

6.Test Plan, Test Design Specifications and Test Cases

6.1 Introduction

6.1.1 Version Control

Version No	Description of Changes	Date
1.0	First Version	7 April, 2022
2.0	Second Version	2 June, 2022

6.1.2 Overview

The purpose of this test plan is to establish a structured approach for conducting tests on the Smart Trip application. It serves as a reference for team members, outlining which features will be tested or omitted, as well as providing details on planned test cases, workflows, and testing methods.

6.1.3 Scope

This test plan document includes test cases for Sign up, Login, Location, Ranking, Reviewing (Making and Showing Review), Navigation (Checking Location), Filtering, and Listing Facilities. This document will go over each of these functions in depth. The test requirements, test scenarios, and how tests will be passed or failed, and test scenarios are also explained in this document. The document's goal is to clarify what should be tested and how test cases should be executed.

6.1.4 Terminology

Acronym	Definition
SRS	Software Requirements Specification
SDD	Software Design Descriptions

6.2 Features to Be Tested

This section lists and gives a brief description of all the major features to be tested. For each major feature there will be a Test Design Specification added at the end of this document.

6.2.1 User Operations

User actions are actions that users are allowed to do. These processes include registration, login, profile setup. It includes seeing toilets and their locations, giving a rating, commenting and filtering.

6.3 Features Not to Be Tested

We will not be able to test the mobile application on the iOS platform because iOS can be tested only with a MacBook.

We are not going to do any test that may overuse the database since mentors from SONO provided us an AWS Student Account and this kind of account has limited access to database.

6.4 Item Pass/Fail Criteria

Exit Criteria

- 80% of the test cases are executed
- 80% of the test cases passed
- All High Priority test cases passed

6.5 References

[1] Team-11-SRS

[2] Team-11-SDD

6.6 Test Design Specifications

6.6.1 User Operations

6.6.1.1 Open Page (UO.OP)

This is the page that the user will encounter when entering the application for the first time. This page is the page where the user will log in or be directed to the sign-up screen if s/he is not registered.

6.6.1.2 Login (UO.LG)

Users enter their email and password. After clicking the log-in button, it redirects to the homepage.

6.6.1.3 Sign Up (UO.SU)

Users who want to register for the application enter their username, email, and password. Then the user presses the register button and the profile is created successfully after this process.

6.6.1.4 Add Rating (UO.AR)

Users rate the facilities out of 5 stars. These scores are kept and updated by taking their averages.

6.6.1.5 Write Review (UO.WR)

Users review the facility they have visited by clicking the review section.

6.6.1.6 Show Reviews and Ratings (UO.SR)

The reviews and ratings can be accessed by clicking the show reviews button.

6.6.1.7 Do Filtering (UO.DF)

It includes the features that the user wants to be in the location they go to (shopping mall, babysitting place, disabled toilet, etc.). The user clicks on the desired filtering feature or features and selects the save button. The eligible ones are then listed.

6.6.1.8 Allow Location (UO.AL)

The application must access the user location. Permission is requested by the operating system to access the user's location. Users allow the app to use location services.

6.6.1.9 Profile Setup (UO.PS)

Users can change their profile photo and can log out from the profile setup page.

6.6.1.10 Trip Mode Page (UO.TMP)

The general map page includes the main functionalities of the program. Viewing maps, searching facilities, routing, writing reviews/rating, profile setup button, and trip mode button are functionalities of the page. Thanks to the trip mode, after you enter the user's final destination, a direct transfer to the navigation takes place.

6.6.2 Test Cases

6.6.2.1 Open Page

TC_ID	Requirement	Priority	Scenario Description
UO.OP.01		H	Whether the login button works
UO.OP.02		H	Whether the sign up button works

6.6.2.2 Login Part

TC_ID	Requirement	Priority	Scenario Description
UO.LG.01		H	Enter valid e-mail and valid password
UO.LG.02		H	Enter invalid e-mail and valid password
UO.LG.03		H	Enter valid e-mail and invalid password
UO.LG.04		H	Enter valid e-mail and blank password
UO.LG.05		H	Enter blank e-mail and valid password
UO.LG.05		H	Whether the 'Forgot Password' works

6.6.2.3 Sign Up Part

TC_ID	Requirement	Priority	Scenario Description
UO.SU.01		H	Enter valid username, valid e-mail and valid password
UO.SU.02		H	Enter valid username, existing e-mail and valid password
UO.SU.03		H	Enter blank username, valid e-mail and valid password
UO.SU.04		H	Enter valid username, blank e-mail and valid password
UO.SU.05		H	Enter valid username, valid e-mail and blank password
UO.SU.06		H	Whether the "already have an account 'login'" button works

6.6.2.4 General Part

TC_ID	Requirement	Priority	Scenario Description
UO.AR.01		H	Add a rating
UO.WR.01		H	Add a comment
UO.SR.01		H	Show rating and review
UO.DF.01		H	List facilities by requirement filters
UO.DF.02		H	Mark near facilities by user location
UO.TMP.01		M	Trip mode
UO.AL.01		H	Allowing location services
UO.PS.01		L	Changing profile setup

7. Detailed Test Cases

7.1 UO.OP.01

TC_ID	UO.OP.01
Purpose	Whether the login button works
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	The user must have an internet connection and open the application.
Procedure	[A01]Check your internet connection
	[A02]Open the app
	[A03]Click the login button
	[V01]Observe that the screen should switch to the login screen
Cleanup	Page refreshes

7.2 UO.OP.02

TC_ID	UO.OP.02
Purpose	Whether the sign up button works
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	The user must have an internet connection and open the application.
Procedure	[A01]Check your internet connection
	[A02]Open the app
	[A03]Click the sign up button
	[V01]Observe that the screen should switch to the sign up screen
Cleanup	Page refreshes

7.3 UO.LG.01

TC_ID	UO.LG.01
Purpose	Enter valid e-mail and valid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	Sign up test cases should pass.
Setup	Database connection should be setup. A user should be created.
Procedure	[A01]Go to login page.
	[A02]Enter valid e-mail.
	[A03]Enter valid password.
	[A04] Click on the 'login' button
	[V01]Observe that the login was successful and redirected to the home page.
Cleanup	Logout

7.4 UO.LG.02

TC_ID	UO.LG.02
Purpose	Enter invalid e-mail and valid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	Sign up test cases should pass.
Setup	Database connection should be setup. A user should be created.
Procedure	[A01]Go to login page. [A02]Enter invalid e-mail. [A03]Enter valid password. [A04] Click on the 'login' button [V01]Observe that the login is unsuccessful and the invalid e-mail or password warning appears.
Cleanup	Page refreshes

7.5 UO.LG.03

TC_ID	UO.LG.03
Purpose	Enter valid e-mail and invalid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	Sign up test cases should pass.
Setup	Database connection should be setup. A user should be created.
Procedure	[A01]Go to login page. [A02]Enter valid e-mail. [A03]Enter invalid password. [A04] Click on the 'login' button [V01]Observe that the login is unsuccessful and the invalid e-mail or password warning appears.
Cleanup	Page refreshes

7.6 UO.LG.04

TC_ID	UO.LG.04
Purpose	Enter valid e-mail and blank password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	Sign up test cases should pass.
Setup	Database connection should be setup. A user should be created.
Procedure	[A01]Go to login page. [A02]Enter valid e-mail. [A03]Enter blank password. [A04] Click on the 'login' button [V01]Observe that the login is unsuccessful and password cannot be empty warning.
Cleanup	Page refreshes

7.7 UO.LG.05

TC_ID	UO.LG.05
Purpose	Enter blank e-mail and valid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	Sign up test cases should pass.
Setup	Database connection should be setup. A user should be created.
Procedure	[A01]Go to login page. [A02]Enter blank e-mail. [A03]Enter valid password. [A04] Click on the 'login' button [V01]Observe that the login is unsuccessful and email cannot be empty warning.
Cleanup	Page refreshes

7.8 UO.LG.06

TC_ID	UO.LG.06
Purpose	Whether the 'Forgot Password' works
Requirements	No
Priority	H
Estimated Time Needed	1-2 min.
Dependency	
Setup	Login page should be open.
Procedure	[A01]Press 'forgot your password?' button. [A02]Enter valid e-mail address. [A03]Click send button. [V01]Observe that page please check your email for password recovery.
Cleanup	Exit

7.9 UO.SU.01

TC_ID	UO.SU.01
Purpose	Enter valid username, valid e-mail and valid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	Database connection should be setup and user must be connected to the internet.
Procedure	[A01]Go to sign up page. [A02]Enter valid username. [A03]Enter valid e-mail. [A04]Enter valid password. [A04] Click on the 'finalize' button [V01]Observe that the sign up was successful and redirected to the login page.
Cleanup	Log out

7.10 UO.SU.02

TC_ID	UO.SU.02
Purpose	Enter valid username, existing e-mail and valid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	Database connection should be setup and user must be connected to the internet.
Procedure	[A01]Go to sign up page. [A02]Enter valid username. [A03]Enter existing e-mail. [A04]Enter valid password. [A04] Click on the 'finalize' button [V01]Observe that the sign up was unsuccessful and "You have already registered with this mail." warning should appear.
Cleanup	Page refreshes

7.11 UO.SU.03

TC_ID	UO.SU.03
Purpose	Enter blank username, valid e-mail and valid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	Database connection should be setup and user must be connected to the internet.
Procedure	[A01]Go to sign up page. [A02]Enter blank username. [A03]Enter valid e-mail. [A04]Enter valid password. [A04] Click on the 'finalize' button [V01]Observe that the sign up was unsuccessful and "Username cannot be empty." warning should appear.
Cleanup	Page refreshes

7.12 UO.SU.04

TC_ID	UO.SU.04
Purpose	Enter valid username, blank e-mail and valid password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	Database connection should be setup and user must be connected to the internet.
Procedure	[A01]Go to sign up page. [A02]Enter valid username. [A03]Enter blank e-mail. [A04]Enter valid password. [A04] Click on the 'finalize' button [V01]Observe that the sign up was unsuccessful and "Email cannot be empty." warning should appear.
Cleanup	Page refreshes

7.13 UO.SU.05

TC_ID	UO.SU.05
Purpose	Enter valid username, valid e-mail and blank password
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	Database connection should be setup and user must be connected to the internet.
Procedure	[A01]Go to sign up page.
	[A02]Enter valid username.
	[A03]Enter valid e-mail.
	[A04]Enter blank password.
	[A04] Click on the 'finalize' button
	[V01]Observe that the sign up was unsuccessful and "Password cannot be empty." warning should appear.
Cleanup	Page refreshes

7.14 UO.SU.06

TC_ID	UO.SU.06
Purpose	Whether the "already have an account 'login'" button works
Requirements	
Priority	H
Estimated Time Needed	5-10 sec.
Dependency	
Setup	Database connection should be setup and user must be connected to the internet.
Procedure	[A01]Go to sign up page.
	[A02]Click on the 'login' button
	[V01]Observe redirected to the login page.
Cleanup	Log out

7.15 UO.AR.01

TC_ID	UO.AR.01
Purpose	Add a rating
Requirements	The user must have selected a facility.
Priority	H
Estimated Time Needed	1-2 min.
Dependency	Sign up and login test cases should be work
Setup	The review screen needs to be opened and must be connected to the Internet.
Procedure	[A01] Sign in.
	[A02] Select Facility/Toilet.
	[A03] Rate the toilet out of 5 stars.
	[A04] Press the Rate now button.
	[A05] Compare properties before and after average rating (stars).
	[A06] Check the database to see if a review has been added.
	[V01] Observe the reviews on other devices have changed.
Cleanup	Return to the general map page or log out.

7.16 UO.WR.01

TC_ID	UO.WR.01
Purpose	Add a Comment
Requirements	The user must have selected a facility.
Priority	H
Estimated Time Needed	1 min.
Dependency	Sign up and login test cases should be work
Setup	The review screen needs to be opened and must be connected to the Internet.
Procedure	[A01] Sign in.
	[A02] Select Facility/Toilet.
	[A03] Choose one of the comments.
	[A04] Press the Rate now button.
	[A05] Compare features before and after comments.
	[A06] Check the database to see if a review has been added.
	[V01] Observe the reviews on other devices have changed.
Cleanup	Return to the general map page or log out.

7.17 UO.SR.01

TC_ID	UO.SR.01
Purpose	Show rating and review
Requirements	No.
Priority	H
Estimated Time Needed	0-50 sec.
Dependency	Sign up and login test cases should work and also location access should be allowed.
Setup	The user needs to search and be connected to the internet.
Procedure	[A01] Login.
	[A02] Select Facility/Restroom.
	[A03] Press the marker that comes to the searched point.
	[A04] Compare the reviews appearing in the reviews section with those in the database
	[V01] Observe that they should match.
Cleanup	Return to the general map page or log out.

7.18 UO.DF.01

TC_ID	UO.DF.01
Purpose	List facilities by requirement filters
Requirements	No.
Priority	H
Estimated Time Needed	1-2 min.
Dependency	Signup and login should work and also UO.AL.O1 should work
Setup	Login to the application.
Procedure	[A01] Click filter button.
	[A02] Select requirements.
	[A03] Click filter.
	[V01] Observe List is popped up and facilities with given requirements are shown in the list.
Cleanup	Return to the general map page or log out.

7.19 UO.DF.02

TC_ID	UO.DF.02
Purpose	Mark near facilities by user location
Requirements	No.
Priority	H
Estimated Time Needed	1-2 min.
Dependency	Signup and login should work and also UO.AL.O1 should work
Setup	Enable location services and login to the application.
Procedure	[A01] Click filter button.
	[A02] Click find facilities near me button.
	[VO1] Observe near facilities are marked.
Cleanup	Return to the general map page or log out.

7.20 UO.AL.01

TC_ID	UO.AL.01
Purpose	Allowing Location Services
Requirements	Device must support GPS
Priority	H
Estimated Time Needed	0-50 sec.
Dependency	No
Setup	Feature requested by the operating system
	[A01] Allow location services
	[V01] Observe that allow location services
Cleanup	Exit

7.21 UO.PS.01

TC_ID	UO.PS.01
Purpose	Changing Profile Setup
Requirements	User must be logged in
Priority	L
Estimated Time Needed	1 min.
Dependency	Signup and login should work
Setup	User must be able to see general map page and click profile setup icon at the alt menu
Procedure	[A01] User clicks profile setup button
	[A02] User clicks change avatar button
	[A02.01] User confirms the changes and redirect to the general map page
	[A03] User logs out
	[V01] Observe the profile picture have changed.
Cleanup	Log out

7.22 UO.TMP.01

TC_ID	UO.TMP.01
Purpose	Trip mode
Requirements	User must be logged in
Priority	M
Estimated Time Needed	1-2 min.
Dependency	Location services must be enabled
Setup	User must be able to see general map page and click trip mode icon at the alt menu
Procedure	[A01] User enters the final destination
	[A02] User clicks trip mode button
	[A03] User is directed to the navigation
	[V01] Observe location information is correct
Cleanup	Log out

8. Test Results

8.1 Individual Test Results for User Operations

TC_ID	Priority	Date Run	Run by	Result	Explanation
UO.OP.01	H	26/05/2023	UMUT BERKAY ÜNAL	PASS	User can press login button.
UO.OP.02	H	26/05/2023	BAŞAK ÜNAL	PASS	User can press sign up button.
UO.LG.01	H	26/05/2023	UMUT BERKAY ÜNAL	PASS	User can login successfully.
UO.LG.02	H	26/05/2023	BAŞAK ÜNAL	PASS	User cannot login with invalid mail.
UO.LG.03	H	26/05/2023	SENA SİMAY YAŞAR	PASS	User cannot login with invalid password.
UO.LG.04	H	26/05/2023	MÜNTEHA NUR YAVUZ	PASS	User cannot login without entering the password.
UO.LG.05	H	26/05/2023	SENA SİMAY YAŞAR	PASS	User cannot login without entering the email.
UO.LG.06	H	26/05/2023	MÜNTEHA NUR YAVUZ	FAIL	If the user forgot his password, s/he must re-register.
UO.SU.01	H	26/05/2023	MÜNTEHA NUR YAVUZ	PASS	User can sign up successfully.
UO.SU.02	H	26/05/2023	BAŞAK ÜNAL	FAIL	User can re-register with existing mail.
UO.SU.03	H	26/05/2023	SENA SİMAY YAŞAR	PASS	User cannot register without entering username.
UO.SU.04	H	26/05/2023	MÜNTEHA NUR YAVUZ	PASS	User cannot register without entering email.
UO.SU.05	H	26/05/2023	SENA SİMAY YAŞAR	PASS	User cannot register without entering password.
UO.SU.06	H	26/05/2023	BAŞAK ÜNAL	PASS	If the user is registered, s/he can click the login button.
UO.AR.01	H	26/05/2023	UMUT BERKAY ÜNAL	PASS	User can give points for facilities.
UO.WR.01	H	26/05/2023	MÜNTEHA NUR YAVUZ	PASS	User can write a comment on the facilities.
UO.SR.01	H	26/05/2023	SENA SİMAY YAŞAR	PASS	User sees the facilities' ratings.
UO.DF.01	H	26/05/2023	MÜNTEHA NUR YAVUZ	PASS	User sees the facilities of the filtering feature s/he want.
UO.DF.02	H	26/05/2023	SENA SİMAY YAŞAR	PASS	User can access the facilities nearby according to their location
UO.AL.01	H	26/05/2023	BAŞAK ÜNAL	PASS	User must allow location access to use the app
UO.PS.01	L	26/05/2023	UMUT BERKAY ÜNAL	PASS	User can change his/her avatar
UO.TMP.01	M	26/05/2023	BAŞAK ÜNAL	PASS	User can trip by selecting the destination and departure point.

8.2 Summary Of Test Results

Priority	Number of TCs	Executed	Passed
H	20	20	18
M	1	1	1
L	1	1	1
Total	22	22	20

We have executed 22 test cases and 2 test cases are passed. Also, 20 high test, 1 medium test and 1 low test cases are passed. Exit criteria is met.