promo code is applied, discount is received, and the payment is successful.	Pass
UTC_26	Payment Module	Expired Credit Card	User selects a flight and enters passenger details.	User enters an expired credit card number and attempts to pay.	Payment is not processed and an error message regarding the expired card is displayed.	Payment is not processed and an error message regarding the expired card is displayed.	Pass
UTC_27	Payment Module	Incorrect CVV	User has selected their flight and entered all necessary details.	User inputs a valid card number but an incorrect CVV code and tries to pay.	Payment fails and an error message about the incorrect CVV is shown.	Payment fails and an error message about the incorrect CVV is shown.	Pass
UTC_28	Payment Module	Insufficient Reward Points	User has selected to pay with reward points but does not have enough.	User attempts to complete the payment with insufficient points.	Transaction fails and an error message about insufficient points is displayed.	Transaction fails and an error message about insufficient points is displayed.	Pass
UTC_29	Payment Module	Invalid Promo Code	User has an expired or invalid promo code.	User tries to apply the promo code before payment.	The system rejects the promo code and an error message is shown.	The system rejects the promo code and an error message is shown.	Pass

ii) Integration test cases (ITC):

Test Case ID	Modules	Test Case Description	Test Steps	Test Data	Expected Results	Actual Results	Test Result
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IT_01	User Authentication Module + Booking Module	Verify the integration between user authentication and flight booking functionality.	1. Authenticate the user. 2. Attempt to book a flight.	Valid user credentials, valid flight details.	User should be able to book a flight after successful authentication.	User is able to book a flight after successful authentication.	Pass
IT_02	Flight Search Module + Booking Module	Verify the integration between flight search and booking functionality.	1. Search for available flights. 2. Select a flight and proceed with the booking.	Valid search criteria, valid flight details.	User should be able to book the selected flight after searching.	User is able to book the selected flight after searching.	Pass
IT_03	User Authentication Module + Payment Gateway Integration	Verify the integration between user authentication and payment gateway.	1. Authenticate the user. 2. Proceed with the booking and make a payment.	Valid user credentials, valid booking details, valid payment information.	User should be able to make a payment and confirm the booking after successful authentication.	User is able to make a payment and confirm the booking after successful authentication.	Pass
IT_04	Flight Search Module + Payment Gateway Integration	Verify the integration between flight search and payment gateway.	1. Search for available flights. 2. Select a flight and proceed with the payment.	Valid search criteria, valid flight details, valid payment information.	User should be able to make a payment for the selected flight after searching.	User is able to make a payment for the selected flight after searching.	Pass
IT_05	Booking Module + Notification System Integration	Verify the integration between booking and notification system.	1. Successfully book a flight. 2. Verify if the booking confirmation notification is sent.	Valid booking details.	User should receive a booking confirmation notification after successful booking.	User receives a booking confirmation notification after successful booking.	Pass

iii) System test cases (STC):

Test Case ID	Module	Test Case Description	Test Steps	Test Data	Expected Results	Actual Results	Test Result
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STC_01	Flight Booking System	Verify end-to-end functionality of flight booking system.	1. User registration and authentication 2. Search for available flights 3. Select a flight and proceed with the booking 4. Confirm the booking and receive the confirmation.	Valid user registration details, valid search criteria, valid flight details.	User should be able to successfully register, search for a flight, book the flight, and receive a confirmation.	User successfully registers, searches for a flight, books the flight, and receives a confirmation.	Pass
STC_02	Payment Gateway Integration	Verify the integration between the booking system and the payment gateway.	1. Proceed with the booking and make a payment 2. Validate the payment process.	Valid booking details, valid payment information.	Payment should be processed successfully, and the booking should be confirmed.	Payment is processed successfully, and the booking is confirmed.	Pass