



**NANYANG
TECHNOLOGICAL
UNIVERSITY**

SINGAPORE

Test Cases for “Go Where GaiGai” Web Application

Version: 1.0

Last Modified: 8/11/2022

Revision History

Version	Implemented By	Revision Date	Approved By	Approval Date	Description of Changes
1.0	Jasper, Tze Chuan	8/11/22	Eugene Lim	11/11/22	Initial Test Cases

Tables of Contents

Purpose of Document	4
Unit Testing	5
Test Case 1	5
Test Case 2	5
Test Case 3	6
Test Case 4	7
Test Case 5	7
Test Case 6	8
Integration Testing	9
Test Case 1	10
Test Case 2	11
Test Case 3	12
Test Case 4	13
System Testing	15
Test Case 1	15
Test Case 2	16
Test Case 3	17
Test Case 4	18
Summary	19

Purpose of Document

A test case document contains sets of instructions performed on the subject software (Go Where GaiGai) in order to simulate the use and operation of code implemented. The document is used to determine if the software satisfies the functional and non-functional requirements proposed during the project planning phase.

Test case writing is a major activity within the testing phase of the Software Development Life Cycle (SDLC). The test cases will be designed to scrutinize the features in Go Where GaiGai, and ensure that they satisfy all related standards, guidelines and customer requirements. Test cases will also help the project team identify errors and/or defects present within the system, so that the Development Team may address them before the product is shipped to its users.

Test coverage is defined as the measure of completeness in software testing. The test coverage will be used to determine how much of the code written by the Development Team is exercised when testing is conducted, and how well the test cases cover the software requirements once testing has concluded. Instead of covering each requirement only at the level of the test, the team will cover all requirements. A test configuration represents a specific use-case of a test. Covering test configurations with requirements provides the team with a better understanding of what goes right and wrong in multiple use-cases.

This document lists down all test cases, categorized into unit tests, integration tests and system tests. In unit testing, individual components of the software are tested for their correctness of input and output values. Integration tests are then performed after unit testing, to ensure that multiple components of the system interact with each other as designed. An incremental top-down approach has been used to conduct integration tests on Go Where GaiGai. This ensures that usability is not compromised for identification of edge cases, and testing larger use-cases. System testing is the process of testing all the integrated hardware and software components of our system to verify that the application meets its specified requirements.

Unit Testing

Test Case 1

Test Case No.	UT1	Test Name	Import existing planner
System	Go Where GaiGai	Sub-System	Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	User imports an existing MyPlanner.txt from their local drive.		

Pre-Conditions	Planner.txt must exist within user's device.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to "Planner" tab	Show the planner.	Show the planner.	Pass
2	Click on "Import" button.	User can choose a .txt file to upload in File Explorer.	User can choose a .txt file to upload in File Explorer.	Pass
3	Select "MyPlanner.txt".	MyPlanner.txt file is selected and updates the planner.	MyPlanner.txt file is selected and updates the planner.	Pass

Post-Conditions	Plans from "MyPlanner.txt" are loaded onto the Planner webpage.
------------------------	---

Test Case 2

Test Case No.	UT2	Test Name	Export planner
System	Go Where GaiGai	Sub-System	Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022

Description	User exports the planner.txt from “Planner” webpage.
--------------------	--

Pre-Conditions	User must have existing plans on the “Planner” webpage. User must enable the download file function on their device.
-----------------------	---

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to “Planner” tab.	Show the planner.	Show the planner.	Pass
2	Click on “Export” button.	Exports the planner into a .txt file.	Exports the planner into a .txt file.	Pass

Post-Conditions	User will have a text file called “MyPlanner.txt” that contains all their previously added plans.
------------------------	---

Test Case 3

Test Case No.	UT3	Test Name	Remove existing plans
System	Go Where GaiGai	Sub-System	Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Remove an existing planned item from the “Planner” webpage.		

Pre-Conditions	Planner should have at least 1 existing record.
-----------------------	---

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to “Planner” tab.	Show the planner.	Show the planner.	Pass
2	Click on “bin” icon at the right column of planned item.	The planned item is removed from the planner.	The planned item is removed from the planner.	Pass

Post-Conditions	Planned item will be removed from “Planner” webpage.
------------------------	--

Test Case 4

Test Case No.	UT4	Test Name	Search location from View Map
System	Go Where GaiGai	Sub-System	View Map
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Search for location in the “View Map” search bar.		

Pre-Conditions	User must be at “View Map” webpage.
-----------------------	-------------------------------------

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to “View Map” tab.	Able to view the map.	Able to view the map.	Pass
2	Type in “Singapore Zoo” in search bar.	Able to see autocomplete search result.	Able to see autocomplete search result.	Pass
3	Type in “80 Mandai Lake Rd” in search bar.	Able to see autocomplete search result.	Able to see autocomplete search result.	Pass
4	Type in “729826” in search bar.	Able to see autocomplete search result.	Able to see autocomplete search result.	Pass

Post-Conditions	The map will show the corresponding location’s pin.
------------------------	---

Test Case 5

Test Case No.	UT5	Test Name	Add to planner function from View Map
----------------------	-----	------------------	---------------------------------------

System	Go Where GaiGai	Sub-System	View Map & Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Add a location to the “Planner” webpage from “View Map”.		

Pre-Conditions	User should have already typed in a nearby location in “View Map” webpage.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Start from Test Case 4 Step 2/3/4.	Able to search for the location.	Able to search for the location.	Pass
2	Click on “Singapore Zoo” map pin.	Popup shows the location details.	Able to show the location details on a popup.	Pass
3	Click “add to planner” button.	“Singapore Zoo” will be added into the “Planner” webpage.	Able to view “Singapore Zoo” at “Planner” webpage.	Pass

Post-Conditions	“Singapore Zoo” will be added into the “Planner” webpage.
------------------------	---

Test Case 6

Test Case No.	UT6	Test Name	Add to planner function from View Locations (card)
System	Go Where GaiGai	Sub-System	View Location & Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Add a location to the “Planner” webpage from “View Locations”.		

Pre-Conditions	User must be at “View Locations” webpage.
-----------------------	---

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to “View Locations”.	Show a list of information cards.	Able to show a list of information cards.	Pass
2	Click “Add to Planner” button on “Singapore Zoo” information card.	“Singapore Zoo” will be added into the “Planner” webpage.	Able to view “Singapore Zoo” at “Planner” webpage.	Pass

Post-Conditions	“Singapore Zoo” will be added into the “Planner” webpage.
------------------------	---

Integration Testing

Test Case 1

Test Case No.	IT1	Test Name	Session Data Sync (View Map)
System	Go Where GaiGai	Sub-System	View Map, Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Check if session data is in sync between “View Map” and “Planner” webpages		

Pre-Conditions	Users must be connected to the internet.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to “View Map” webpage and key in any address.	Able to see autocomplete search result.	Able to see autocomplete search result.	Pass
2	Click on any map pin.	Popup shows the location details.	Able to show the location details on a popup.	Pass
3	Click the “Add to planner” button.	The location will be added into the “Planner” webpage.	The location will be added into the “Planner” webpage.	Pass
4	Navigate to “Planner” webpage and check if location is added into planner.	The planner should contain the location that was added from Step 3.	The planner should contain the location that was added from Step 3.	Pass

Post-Conditions	Users can export the updated planner into a MyPlanner.txt file locally.
------------------------	---

Test Case 2

Test Case No.	IT2	Test Name	Session Data Sync (View Locations)
System	Go Where GaiGai	Sub-System	View Locations, Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Check session data is in sync between “View Locations” and “Planner” webpages		

Pre-Conditions	Users must be connected to the internet.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to “View Locations”.	Show a list of information cards.	Able to show a list of information cards.	Pass
2	Click “Add to planner” button on any location card	The location will be added into the “Planner” webpage.	The location will be added into the “Planner” webpage.	Pass
3	Navigate to “Planner” webpage and check if location is added into planner	The planner should contain the location that was added from Step 2.	The planner should contain the location that was added from Step 2.	Pass

Post-Conditions	Users can export the updated planner into a MyPlanner.txt file locally.
------------------------	---

Test Case 3

Test Case No.	IT3	Test Name	Imported Data Sync
System	Go Where GaiGai	Sub-System	Planner
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Check session data is in sync between all webpages after importing "MyPlanner.txt".		

Pre-Conditions	There is an existing working "MyPlanner.txt" on user's device.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to "Planner" webpage and click "import" button	Users can choose a .txt file to upload in File Explorer.	Users can choose a .txt file to upload in File Explorer.	Pass
2	Select "MyPlanner.txt"	Every location details in "MyPlanner.txt" should be loaded into "Planner" webpage	Every location details in "MyPlanner.txt" should be loaded into "Planner" webpage	Pass
3	Navigate to any other webpage and back to "Planner" webpage	"MyPlanner.txt" should still be loaded and no changes made unless users add/remove location	"MyPlanner.txt" should still be loaded and no changes made unless users add/remove location	Pass

Post-Conditions	Every location details in "MyPlanner.txt" will be stored as session data.
------------------------	---

Test Case 4

Test Case No.	IT4	Test Name	Import / Export Data sync
System	Go Where GaiGai	Sub-System	Planner, View Map & View Locations
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Check "MyPlanner.txt" data can be modified and saved by using the import and export button in the "Planner" webpage.		

Pre-Conditions	"MyPlanner.txt" should have at least 1 existing record..
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Navigate to "Planner" webpage and click "import" button.	Users should be able to navigate to the webpage successfully.	User navigates to the webpage successfully.	Pass
2	Select "MyPlanner.txt".	Every location details in "MyPlanner.txt" should be loaded into "Planner" webpage.	Every location details in "MyPlanner.txt" are loaded into "Planner" webpage.	Pass
3	Remove "Singapore Zoo" in planner.	"Singapore Zoo" record should be removed from user's session data.	"Singapore Zoo" record was removed from the user's session data.	Pass
4	Navigate to the "View Map" or "View Locations" webpage.	User should be able to navigate to the respective webpage.	User is able to navigate to the respective webpage.	Pass
5	Add any location card to the planner.	A new record should be saved into the user's session data.	A new record is saved into the user's session data.	Pass
6	Navigate back to "Planner" webpage.	The new record should be shown in the "Planner" webpage.	The new record should be shown in the "Planner"	Pass

			webpage.	
7	User Click on “Export” button.	User should be able to export all location details successfully into “MyPlanner .txt”.	User is able to export all location details successfully into “MyPlanner .txt”.	Pass

Post-Conditions	“MyPlanner.txt” successfully downloaded to the user's device and able to open to view content.
------------------------	---

System Testing

Test Case 1

Test Case No.	ST1	Test Name	Smoke Test
System	Go Where GaiGai	Sub-System	-
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Users should be able to navigate around webpages.		

Pre-Conditions	Users must be connected to the internet.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	User clicks on “Planner” at the navigation bar.	User reaches the “Planner” webpage.	User reaches the “Planner” webpage.	Pass
2	User clicks on “View Map” at the navigation bar.	User reaches the “View Map” webpage.	User clicks the “View Map” webpage.	Pass
3	User clicks on “View Locations” at the navigation bar.	User reaches the “View Locations” webpage.	User reaches the “View Locations” webpage.	Pass
4	User clicks on “Go Where GaiGai” Logo above the navigation bar.	User reaches the homepage of Go Where GaiGai.	User reaches the homepage of Go Where GaiGai.	Pass

Post-Conditions	Users are able to use the features of the application.
------------------------	--

Test Case 2

Test Case No.	ST2	Test Name	Stress Test
System	Go Where GaiGai	Sub-System	-
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Multiple users are able to use the application concurrently.		

Pre-Conditions	Users must be connected to the internet.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	At least 15,000 users can use the web application.	Application runs smoothly for all users and does not crash.	Application runs smoothly for all users and does not crash.	Pass

Post-Conditions	All 15,000 users are able to navigate and use features of the application without problem.
------------------------	--

Test Case 3

Test Case No.	ST3	Test Name	Scalability Test
System	Go Where GaiGai	Sub-System	View Map
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Yelp API should be able to process multiple queries from many users without crashing.		

Pre-Conditions	Yelp's database must have existing data.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	At least 15,000 users are using "search" function in "View Map" web page.	Yelp API should be able to extract the data for all 15,000 users without crashing.	Yelp API is able to extract the data for all 15,000 users without crashing.	Pass

Post-Conditions	Application is able to process data to display it on the "View Map" web page.
------------------------	---

Test Case 4

Test Case No.	ST4	Test Name	Security Test
System	Go Where GaiGai	Sub-System	-
Designed By	QA Team	Design Date	8/11/2022
Executed By	QA Engineer	Execution Date	11/11/2022
Description	Users should not be able to edit applications without authorization.		

Pre-Conditions	Users must be connected to the internet.
-----------------------	--

Step #	Step Description	Expected Result	Actual Result	Status (Pass/Fail)
1	Import a MyPlanner.txt file that contains malicious content to bypass the application's security measures.	Application should recognize malicious content and reject the file for import.	Application recognizes malicious content and rejects the file for import.	Pass

Post-Conditions	Users are unable to get through to edit any application.
------------------------	--

Summary

Test Case	Test Data	Expected Result	Actual Result	Status
UT1	Local Host Data	User imports an existing MyPlanner.txt from their local drive.	Plans from “MyPlanner.txt” are loaded onto the Planner webpage.	Pass
UT2	Session Data Local Host Data	User exports the planner.txt from “Planner” webpage.	User will have a text file called “MyPlanner.txt” that contains all their previously added plans.	Pass
UT3	Yelp API Data	Remove an existing planned item from the “Planner” webpage.	Planned item will be removed from “Planner” webpage.	Pass
UT4	Session Data	Search for location in the “View Map” search bar.	The map will show the corresponding location’s pin.	Pass
UT5	Yelp API Data Session Data	Add a location to the “Planner” webpage from “View Map”.	“Singapore Zoo” will be added into the “Planner” webpage.	Pass
UT6	Session Data	Add a location to the “Planner” webpage from “View Locations”.	“Singapore Zoo” will be added into the “Planner” webpage.	Pass
IT1	Session Data	Check if session data is in sync between “View Map” and “Planner” webpages	Users can export the updated planner into a MyPlanner.txt file locally.	Pass

IT2	Session Data	Check session data is in sync between “View Locations” and “Planner” webpages	Users can export the updated planner into a MyPlanner.txt file locally.	Pass
IT3	Local Host Data	Check session data is in sync between all webpages after importing “MyPlanner.txt”.	Every location details in “MyPlanner.txt” will be stored as session data.	Pass
IT4	Session Data Local Host Data	“MyPlanner.txt” successfully downloaded to the user's device and able to open to view content.	“MyPlanner.txt” successfully downloaded to the user's device and able to open to view content.	Pass
ST1	Smoke Test	Users should be able to navigate around webpages.	Users should be able to navigate around webpages.	Pass
ST2	Stress Test	Application runs smoothly for all users and does not crash.	Application runs smoothly for all users and does not crash.	Pass
ST3	Scalability Test	Yelp API should be able to extract the data for all 15,000 users without crashing.	Yelp API is able to extract the data for all 15,000 users without crashing.	Pass
ST4	Security Test	Users should not be able to edit applications without authorization.	Users are unable to get through to edit any application.	Pass