Airline Reservation System Test Plan

Version 1.0

March 21, 2025

Authored by:

Tianze Shen: tshe0049@student.monash.edu

Sen Cao: scao0030@student.monash.edu

Ruwang Lin: rlin0044@student.monash.edu

Airline Reservation System Test Plan

Approvals
Table of Contents

1.   Introduction

1.1.   *Test Objectives*

The objectives of this testing is to validate some of the methods in the system working correctly and their isolation.

1.2.   *Scope Of Testing*

The unit test include the "saleByAge" method int and all the gets() and sets() methods in "passenger" class. Other classes like "Flight" is excluded because it's structure and contents are similar to "passenger" class. Given "TicketSystem" class, due to its fields are not public, they are not able to work in another package, so it si also exclued.

2.   Approach

- All unit tests will be automated using Junit5
- Each test cases will be isolated, ensuring no dependencies on external system.

2.1.   *Assumption/Constraints*

2.1.1.   Assumptions

- All the planned methods will be ready for unit test on March 21, 2025.
- The negative intergal of age will not be successfully tested because of the code provided

2.1.2.   Constraints

- After the combination of buyticket class and chooseticket class The Access Modifiers of fields in the new class prevents us to test their related methods in anther package

2.2.   *Test Tools*

Junit5 is applied in this unit testing.

3.   Plan

3.1.   *Test Team*

Name	Level of involvement	Contributions

Sen Cao	3 hrs/wk	Create the Github repository, create the maven project, combine BuyTicket class with ChooseTicket class into one class, write 1 test case, write 1 section of test plan
Ruwang Ling	3 hrs/wk	Write 9 test cases, write 2 sections of test plan, submit the assignment files
Tianze Shen	3 hrs/wk	Modified the pom.xml, write 2 test cases, write the file indicating contribution made by team members, write 1 section of test plan

3.2. *Test Environment*

Hardware
(1) iMAC
Apple M3 Pro
18GB of 1600MHz LPDDR3 onboard memory
500GB (5400-rpm) hard drive
(1) MECHREVO
AMD Ryzen 7 8845H w/ Radeon 780M Graphics   3.80 GHz
RAM 24GB DDR5 5600MHz
(1) LENOVO
AMD Ryzen 7 8845H w/ Radeon 780M Graphics   3.80 GHz
RAM 32.0 GB DDR5 5600MHz

Network
WLAN: eduroam

Software
IntelliJ IDEA

4.   Test Procedures

4.1. *Test Execution*

4.1.1.   Test Cases

Test Number	Test Name	Purpose of Test	Input	Expected Output	Actual Output	Status
0001	testPriceWhenPassengerIsBetween1And15	validate ticket price when passenger is between 1 and 15	14	5	5	Pass
0002	testPriceWhenPassengerOver60	validate ticket price when passenger is over 60	60	0	0	Pass
0003	testPriceWhenPassengerBetween15And60	validate ticket price when passenger is between 15 and 60	15	11	11	Pass
0004	testEmail	Test set and get method of Email	test@example.com	test@example.com	test@example.com	Pass
0005	testFirstName	Test set and get method of First Name	John	John	John	Pass
0006	testSecondName	Test set and get method of Second Name	Doe	Doe	Doe	Pass
0007	testPhoneNumber	Test set and get method of Phone Number	+123456789	+123456789	+123456789	Pass
0008	testCardNumbr	Test set and get method of Card Number	1234-5678-9012-3456	1234-5678-9012-3456	1234-5678-9012-3456	Pass
0009	testSecurityCode	Test set and get method of Security Code	123	123	123	Pass
0010	testPassport	Test set and get method of Passport	AB1234567	AB1234567	AB1234567	Pass
0011	testGender	Test set and get method of Gender	Male	Male	Male	Pass
0012	testAge	Test set and get method of Age	25	25	25	Pass