



ÇANKAYA UNIVERSITY FACULTY OF ENGINEERING
COMPUTER ENGINEERING DEPARTMENT

Test Plan, Test Design Specifications and Test Cases

Version 1

CENG 408

Innovative System Design and Development II

ATADAN

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1. INTRODUCTION

1.1 Version Control

Version No	Description of Changes	Date
1.0	First Version	Mar 26, 2023

1.2 Overview

The usability, efficiency and error margins of the specified use cases of ATADAN Application will be tested.

1.3 Scope

This document explains the testing stages and test details of the ATADAN Application. The goal is to help the application develop and reach its most advanced state by testing.

1.4 Terminology

Acronym	Definition
SU	Sign Up
AT	Analyze Plant Type
AD	Analyze Disease
DL	Contribute Data Labeling
EP	Edit Profile
AP	Add and Take Photo to Album
FC	Find the Closest Pesticide Dealer
SM	Show Natural and Chemical Solution Methods
CA	Check the Agricultural Weather Forecast

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.

2.1 Sign Up (SU)

The feature that allows the registered user to sign up to the system using mail and password.

2.2 Analyze Plant Type (AT)

The feature that detects the type of plant whose photo is uploaded to the system.

2.3 Contribute Data Labeling (DL)

The feature that allows the obtained photo data to be classified and stored.

2.4 Edit Profile (EP)

The feature that allows users to edit their profiles on the system.

2.5 Add and Take Photo to Album (AP)

The feature that allows users to edit their profiles on the system.

2.6 Find the Closest Pesticide Dealer (FC)

The feature that allows users to find closest pesticide dealer.

2.7 Show Natural and Chemical Solution Methods (SM)

The feature that allows users to see natural and chemical solution methods.

2.8 Ask to an Agricultural Engineer (AE)

The feature that allows users to ask to an agricultural engineer.

2.9 Check the Agricultural Weather Forecast (CA)

The feature that allows users to edit their profiles on the system.

3. ITEM PASS/FAIL CRITERIA

3.1 Exit Criteria

Describe under what conditions the testing of the product is considered successful. Some examples are:

- 100% of the test cases are executed
- 95% of the test cases passed
- All High and Medium Priority test cases passed

4. REFERENCES

- [1] <https://github.com/CankayaUniversity/ceng-407-408-2022-2023-ATADAN/wiki/SDD>
- [2] <https://github.com/CankayaUniversity/ceng-407-408-2022-2023-ATADAN/wiki/SRS>

5. TEST DESIGN SPECIFICATIONS

5.1 Sign Up (SU)

5.1.1 Subfeatures to be tested

5.1.1.1 User (SU.US)

Person trying to register to the server to use the application.

5.1.1.2 Sign Up Button (SU.SUB)

After providing the necessary information, the button to be clicked on to register.

5.1.1.3 Input Display (SU.ID)

Screen output that allows the user to properly enter the required information.

5.1.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
SU.US.01	2.1	H	Enter a user id and password
SU.US.02	2.1	H	Enter a user id and blank password
SU.US.03	2.1	H	Enter a blank user id and password
SU.US.04	2.1	H	Enter a blank user id and blank password

TC ID	Requirements	Priority	Scenario Description
SU.SUB.01	2.1	M	Click button 1 time
SU.SUB.02	2.1	S	Click button more than 1 time rapidly

TC ID	Requirements	Priority	Scenario Description
SU.ID.01	2.1	S	Change display window size

5.2 Analyze Plant Type (AT)

5.2.1 Subfeatures to be tested

5.2.1.1 Taking Photo (AT.TP)

Taking the photo instantly and uploading it to the system for review.

5.2.1.2 Uploading Photo(AT.UP)

Uploading the previously taken photo from the device memory to the system.

5.2.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
AT.TP.01	2.2	H	Taking a plant photo
AT.TP.02	2.2	H	Taking a non plant photo

TC ID	Requirements	Priority	Scenario Description
AT.UP.01	2.2	H	Uploading a plant photo
AT.UP.02	2.2	H	Uploading a non plant photo

5.3 Contribute Data Labeling (DL)

5.3.1.1 Adding Data (DL.AD)

Describe in 1-2 sentence this sub feature.

5.3.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
DL.AD.01	2.3	H	Adding valid data
DL.AD.02	2.3	H	Adding unvalid data

5.4 Edit Profile (EP)

5.4.1 Subfeatures to be tested

5.4.1.1 User (EP.US)

Person trying to edit his profile in the application.

5.4.1.2 Edit Profile Button (EP.EPB)

Button that the user uses to edit their profile.

5.4.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
EP.US.01	2.4	H	Change user name
EP.US.02	2.4	H	Change password

TC ID	Requirements	Priority	Scenario Description
EP.EPB.01	2.4	M	Click button 1 time
EP.EPB.02	2.4	S	Click button more than 1 time rapidly

5.5 Add and Take Photo to Album (AP)

5.5.1 Subfeatures to be tested

5.5.1.1 Add Photo (AP.AP)

Add a previously taken photo to the system.

5.5.1.2 Take Photo (AP.TP)

Taking a new photo using the app.

5.5.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
AP.AP.01	2.5	H	Add photo
AP.AP.02	2.5	H	Add another file

TC ID	Requirements	Priority	Scenario Description
AP.TP.01	2.5	H	Take photo
AP.TP.02	2.5	H	Take non plant photo

5.6 Find the Closest Pesticide Dealer (FC)

5.6.1 Subfeatures to be tested

5.6.1.1 Enter Location (FC.EL)

User enters his address in the system.

TC ID	Requirements	Priority	Scenario Description
FC.EL.01	2.6	M	Enter a location
FC.EL.02	2.6	M	Enter something else

5.7 Show Natural and Chemical Solution Methods (SM)

5.7.1 Subfeatures to be tested

5.7.1.1 Show Solution Button (SM.SS)

Button to show solution methods.

TC ID	Requirements	Priority	Scenario Description
SM.SS.01	2.7	M	Click button 1 time
SM.SS.02	2.7	S	Click button more than 1 time rapidly

5.8 Check the Agricultural Weather Forecast (CA)

5.8.1 Subfeatures to be tested

5.8.1.1 Set Parameter (CA.SP)

Add a previously taken photo to the system.

5.8.1.2 Check Weather Button (CA.CW)

Taking a new photo using the app.

5.8.2 Test Cases

Here list all the related test cases for this feature

TC ID	Requirements	Priority	Scenario Description
CA.SP.01	2.9	H	Set parameter
CA.SP.02	2.9	H	Set wrong parameter

TC ID	Requirements	Priority	Scenario Description
CA.CW.01	2.9	M	Click button 1 time
CA.CW.02	2.9	S	Click button more than 1 time rapidly

6. Detailed Test Cases

6.1 SU.US.01

TC_ID	SU.US.01
Purpose	Enter a user id and password
Requirements	2.1
Priority	High.
Estimated Time Needed	3 Minutes
Dependency	Warning test cases should pass
Setup	An user should be created.
Procedure	[A01] Go to sign up page.
	[A02] Enter a user id.
	[A03] Enter the password for this user
	[A04] Click on the “Sign Up” button.
	[V01] Observe that the signing up is successful and the user page appears
	-
Cleanup	Logout

6.2 SU.US.02

TC_ID	SU.US.02
Purpose	Enter a user id and blank password
Requirements	2.1
Priority	High.
Estimated Time Needed	2 Minutes
Dependency	Warning test cases should pass
Setup	A warning must be show up.
Procedure	[A01] Go to sign up page.
	[A02] Enter a valid user id.
	[A03] Leave password empty.
	[A04] Click on the “Sign UP” button.
	[V01] Observe that the warning window works properly.
	-
Cleanup	Close warning

6.3 SU.US.03

TC_ID	SU.US.03
Purpose	Enter a blank user id and password
Requirements	2.1
Priority	High.
Estimated Time Needed	2 Minutes
Dependency	Warning test cases should pass
Setup	A warning must be show up.
Procedure	[A01] Go to sign up page.
	[A02] Leave user id empty.
	[A03] Enter random password for this user
	[A04] Click on the “Sign Up” button.
	[V01] Observe that the warning window works properly.
	-
Cleanup	Close warning

6.4 SU.US.04

TC_ID	SU.US.04
Purpose	Enter a blank user id and blank password
Requirements	2.1
Priority	High.
Estimated Time Needed	2 Minutes
Dependency	Warning test cases should pass
Setup	A warning must be show up.
Procedure	[A01] Go to sign up page.
	[A02] Leave user id empty.
	[A03] Leave password empty.
	[A04] Click on the “Sign Up” button.
	[V01] Observe that the warning window works properly.
	-
Cleanup	Close warning

6.5 SU.SUB.01

TC_ID	SU.SUB.01
Purpose	Click sign up button 1 time
Requirements	2.1
Priority	Medium.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must gets darker.
Procedure	[A01] Go to sign up page.
	[A02] Click on the “Sign Up” button.
	[V01] Observe that the sign up button works properly.
	-
Cleanup	Click blank

6.6 SU.SUB.02

TC_ID	SU.SUB.02
Purpose	Click sign up button more than 1 time rapidly
Requirements	2.1
Priority	Small.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must gets darker rapidly.
Procedure	[A01] Go to sign up page.
	[A02] Click on the “Sign Up” button.
	[V01] Observe that the sign up button works properly.
	-
Cleanup	Click blank

6.7 SU.ID.01

TC_ID	SU.ID.01
Purpose	Change display window size
Requirements	2.1
Priority	Small.
Estimated Time Needed	2 Minutes
Dependency	Display test cases should pass
Setup	Display size must change.
Procedure	[A01] Go to sign up page.
	[A02] Click on the corner of display.
	[A03] Change size
	[V01] Observe that the display size changes properly.
	-
Cleanup	Leave page

6.8 AT.TP.01

TC_ID	AT.TP.01
Purpose	Taking a plant photo
Requirements	2.2
Priority	High.
Estimated Time Needed	4 Minutes
Dependency	Photo take test cases should pass
Setup	A photo must taken.
Procedure	[A01] Go to camera.
	[A02] Set frame.
	[A03] Click on the circle button.
	[V01] Observe that the photo taken.
	-
Cleanup	Exit camera

6.9 AT.TP.02

TC_ID	AT.TP.02
Purpose	Taking a non plant photo
Requirements	2.2
Priority	High.
Estimated Time Needed	3 Minutes
Dependency	Photo take test cases should pass
Setup	A photo must taken but not accepted.
Procedure	[A01] Go to camera.
	[A02] Set frame.
	[A03] Click on the circle button.
	[V01] Observe that the photo taken and not accepted.
	-
Cleanup	Exit camera

6.10 AT.UP.01

TC_ID	AT.UP.01
Purpose	Uploading a plant photo
Requirements	2.2
Priority	High.
Estimated Time Needed	3 Minutes
Dependency	Photo upload test cases should pass
Setup	A photo must uploaded.
Procedure	[A01] Go to gallery.
	[A02] Select photo.
	[V01] Observe that the photo Uploaded.
	-
Cleanup	Exit gallery

6.11 AT.UP.02

TC_ID	AT.UP.02
Purpose	Uploading a non plant photo
Requirements	2.2
Priority	High.
Estimated Time Needed	3 Minutes
Dependency	Photo upload test cases should pass
Setup	A photo must uploaded but not accepted.
Procedure	[A01] Go to gallery.
	[A02] Select photo.
	[V01] Observe that the photo Uploaded but not accepted.
	-
Cleanup	Exit gallery

6.12 DL.AD.01

TC_ID	DL.AD.01
Purpose	Adding valid data
Requirements	2.3
Priority	High.
Estimated Time Needed	4 Minutes
Dependency	Data test cases should pass
Setup	A data must added.
	[A01] Select data.
	[V01] Observe that the data added.
	-
Cleanup	Go to menu

6.13 DL.AD.02

TC_ID	DL.AD.02
Purpose	Adding unvalid data
Requirements	2.3
Priority	High.

Estimated Time Needed	4 Minutes
Dependency	Data test cases should pass
Setup	A data must added but not accepted.
	[A01] Select data.
	[V01] Observe that the data added but not accepted.
	-
Cleanup	Go to menu

6.14 EP.US.01

TC_ID	EP.US.01
Purpose	Change user name
Requirements	2.4
Priority	High.
Estimated Time Needed	2 Minutes
Dependency	Warning test cases should pass
Setup	An user name should be changed.
Procedure	[A01] Go to edit profile page.
	[A02] Enter a new user id.
	[A03] Click on the “Change User Name” button.
	[V01] Observe that the user name change is successful and the user page appears
	-
Cleanup	Logout

6.15 EP.US.02

TC_ID	EP.US.02
Purpose	Change password
Requirements	2.4
Priority	High.
Estimated Time Needed	2 Minutes
Dependency	Warning test cases should pass
Setup	A password should be changed.
Procedure	[A01] Go to edit profile page.
	[A02] Enter a new password.
	[A03] Leave password empty.
	[A04] Click on the “Change Password” button.
	[V01] Observe that the password change is successful and the user page appears
	-
Cleanup	Logout

6.16 EP.EPB.01

TC_ID	EP.EPB.01
Purpose	Click change button 1 time
Requirements	2.1
Priority	Medium.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Change button must gets darker.
Procedure	[A01] Go to edit profile page.
	[A02] Click on the “Change” button.
	[V01] Observe that the sign up button works properly.
	-
Cleanup	Click blank

6.17 EP.EPB.02

TC_ID	EP.EPB.02
Purpose	Click change button more than 1 time rapidly
Requirements	2.1
Priority	Small.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Change button must gets darker rapidly.
Procedure	[A01] Go to edit profile page.
	[A02] Click on the “Change” button.
	[V01] Observe that the sign up button works properly.
	-
Cleanup	Click blank

6.18 AP.AP.01

TC_ID	AP.AP.01
Purpose	Adding suitable photo from gallery
Requirements	2.5
Priority	High.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must gets darker.
Procedure	[A01] Go to Home after the login page
	[A02] Click on the “Open Gallery” button
	[V01] Choose the appropriate photo from the gallery.
	-
Cleanup	Go to menu

6.19 AP.AP.02

TC_ID	AP.AP.02
Purpose	Adding unsuitable photo from gallery

Requirements	2.5
Priority	High.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must gets darker.
Procedure	[A01] Go to Home after the login page
	[A02] Click on the “Open Gallery” button
	[V01] Choose the unsuitable photo from the gallery.
	-
Cleanup	Go to menu

6.20 FC.EL.02

TC_ID	FC.EL.01
Purpose	Finding Closest Pesticide Dealer
Requirements	2.6
Priority	Medium.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must gets darker.
Procedure	[A01] Go to Closest Pesticide Dealer page.
	[A02] Connect to Google Maps.
	[V01] Show the suitable pesticide dealers.
	-
Cleanup	Go to menu

6.21 FC.EL.02

TC_ID	FC.EL.02
Purpose	Finding Closest Pesticide Dealer
Requirements	2.6
Priority	Medium.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must gets darker.
Procedure	[A01] Go to Closest Pesticide Dealer page.
	[A02] Connect to Google Maps.
	[V01] Show the unsuitable pesticide dealers.
	-
Cleanup	Go to menu

6.22 AE.AQ.01

TC_ID	AE.AQ.01
Purpose	Ask a plant question to engineer
Requirements	2.8
Priority	High.

Estimated Time Needed	3 Minutes
Dependency	Data test cases should pass
Setup	A question must asked.
	[A01] Question Asked
	[V01] Engineer Answers Question
	-
Cleanup	Go to menu

6.23 AE.AQ.02

TC_ID	AE.AQ.02
Purpose	Ask irrelevant question to engineer
Requirements	2.8
Priority	High.
Estimated Time Needed	3 Minutes
Dependency	Data test cases should pass
Setup	A question must asked but not accepted.
	[A01] Question Asked
	[V01] Question not reach engineer
	-
Cleanup	Go to menu

6.24 CA.SP.01

TC_ID	CA.SP.01
Purpose	Setting valid data
Requirements	2.9
Priority	High.
Estimated Time Needed	3 Minutes
Dependency	Data test cases should pass
Setup	A parameter must added.
	[A01] Set parameter.
	[V01] Observe that the parameter set.
	-
Cleanup	Go to menu

6.25 CA.SP.02

TC_ID	CA.SP.02
Purpose	Setting unvalid data
Requirements	2.9
Priority	High.

Estimated Time Needed	3 Minutes
Dependency	Data test cases should pass
Setup	A parameter must be set but not accepted.
	[A01] Set wrong parameter.
	[V01] Observe that the parameter is set but not accepted.
	-
Cleanup	Go to menu

6.26 CA.CW.01

TC_ID	CA.CW.01
Purpose	Click sign up button 1 time
Requirements	2.9
Priority	Medium.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must get darker.
Procedure	[A01] Go to Check the Agricultural Weather Forecast page.
	[A02] Click on the "Check Weather" button.
	[V01] Observe that the Check Weather button works properly.
	-
Cleanup	Click blank

6.27 CA.CW.02

TC_ID	CA.CW.02
Purpose	Click sign up button more than 1 time rapidly
Requirements	2.9
Priority	Small.
Estimated Time Needed	1 Minutes
Dependency	Button test cases should pass
Setup	Sign up button must get darker rapidly.
Procedure	[A01] Go to Check the Agricultural Weather Forecast page.
	[A02] Click on the "Check Weather" button.
	[V01] Observe that the Check Weather button works properly.
	-
Cleanup	Click blank