Test Summary and Execution Report

Personal Project		Test Types:	End-to-End (E2E), Functional, Validation, and Negative Testing.
		Test Methodologies:	Exploratory Testing, Manual, Scenario-based
		Pre-condition	App launched with 14 seats (2 Business, 12 Economy), ticket start no. 1,000,000, console I/O active.
Project Name:	Airplane Ticket Java Application	Dependencies:	SeatingPlan, SeatReserver, SellTicket, Passenger modules; DS1–DS9 datasets.
Module Name:	Ticket Purchase Flow	Test Priority	P1 – Core ticket issue and exit flows P2 – Input validation and loop repetition
Release Version:	v1.0	Total Requirements	11
Test Designed by:	Garam Yoon	Covered Requirements	BR: 01, 02, 04, 07 NO: 02, 04
Test Designed date:	2025-09-02	Total Test Cases	8
Test Executed by:	Garam Yoon	Tested Requirements	6
Test Execution date:	2025-09-02	Executed Tests	8

Legends

Test Data Sets Definition (DS):

DS1: "Y", "y", "Yes" - Affirmative input used for Yes-type prompts.
DS2: "N", "n", "No" - Negative input used for No-type prompts.
DS3: (empty) - Null or empty input used for validation testing.
DS4: "quit", 123 - Invalid input for prompt validation testing.
DS5: "Garam", "garam" - Sample first name input.
DS6: "Yoon", "yoon" - Sample last name input.
DS7: "GRY", "gry" - Sample initial input.
DS8: 1 - Frequent flyer number.

Prompt Map:

Q1: "Do you want to purchase a ticket?"
Q2-B: "Do you want BUSINESS class?"
Q2-E: "Do you want ECONOMY class?"
Q3: "First name?"
Q4: "Last name?"
Q5: "Initial?"
Q6-F: "Are you a frequent flyer?"
Q6-E: "Are you an airline employee?"
Q7: "Frequent flyer number?"

Output Messages:

OUTPUT: Ticket issued: 1000001 for seat 1B at $750.0 - Standard success message after ticket issuance.
Validation Message: "Please answer Y or N" - Prompt validation message for incorrect input.

Repetition Map:

1R: Repeat 1 - First repetition due to invalid input.
2R: Repeat 2 - Second repetition due to invalid input.
3R: Repeat 3 - Third and final repetition before termination.

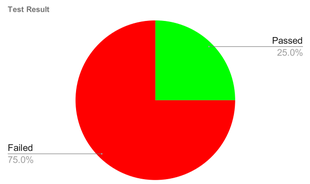
Loop Definition:

L1: Loop1 - First full execution of the purchase cycle.
L2: Loop2 - Second purchase cycle iteration.
L3: Loop3 - Third loop or system re-entry iteration.

Test Metrics Summary

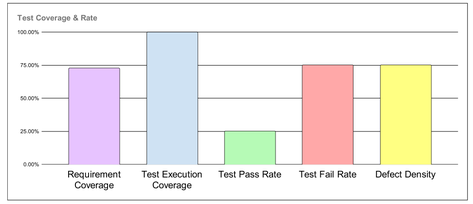
Test Result

Passed	2
Failed	6
Total Bugs	6



Test Coverage & Rate

Requirement Coverage	72.73%
Test Execution Coverage	100.00%
Test Pass Rate	25.00%
Test Fail Rate	75.00%
Defect Density	75.00%



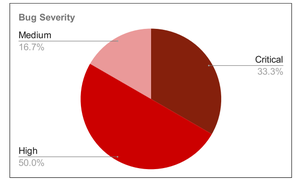
Defect Summary

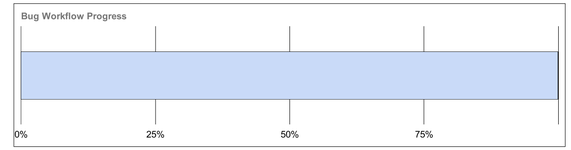
Bug Workflow Progress

Open	6
Assigned	0
In Progress	0
Resolved	0
Verified	0
Reopened	0
Closed	0

Bug Severity

Critical	33.33%
High	50.00%
Medium	16.67%
Low	0.00%





Feature (Class)	Module (Method)	Depth	Case Type	Priority	Pre-Condition	Test Case ID	Requirement ID (s)	Test Title	Test Summary	Test Steps	Test Data (Data Sets)	Expected Result	Post-condition	Actual Result	Status	Retested Date	Bug ID	Reference	Status	Severity	ScreenShot
Prompt	Console Main Loop	Q1–Q7, L1	E2E		App started; 14 Seats available; Initial Seat Num (1,000,000); Console I/O OK	E2E-Y-ISSUE-L1-TC01	BR-01, BR-02, BR-04, BR-07, NO-02, NO-04	E2E – Yes Flow & Ticket Issue (L1)	Validates full YES flow from Q1 to Q7 and Ticket issue.	1) Launch app. 2) Q1: DS1 3) Q2-B: DS1 4) Q3: DS5 5) Q4: DS6 6) Q5: DS7 7) Q6: DS1 8) Q7: DS8	DS1, DS5, DS6, DS7, DS8	1) Ticket issued (Business, Seat 1B, Price $750 2) Ticket Num 1,000,001 3) Displays Q1, L2	Ticket issued; seat state updated; ready for next purchase	Work as expected	Pass	2025-09-03	N/A	N/A	N/A	N/A	N/A	N/A
Prompt	Console Main Loop	Q1-Q7, L2	E2E		App started; 13 Seats available; Initial Seat Num (1,000,001); Console I/O OK	E2E-Y-ISSUE-L1-TC02	BR-01, BR-02, BR-04, BR-07, NO-02, NO-04	E2E - Yes Flow & Ticket Issue (L2)	Validates full YES flow from L1 to L2, and Ticket issue	1) Execute: E2E-Y-ISSUE-L1-TC01 2) Q1: DS1 3) Q2-B: DS1 4) Q3: DS5 5) Q4: DS6 6) Q5: DS7 7) Q6: DS1 8) Q7: DS8	DS1, DS5, DS6, DS7, DS8	1) Ticket issued (Business, Seat 1A, Price $750 2) Ticket Num 1,000,002 3) Redisplays Q1	Ticket issued; seat state updated; ready for next purchase	**1) Ticket issued (Business, Seat 1B, Price $750** **2) Ticket Num 1,000,002** 3) Redisplays Q1		2025-09-03	BUG-PROMPT-TC02-001	N/A	Open		BUG-PROMPT-TC02-001.png
Prompt	Console Main Loop	Exit L1	E2E		App started; 13 Seats available; Initial Seat Num (1,000,001); Console I/O OK	E2E-Y-ISSUE-L1-TC03	BR-01, NO-04	E2E - Yes Flow & Exit at L1	Verify system terminates loop and displays correct flight manifest after Q1, L2 (Q1: DS2)	1) Execute: E2E-Y-ISSUE-L2-TC01 2) Q1(1-3R): DS2	DS1, DS2, DS5, DS6, DS7, DS8	1) Displays flight manifest 2) 13 Seats availables 3) Seat 1B with "Unavailable", user name(DS5,DS6) 4) Terminates loop, system	Flight manifest; seat state updated; 13 Seats available; Seat 1B unavailable; Terminates loop; Terminates system	1) BUG-PURCHASE-TC05-004 occurs 2) Displays flight manifest **3) 14 Seats availables** **4) No seat with "Unavailable" or DS5/DS6** 5) Terminates loop, system		2025-09-04	BUG-PROMPT-TC03-002	N/A	Open		BUG-PROMPT-TC03-002.png
Prompt	Console Main Loop	Exit L2	E2E		App started; 12 Seats available; Seat 1B,1A unavailable; Initial Seat Num (1,000,001); Console I/O OK	E2E-Y-ISSUE-L1-TC04	BR-01, NO-02, NO-04	E2E - Yes Flow & Exit at L2	Verify system displays correct flight manifest and terminates after L2 (Q1 = No)	1) Execute: E2E-Y-ISSUE-L1-TC01 two times 2) Q1(1-3R): DS2	DS1, DS2, DS5, DS6, DS7, DS9	1) Displays flight manifest 2) 12 Seats availables 3) Seat 1A,1B with "Unavailable", user name(DS5, DS6) 4) Terminates loop, system	Flight manifest; seat state updated; 12 Seats available; Seat 1A, 1B unavailable; Terminates loop; Terminates system	1) BUG-PURCHASE-TC05-004 occurs 2) Displays flight manifest **3) 14 Seats availables** **4) No seat with "Unavailable" or DS5/DS6** 5) Terminates loop, system		2025-09-04	BUG-PROMPT-TC04-003	N/A	Open		BUG-PROMPT-TC04-003.png
Prompt	Console Main Loop	Pre-Loop	E2E		App started; Console I/O OK	E2E-Y-ISSUE-L1-TC05	NO-04	E2E – No Flow & Quit App before L1	Validates system ends after No to Q1.	1) Launch app. 2) Q1(1-3R): DS2	DS2	1) Displays Flight Manifest 2)14 Seats available; 3) Terminates app	App closed	**1) Reprompts Q1 2 more with appended Validation Message** 2) Then displays Flight Manifest 3)14 Seats available; 4) Terminates app		2025-09-04	BUG-PROMPT-TC05-004	N/A	Open		BUG-PROMPT-TC05-004.png
Prompt	Console Main Loop	Q2-E, L1	E2E		App started; 14 Seats available; Initial Seat Num (1,000,000); Console I/O OK	E2E-Y-ISSUE-L1-TC06	NO-04	E2E - Yes to Economy (L1)	Validates system prompts Q3 (Q2: DS2)	1) Launch app 2) Q1: DS1 2) Q2-B: Input DS2	DS1, DS2	1) Prompts Q2-E directly	Prompts Q2-E directly	**1) Reprompts Q2-B 2 more with appended Validation Message** (same as Q1 repetition issue) 2) Then prompts Q2-E		2025-09-04	BUG-PROMPT-TC06-005	Ref: BUG-PURCHASE-TC05-004	Open	Medium	BUG-PROMPT-TC06-005.png
Prompt	Console Main Loop	Pre-Loop	E2E	P3	App started; 14 Seats available; Initial Seat Num (1,000,000); Console I/O OK	E2E-Y-ISSUE-L1-TC07	NO-04	E2E – Null & Start App	Validates system prompts Validation Message for null input	1) Launch app. 2) Q1(1-2R): DS3	DS3	Reprompts Q1 for the valid input	Reprompts Q1 for the valid input	Reprompts Q1 for the valid input	Pass	2025-09-05	N/A	N/A	N/A	N/A	N/A
Prompt	Console Main Loop	Pre-Loop	E2E	P3	App started; Console I/O OK	E2E-Y-ISSUE-L1-TC08	NO-04	E2E – Invalid & Start App	Validates system prompts Validation Message for invalid input	1) Launch app. 2) Q1(1-3R): DS4	DS4	1) Reprompts Q1 with Validation Message 2) Displays Flight Manifest 2) 14 Seats available; 3) Terminates app"	Q1 with Validation Message; Displays Flight Manifest; 14 Seats available; Terminates app	**1) Reprompts Q1 2 more with appended Validation Message** 2) Then displays Flight Manifest 3)14 Seats available; 4) Terminates app		2025-09-05	BUG-PROMPT-TC08-006	Ref: BUG-PURCHASE-TC05-004	Open		BUG-PROMPT-TC08-006.png