



**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

Biometric Identification based on Face and Iris Recognition

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1. INTRODUCTION

1.1 Version Control

Version No	Description of Changes	Date
1.0	First Version	March 13, 2018

1.2 Overview

The use case of Biometric Identification based on Face and Iris Recognition's system employees namely workers, and also the FIREc system has a employees' face and iris features and admin which had been determined in SRS document will be tested.

1.3 Scope

This document encapsulates the test plan of the use cases, test design specifications and the test cases correspond to test plan.

1.4 Terminology

Acronym	Definition
GUI	Graphical User Interface (GUI)

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 Graphical User Interface (GUI)

In project, graphical user interface components are used. The GUI part is divided into three parts which are Main Menu, Admin Menu. Every part of the GUI also includes smaller parts. GUI part includes testing of the functions of GUI components which are used in the project such as button, panel, text, etc.

3. ITEM PASS/FAIL CRITERIA

3.1 Exit Criteria

- 100% of the test cases are executed
- 99.9% of the test cases passed
- All High and Medium Priority test cases passed

4. REFERENCES

[1] Group14_SRS_100, March 13, 2018

[2] Group14_SDD_100, March 13, 2018

5. TEST DESIGN SPECIFICATIONS

5.1 Graphical User Interface (GUI)

5.1.1 Subfeatures to be tested

5.1.1.1 Main Menu

5.1.1.1.1 Register Button

Participant can select the register button. If Register Button is selected, the employee will fill information about him/herself, then the camera will take a photo which includes face and iris features of the employee.

5.1.1.1.2 Verify Button

Participant can select the verify button. If the face and iris data of person match is correct, it verifies.

5.1.1.1.3 Admin Login Button

Admin have to login to the system by entering password for being able to change question.

5.1.1.2 Admin Menu

5.1.1.2.1 Update Button

Participant can continue simulation by selecting the “Continue” button.

5.1.1.2.2 Approve Button

Participant can change volume by selecting the “Volume Setting” button.

5.1.1.2.3 Update an Employee Button

Participant can gain information about how to use the simulation with selecting “Display Instruction” button. This button displays a panel which includes instructions about how to use the simulation.

5.1.1.2.4 Delete an Employee Button

Participant can gain information about how to use the simulation with selecting “Display Instruction” button. This button provide to remove the employee.

5.1.1.2.5 Set Match Rate Button

Participant can gain information about how to use the simulation with selecting “Display Instruction” button. This button displays a match rate which includes matching rate of the employee.

5.1.2 Test Cases

TC ID	Requirements	Priority	Scenario Description
MM_REG_BTN.01		L	Select “REGISTER” button. After selecting, register page will be displayed.

TC ID	Requirements	Priority	Scenario Description
MM_VER_BTN.01		H	Select “Verify” button. After selecting, your face’s photo will be send to FIREc System then response of FIREc system will be appeared on the screen.

TC ID	Requirements	Priority	Scenario Description
MM_ADLG.01		H	Enter a valid password.
MM_ADLG.02		H	Enter an invalid password.

TC ID	Requirements	Priority	Scenario Description
AD_UPD_BTN.01		M	Select “UPDATE” button. After selecting, update page will be displayed.

TC ID	Requirements	Priority	Scenario Description
AD_APP_BTN.01	3.2.1	H	Select “APPROVE” button. After selecting information of the employees will be approved.
AD_UP_EMP_BTN.01	3.2.1	M	Select “UPDATE AN EMPLOYEE” button. After selecting, update an employee page will be display.
AD_DEL_EMP_BTN.01	3.2.1	M	Select “DELETE AN EMPLOYEE” button. After selecting, delete page will bi displayed.
AD_MATCH_RATE_BTN.01	3.2.1	H	Select “SET MATCH RATE” button. After selecting, matching rate will be changed.

5.2 Pages

5.2.1 Subfeatures to be tested

5.2.1.1 Register Page

To register an employee.

5.2.1.2 Update Page

Admin can update himself/herself.

5.2.1.3 Update an employee

Admin can update an employee.

5.2.1.4 Delete an employee

Admin can delete an employee.

5.2.1.5 Approve Page

Admin can approve an application.

5.2.2 Test Cases

TC ID	Requirements	Priority	Scenario Description
P_REG.01		M	User will enter his/her information then, user will click next button then system will take photo of user's face.

TC ID	Requirements	Priority	Scenario Description
P_UPD.01		L	Admin will re-enter his/her information, then admin will click next button then system will take photo of the admin's face.

TC ID	Requirements	Priority	Scenario Description
P_APP.01		H	Unanswered applications will be listed on the screen. Admin will click approve button to approve an application.
P_APP.02		H	Unanswered applications will be listed on the screen. Admin will click cancel button to cancel an application.

TC ID	Requirements	Priority	Scenario Description
P_UPD_EMP.01		L	Employees will be listed, then admin will re-enter his/her information, then admin will click next button then system will take photo of the employee's face.
P_DLT.01		M	Employees will be listed, then admin will choose an employee that will be deleted, then employee will be deleted.

5.3 Face and Iris Recognition System

5.3.1 Subfeatures to be tested

5.3.1.1 Face Recognition System

After giving image to face recognition system, it will verify or reject the image.

5.3.1.2 Iris Recognition System

After giving image to iris recognition system, it will verify or reject the image.

5.3.2 Test Cases

TC ID	Requirements	Priority	Scenario Description
F_REC.01		H	Give a valid image.
F_REC.02		H	Give an invalid image.

TC ID	Requirements	Priority	Scenario Description
I_REC.01		H	Give a valid image.
I_REC.02		H	Give an invalid image.

6. Detailed Test Cases

6.1 MM_REG_BTN.01

TC_ID	MM_REG_BTN.01
Purpose	Starts register page correctly.
Requirements	
Priority	Low
Estimated Time Needed	30 Sec.
Dependency	The program is executed.
Setup	The program should install on the computer.
Procedure	[A01] Select “Register” button from main menu.
	[V01] Register page will be displayed on the screen.
Cleanup	Go back to previous page.

6.2 MM_VER_BTN.01

TC_ID	MM_VER_BTN.01
Purpose	Starts verify system.
Requirements	
Priority	High
Estimated Time Needed	30 Sec.
Dependency	The program is executed.
Setup	The program should install on the computer.
Procedure	[A01] Select “Verify” button from the main menu.
	[V01] Verify process will be started.
Cleanup	Go back to previous page.

6.3 MM_ADLG.01

TC_ID	MM_ADLG.01
Purpose	Enter a valid password.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	-
Setup	An admin user should be created.
Procedure	[A01] Go to login page.
	[A02] Enter the valid password for the admin.
	[A03] Click on the “Login” button.
	[V01] Observe that the login is successful and the admin page appears.
Cleanup	Exit

6.4 MM_ADLG.02

TC_ID	MM_ADLG.02
Purpose	Enter an invalid password.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	-
Setup	An admin user should be created.
Procedure	[A01] Go to login page.
	[A02] Enter the invalid password for the admin.
	[A03] Click on the “Login” button.
	[V01] Observe that “Password is invalid” error message is displayed.
Cleanup	Close admin page.

6.5 AD_UPD_BTN.01

TC_ID	AD_UPD_BTN.01
Purpose	Display update page.
Requirements	
Priority	Medium.
Estimated Time Needed	1 Minutes
Dependency	Admin should login the system.
Setup	An admin user should be created.
Procedure	[A01] Select “Update” button in the admin menu.
	[V01] Update page will be displayed.
Cleanup	-

6.6 AD_APP_BTN.01

TC_ID	AD_APP_BTN.01
Purpose	Display approve page.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	Admin should login the system.
Setup	An admin and employee user should be created.
Procedure	[A01] Select “Approve” button in the admin menu.
	[V01] Approve page will be displayed.
Cleanup	-

6.7 AD_UP_EMP_BTN.01

TC_ID	AD_UP_EMP_BTN.01
Purpose	Display update employee page
Requirements	
Priority	Medium
Estimated Time Needed	2 Minutes
Dependency	Admin should login the system.
Setup	An admin and employee user should be created.
Procedure	[A01] Select “Update an employee” button in the admin menu.
	[V01] Update an employee page will be displayed.
Cleanup	-

6.8 AD_DEL_EMP_BTN.01

TC_ID	AD_DEL_EMP_BTN.01
Purpose	Display delete employee page
Requirements	
Priority	Medium.
Estimated Time Needed	2 Minutes
Dependency	Admin should login the system.
Setup	An admin and employee user should be created.
Procedure	[A01] Select “Delete” button in the admin menu.
	[V01] Delete page will be displayed.
Cleanup	Close options menu.

6.9 AD_MATCH_RATE_BTN.01

TC_ID	AD_MATCH_RATE_BTN.01
Purpose	Set match rate.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	Admin should login the system.
Setup	An admin user should be created.
Procedure	[A01] Enter Match rate.
	[A02] Select “Match rate” button.
	[V01] Match rate will be changed.
Cleanup	Go back to previous page.

6.10 P_REG.01

TC_ID	P_REG.01
Purpose	Register employee.
Requirements	
Priority	Medium
Estimated Time Needed	2 Minutes
Dependency	Register button should be selected.
Setup	Program should be started.
Procedure	[A01] Enter employee information.
	[A02] Select “next”
	[V01] Employee application will be send to admin.
Cleanup	Go back to previous page.

6.11 P_UPD.01

TC_ID	P_UPD.01
Purpose	Update admin information.
Requirements	
Priority	Low
Estimated Time Needed	2 Minutes
Dependency	Update button in the admin menu should be selected.
Setup	An admin user should be created.
Procedure	[A01] Enter admin's updated information.
	[A02] Select "next"
	[V01] Admin information will be updated.
Cleanup	Go back to previous page.

6.12 P_APP.01

TC_ID	P_APP.01
Purpose	Approve an application.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	An employee should be registered.
Setup	An admin user should be created.
Procedure	[A01] Select application.
	[A02] Click "approve"
	[V01] Application will be accepted.
Cleanup	Go back to previous page.

6.13 P_APP.02

TC_ID	P_APP.02
Purpose	Reject an application.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	An employee should be registered.
Setup	An admin user should be created.
Procedure	[A01] Select application.
	[A02] Click “approve”
	[V01] Application will be accepted.
Cleanup	Go back to previous page.

6.14 P_UPD_EMP.01

TC_ID	P_UPD_EMP.01
Purpose	Update an employee information.
Requirements	
Priority	Low
Estimated Time Needed	2 Minutes
Dependency	Update an employee button in the admin menu should be selected.
Setup	An admin and an employee user should be created.
Procedure	[A01] Enter employee’s updated information.
	[A02] Select “next”
	[V01] Employee information will be updated.
Cleanup	Go back to previous page.

6.15 P_DLT.01

TC_ID	P_DLT.01
Purpose	Delete an employee.
Requirements	
Priority	Medium
Estimated Time Needed	2 Minutes
Dependency	Delete button in the admin menu should be selected.
Setup	An admin and an employee user should be created.
Procedure	[A01] Select an employee.
	[V01] Employee will be deleted.
Cleanup	Go back to previous page.

6.16 F_REC.01

TC_ID	F_REC.01
Purpose	Give a valid image.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	-
Setup	An employee user should be created.
Procedure	[A01] Go to main menu.
	[A02] Click verify.
	[A03] Give a valid image.
	[V01] “Verified” will be displayed.
Cleanup	-

6.17F_REC.02

TC_ID	F_REC.02
Purpose	Give an invalid image.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	-
Setup	An employee user should be created.
Procedure	[A01] Go to main menu.
	[A02] Click verify.
	[A03] Give an invalid image.
	[V01] “Rejected” will be displayed.
Cleanup	-

6.18I_REC.01

TC_ID	I_REC.01
Purpose	Give a valid image.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	-
Setup	An employee user should be created.
Procedure	[A01] Go to main menu.
	[A02] Click verify.
	[A03] Give a valid image.
	[V01] “Verified” will be displayed.
Cleanup	-

6.19I_REC.02

TC_ID	I_REC.02
Purpose	Give an invalid image.
Requirements	
Priority	High
Estimated Time Needed	2 Minutes
Dependency	-
Setup	An employee user should be created.
Procedure	[A01] Go to main menu.
	[A02] Click verify.
	[A03] Give an invalid image.
	[V01] “Rejected” will be displayed.
Cleanup	-