



**ÇANKAYA UNIVERSITY COMPUTER  
ENGINEERING  
CENG 408**

**Test Plan Document  
&  
Test Results**

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## Contents

<b>1. Test Plan, Test Design Specifications and Test Cases .....</b>	<b>5</b>
<b>1.1. Introduction .....</b>	<b>5</b>
<b>1.1.1. Version Control.....</b>	<b>5</b>
<b>1.1.2. Overview .....</b>	<b>5</b>
<b>1.1.3. Scope.....</b>	<b>5</b>
<b>1.1.4. Terminology .....</b>	<b>5</b>
<b>1.2. Features to be Tested .....</b>	<b>6</b>
<b>1.2.1. User Operations.....</b>	<b>6</b>
<b>1.2.2. System Operations .....</b>	<b>6</b>
<b>1.3. Features Not to be Tested .....</b>	<b>6</b>
<b>1.4. Item Pass/Fail Criteria .....</b>	<b>6</b>
<b>1.5. References .....</b>	<b>7</b>
<b>1.6. Test Design Specifications .....</b>	<b>7</b>
<b>1.6.1. User Operations (UO).....</b>	<b>7</b>
<b>1.6.2. System Operations (SYSO).....</b>	<b>8</b>
<b>1.7. Test Cases .....</b>	<b>8</b>
<b>2. Detailed Test Cases .....</b>	<b>14</b>
<b>2.1. UO.RG.01 .....</b>	<b>14</b>
<b>2.2. UO.RG.02 .....</b>	<b>14</b>
<b>2.3. UO.RG.03 .....</b>	<b>15</b>
<b>2.4. UO.RG.04 .....</b>	<b>15</b>
<b>2.5. UO.RG.05 .....</b>	<b>16</b>
<b>2.6. UO.RG.06 .....</b>	<b>16</b>
<b>2.7. UO.RG.07 .....</b>	<b>17</b>
<b>2.8. UO.RG.08 .....</b>	<b>17</b>
<b>2.9. UO.LG.01 .....</b>	<b>18</b>
<b>2.10. UO.LG.02 .....</b>	<b>18</b>
<b>2.11. UO.LG.03 .....</b>	<b>19</b>
<b>2.12. UO.LG.04 .....</b>	<b>19</b>
<b>2.13. UO.LG.05 .....</b>	<b>20</b>
<b>2.14. UO.LG.06 .....</b>	<b>20</b>
<b>2.15. UO.DTH.01 .....</b>	<b>21</b>
<b>2.16. UO.DTH.02 .....</b>	<b>21</b>
<b>2.17. UO.SFR.01 .....</b>	<b>22</b>
<b>2.18. UO.SFR.02 .....</b>	<b>22</b>

2.19.	UO.SFR.03 .....	23
2.20.	UO.VFR.01 .....	23
2.21.	UO.VFR.02 .....	24
2.22.	UO.VFR.03 .....	24
2.23.	UO.VFR.04 .....	25
2.24.	UO.OFL.01 .....	25
2.25.	UO.OFL.02 .....	26
2.26.	UO.CL.01 .....	26
2.27.	UO.CL.02 .....	27
2.28.	UO.CL.03 .....	27
2.29.	UO.CL.04 .....	28
2.30.	UO.CL.05 .....	28
2.31.	UO.CL.06 .....	29
2.32.	UO.JL.01 .....	29
2.33.	UO.JL.02 .....	30
2.34.	UO.JL.03 .....	30
2.35.	UO.JL.04 .....	31
2.36.	UO.JL.05 .....	31
2.37.	SYSO.RTF.01 .....	32
2.38.	SYSO.RTF.02 .....	32
2.39.	SYSO.RTF.03 .....	33
2.40.	SYSO.RTF.04 .....	33
2.41.	SYSO.SPB.01 .....	34
2.42.	SYSO.SPB.02 .....	34
2.43.	SYSO.HPP.01 .....	35
2.44.	SYSO.HPP.02 .....	35
2.45.	SYSO.OMP.01 .....	36
2.46.	SYSO.OMP.02 .....	36
2.47.	SYSO.OMP.03 .....	37
2.48.	SYSO.OMP.04 .....	37
2.49.	SYSO.OMP.05 .....	38
2.50.	SYSO.OBP.01 .....	38
2.51.	SYSO.OBP.02 .....	39
2.52.	SYSO.OBP.03 .....	39
2.53.	SYSO.LLV.01 .....	40
2.54.	SYSO.LLV.02 .....	40

2.55.	<b>SYSO.LLV.03</b>	41
2.56.	<b>SYSO.HIC.01</b>	41
2.57.	<b>SYSO.HIC.02</b>	42
2.58.	<b>SYSO.HIC.03</b>	42
2.59.	<b>SYSO.CD.01</b>	43
2.60.	<b>SYSO.CD.02</b>	43
2.61.	<b>SYSO.CD.03</b>	44
2.62.	<b>SYSO.CD.04</b>	44
2.63.	<b>SYSO.CD.05</b>	45
2.64.	<b>SYSO.CD.06</b>	46
3.	<b>Test Results</b>	46
3.1.	<b>User Operations Test Results</b>	46
3.2.	<b>System Operation Test Results</b>	47

# 1. Test Plan, Test Design Specifications and Test Cases

## 1.1. Introduction

### 1.1.1. Version Control

Version No	Description of Changes	Date
1.0	First Version	April 15 - 20, 2024
2.0	Final Version	May 24, 2024

### 1.1.2. Overview

In Blast Strike, the use cases and requirements outlined in the SRS and SDD document will be tested for backend process, body-pix segmentation model, body-pix model optimization, and GPS.

### 1.1.3. Scope

The test plan, test design specifications, and test cases are all included in the Test Plan Document. Applications' requirements and features are put to the test.

### 1.1.4. Terminology

Acronym	Definition
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Android Operating System	The Android operating system is a mobile operating system that was developed by Google to be primarily used for touchscreen devices, cell phones, and tablets.
iOS Operating System	iOS (formerly iPhone OS) is a mobile operating system created and developed by Apple Inc. exclusively for its hardware.
SDD	Software Design Descriptions
SRS	Software Requirements Specification
Body-Pix Model	Deep learning model that accurately segment human bodies.
GPS	Satellite based navigation system

## 1.2. Features to be Tested

This section identifies and briefly describes all the significant features that will be examined. A Test Design Specification will be appended to the end of this document for each significant feature.

### 1.2.1. User Operations

User Operations include operations that are authorized for both members and admins. These operations are explained in detail in the next sections.

### 1.2.2. System Operations

Systems' important features are tested. Including, body segmentation, determining hit part from the user, optimization of the model and GPS features etc.

## 1.3. Features Not to be Tested

We have tested our features in the Android operating system, but we cannot test for the IOS operating system. We tested our features in different modules individually, we plan to test the features combined until the project demo.

## 1.4. Item Pass/Fail Criteria

The features listed in section 6 must be successfully implemented in order for our applications to be successful. If any of these features fails to function properly, the test will be considered as a failure.

## 1.5. References

[1] Blast\_Strike\_SRS\_Updated(408), March 23, 2024

[2] Blast\_Strike\_SDD\_Updated(408), March 23, 2024

## 1.6. Test Design Specifications

### 1.6.1. User Operations (UO)

#### 1.6.1.1. *Subfeatures to be Tested*

##### 1.6.1.1.1. Register (UO.RG)

Users can register to the applications with valid e-mail and password.

##### 1.6.1.1.2. Login (UO.LG)

Users can log in to the applications with valid e-mail and password.

##### 1.6.1.1.3. Direct to Homepage (UO.DTH)

Users can navigate to homapage of application.

##### 1.6.1.1.4. Send Friend Request (UO.SFR)

Users can send and accept friend requests.

##### 1.6.1.1.5. View Friend Request (UO.VFR)

Users can view friend requests that sendd to him/her.

##### 1.6.1.1.6. Open Friend List (UO.OFR)

Users can view their friend list .

##### 1.6.1.1.7. Create Lobby (UO.CL)

Users can create lobby in the game.

##### 1.6.1.1.8. Join Lobby (UO.JL)

Users can join the lobby in the game.

## 1.6.2. System Operations (SYSO)

### 1.6.2.1. *System Features to be Tested*

#### 1.6.2.1.1. Take Real-Time Frame from Camera (SYSO.RTF)

Take real time camera frame continuously for body segmentation.

#### 1.6.2.1.2. Segment Player Body (SYSO.PB)

Segment human body for understanding player hit or not.

#### 1.6.2.1.3. Determine the Hit Part of the Player (SYSO.HPP)

Determine the hit body part of hit player. In example, head or body.

#### 1.6.2.1.4. Optimization by Model Parameters (SYSO.OMP)

Optimizing the model by computation parameters.

#### 1.6.2.1.5. Optimization by Body Part Parameters (SYSO.OBP)

Optimizing the model by relisting the body parts parameters.

#### 1.6.2.1.6. Taking Latitude and Longitude Value from GPS (SYSO.LLV)

Getting users latitude and longitude values from users' mobile phone.

#### 1.6.2.1.7. Taking Heading Information from CAmera (SYSO.HIC)

Taking direction of the camera from the compass of the users' mobile phone.

#### 1.6.2.1.8. Calculating Distance Between Two Latitude and Longitude Values (SYSO.CD)

The two latitude and longitude values are calculated in meters via haversine formula.

## 1.7. Test Cases

TC ID	Priority	Scenario Description
UO.RG.01	H	Enter valid member e-mail and valid password
UO.RG.02	H	Enter valid member e-mail and invalid password



UO.RG.03	H	Enter invalid member e-mail and valid password
UO.RG.04	H	Enter invalid member e-mail and invalid password
UO.RG.05	H	Enter valid member e-mail and blank password
UO.RG.06	H	Enter blank member e-mail and valid password
UO.RG.07	H	Enter valid membership admin e-mail and valid password
UO.RG.08	H	Enter valid membership admin e-mail and invalid password

TC ID	Priority	Scenario Description
UO.LG.01	H	Enter valid member e-mail and valid password
UO.LG.02	H	Enter valid member e-mail and invalid password
UO.LG.03	H	Enter invalid member e-mail and valid password
UO.LG.04	H	Enter invalid member e-mail and invalid password
UO.LG.05	H	Enter valid member e-mail and blank password
UO.LG.06	H	Enter blank member e-mail and valid password

TC ID	Priority	Scenario Description
UO.DTH.01	M	Users see the Home Page after successful login.

UO.DTH.02	M	User cannot see the Home Page after successful login.
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TC ID	Priority	Scenario Description
UO.SFR.01	M	User enters valid username and clicks send button.
UO.SFR.02	M	User enters valid username and clicks send button.
UO.SFR.03	M	User enters blank username and clicks send button.
UO.SFR.04	M	User enters valid username but does not click send button.

TC ID	Priority	Scenario Description
UO.VFR.01	M	User clicks View Friend Request button and see the friend requests.
UO.VFR.02	M	User clicks View Friend Request button and cannot see the friend requests.
UO.VFR.03	M	User clicks accept button and add it to the friend list.
UO.VFR.04	M	User clicks accept button but cannot add it to the friend list.

TC ID	Priority	Scenario Description
UO.OFL.01	M	User clicks Friend List button and see their friends.
UO.OFL.02	M	User clicks Friend List button and cannot see their friends.

TC ID	Priority	Scenario Description
UO.CL.01	H	User clicks create lobby button.
UO.CL.02	H	Create lobby pop-up does not show up.
UO.CL.03	H	User enters lobby name.
UO.CL.04	H	User entered non-unique lobby name.
UO.CL0.5	H	User clicks join Red team.
UO.CL0.6	H	User clicks join Blue team.

TC ID	Priority	Scenario Description
UO.JL.01	H	User clicks Join Lobby button.
UO.JL.02	H	User enters valid lobby name.
UO.JL.03	H	User enters invalid lobby name.
UO.JL.04	H	User clicks join Red team.
UO.JL.05	H	User clicks join Blue team.

TC ID	Priority	Scenario Description
SYSO.RTF.01	H	User gives permission for camera
SYSO.RTF.02	H	User does not give permission for camera

SYSO.RTF.03	H	User gives permission and correctly take camera frame in real time
SYSO.RTF.04	H	User gives permission and camera frame don't take frame correctly in real time

TC ID	Priority	Scenario Description
SYSO.SPB.01	H	Correctly segment opponent team body
SYSO.SPB.02	H	Don't segment correctly opponent team player body

TC ID	Priority	Scenario Description
SYSO.HPP.01	H	Determine correctly hit part of the opponent team player
SYSO.HPP.02	H	Don't determine correctly hit part of the opponent team player

TC ID	Priority	Scenario Description*
SYSO.OMP.01	H	Observe the effect of output stride parameter to the speed of the model.
SYSO.OMP.02	H	Observe the effect of multiplier parameter to the speed of the model.
SYSO.OMP.03	H	Observe the effect of quantBytes parameter to the speed of the model.
SYSO.OMP.04	H	Observe the effect of segmentation threshold parameter to the speed of the model.
SYSO.OMP.05	H	Observe the effect of internal resolution parameter to the speed of the model.

\* Output stride parameter can take values 8 or 16. Multiplier parameter can take the values 0.25, 0.50, or 0.75. QuantBytes parameter can take the values 4, 2 or 1. Segmentation threshold parameter can take the values between the range 0-1. Internal resolution parameter can take the values low, medium and high.

The tests include all the combinations of the parameters taking different values. Since there are too many parameters and possible values the parameters can take, only a summary is given in the table.

TC ID	Priority	Scenario Description*
SYSO.OBP.01	H	Combine and reduce the body parts existing in the head. Connect the new part to appropriate body part in the list.
SYSO.OMP.02	H	Combine and reduce the body parts existing in the arm. Connect the new part to appropriate body part in the list.
SYSO.OMP.03	H	Combine and reduce the body parts existing in the leg. Connect the new part to appropriate body part in the list.

\* The bodypix library includes a long list of body parts. Mainly, the body parts that are existing in the same limb are combined.

TC ID	Priority	Scenario Description
SYSO.LLV.01	H	User's location permission not granted.
SYSO.LLV.02	H	User's location permission granted and getting latitude and longitude values correctly.
SYSO.LLV.03	H	User's location permission granted and getting latitude and longitude values incorrectly.

TC ID	Priority	Scenario Description
SYSO.HIC.01	M	User's location permission not granted.
SYSO.HIC.02	M	User's location permission granted and getting heading values from compass correctly.
SYSO.HIC.03	M	User's location permission granted and getting heading values from compass incorrectly.

TC ID	Priority	Scenario Description
SYSO.CD.01	M	Users' location permission not granted.

SYSO.CD.02	M	Users' location permission granted and getting two latitude and longitude values. correctly
SYSO.CD.03	M	Users' location permission granted and getting one latitude and longitude values correctly and the other latitude and longitude values incorrectly.
SYSO.CD.04	M	Users' location permission granted and getting two latitude and longitude values incorrectly.
SYSO.CD.05	M	Users' location values are correct and calculating distance correctly.
SYSO.CD.06	M	Users' location values are correct and calculating distance incorrectly.

## 2. Detailed Test Cases

### 2.1. UO.RG.01

<b>TC_ID</b>	UO.RG.01
<b>Purpose</b>	Enter valid member e-mail and valid password
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter valid member e-mail.
	[A03] Enter valid password.
	[A04] Click on the “Register” button.
	[V01] Observe that the register is successful and membership approval warning appears.
	-
<b>Cleanup</b>	Logout from app.

### 2.2. UO.RG.02

<b>TC_ID</b>	UO.RG.02
<b>Purpose</b>	Enter valid member e-mail and invalid password
<b>Requirements</b>	2.2.1
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.

<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter valid member e-mail.
	[A03] Enter invalid password.
	[A04] Click on the “Register” button.
	[V01] Observe that the register is unsuccessful and the invalid password warning appears
	-
<b>Cleanup</b>	Page refreshes

### 2.3. UO.RG.03

<b>TC_ID</b>	UO.RG.03
<b>Purpose</b>	Enter invalid member e-mail and valid password
<b>Requirements</b>	2.2.1
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter invalid member e-mail.
	[A03] Enter valid password.
	[A04] Click on the “Register” button.
	[V01] Observe that the register is unsuccessful and the invalid e-mail warning appears
	-
<b>Cleanup</b>	Page refreshes

### 2.4. UO.RG.04

<b>TC_ID</b>	UO.RG.04
<b>Purpose</b>	Enter invalid member e-mail and invalid password
<b>Requirements</b>	2.2.1
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter invalid member e-mail.

	[A03] Enter invalid password.
	[A04] Click on the “Register” button.
	[V01] Observe that the register is unsuccessful and the invalid e-mail warning and invalid password warning appear
	-
<b>Cleanup</b>	Page refreshes

## 2.5. UO.RG.05

<b>TC_ID</b>	UO.RG.05
<b>Purpose</b>	Enter valid member e-mail and blank password
<b>Requirements</b>	2.2.1
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter valid member e-mail.
	[A03] Enter blank password.
	[A04] Click on the “Register” button.
	[V01] Observe that the register is unsuccessful and the password is required warning appears
	-
<b>Cleanup</b>	Page refreshes

## 2.6. UO.RG.06

<b>TC_ID</b>	UO.RG.06
<b>Purpose</b>	Enter blank member e-mail and valid password
<b>Requirements</b>	2.2.1
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter blank member e-mail.
	[A03] Enter valid password.



	[A04] Click on the “Register” button.
	[V01] Observe that the register is unsuccessful and the e-mail is required warning appears
	-
<b>Cleanup</b>	Page refreshes

## 2.7. UO.RG.07

<b>TC_ID</b>	UO.RG.07
<b>Purpose</b>	Enter valid membership admin e-mail and valid password
<b>Requirements</b>	2.2.1
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter valid membership admin e-mail.
	[A03] Enter valid password.
	[A04] Click on the “Register” button.
	[V01] Observe that the register is successful and feed page appears.
	-
<b>Cleanup</b>	Logout from app.

## 2.8. UO.RG.08

<b>TC_ID</b>	UO.RG.08
<b>Purpose</b>	Enter valid membership admin e-mail and invalid password
<b>Requirements</b>	2.2.1
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to register page.
	[A02] Enter valid membership admin e-mail.
	[A03] Enter invalid password.
	[A04] Click on the “Register” button.

	[V01] Observe that the register is unsuccessful and the invalid password warning appears
	-
<b>Cleanup</b>	Page refreshes

## 2.9. UO.LG.01

<b>TC_ID</b>	UO.LG.01
<b>Purpose</b>	Enter valid e-mail and valid password
<b>Requirements</b>	2.2.2
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	2 Minutes
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup. A member should be created.
<b>Procedure</b>	[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 is successful and the feed page appears.
	-
<b>Cleanup</b>	Logout

## 2.10. UO.LG.02

<b>TC_ID</b>	UO.LG.02
<b>Purpose</b>	Enter valid e-mail and invalid password
<b>Requirements</b>	2.2.2
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	2 Minutes
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup. A member should be created.
<b>Procedure</b>	[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 password warning appears
	-
<b>Cleanup</b>	Page refreshes

## 2.11.UO.LG.03

<b>TC_ID</b>	UO.LG.03
<b>Purpose</b>	Enter invalid e-mail and valid password
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	2 Minutes
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup. A member should be created.
<b>Procedure</b>	[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 warning appears
	-
<b>Cleanup</b>	Page refreshes

## 2.12.UO.LG.04

<b>TC_ID</b>	UO.LG.04
<b>Purpose</b>	Enter invalid e-mail and valid password
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	2 Minutes
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup. A member should be created.
<b>Procedure</b>	[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 warning appears
	-

<b>Cleanup</b>	Page refreshes
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## 2.13. UO.LG.05

<b>TC_ID</b>	UO.LG.05
<b>Purpose</b>	Enter valid e-mail and blank password
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	2 Minutes
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup. A member should be created.
<b>Procedure</b>	[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 the password is required warning appears
	-
<b>Cleanup</b>	Page refreshes

## 2.14. UO.LG.06

<b>TC_ID</b>	UO.LG.06
<b>Purpose</b>	Enter blank e-mail and valid password
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	2 Minutes
<b>Dependency</b>	Register test cases should pass.
<b>Setup</b>	Database connection should be setup. A member should be created.
<b>Procedure</b>	[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 the e-mail is required warning appears
	-

## 2.15. UO.DTH.01

<b>TC_ID</b>	UO.DTH.01
<b>Purpose</b>	User see the Home Page after successfull login.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs user to the Home page
	[A03] User see his/her name in the Home page.
	[V01] Observe that user can use the buttons on the screen.
	-
<b>Cleanup</b>	Logout

## 2.16. UO.DTH.02

<b>TC_ID</b>	UO.DTH.02
<b>Purpose</b>	User cannot see the Home Page after successfull login.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System does not direct the user to the Home Page.
	[A03] User sees blank page.
	[V01] Observe that user cannot use the buttons on the screen.
	-
<b>Cleanup</b>	Logout

## 2.17. UO.SFR.01

<b>TC_ID</b>	UO.SFR.01
<b>Purpose</b>	User enters valid username and clicks send button.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks send friend request button.
	[A02] System opens pop up screen.
	[A03] User enters valid username for sending friendship request.
	[A04] User Clicks Send button.
	[V01] Observe that pop up screen closed after request sent. -
<b>Cleanup</b>	Return to the Home Page

## 2.18. UO.SFR.02

<b>TC_ID</b>	UO.SFR.02
<b>Purpose</b>	User enters invalid username and clicks send button.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks send friend request button.
	[A02] System opens pop up screen.
	[A03] User enters invalid username for sending friendship request.
	[A04] User Clicks Send button.
	[A05] System displays warning message.
	[V01] Observe that system displays warning message. -

<b>Cleanup</b>	Return to the Home Page
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## 2.19. UO.SFR.03

<b>TC_ID</b>	UO.SFR.03
<b>Purpose</b>	User enters blank username and clicks send button.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks send friend request button.
	[A02] System opens pop up screen.
	[A03] User enters blank username for sending friendship request.
	[A04] User Clicks Send button.
	[A05] System displays warning message.
	- [V01] Observe that system displays warning message.
<b>Cleanup</b>	Return to the Home Page

## 2.20. UO.VFR.01

<b>TC_ID</b>	UO.VFR.01
<b>Purpose</b>	User clicks View Friend Request button and see the friend requests.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks view friend request button.
	[A02] System opens pop up screen.
	[A03] User sees the friend requests
	- [V01] Observe that system opens pop up screen.
<b>Cleanup</b>	Return to the Home Page

## 2.21. UO.VFR.02

<b>TC_ID</b>	UO.VFR.02
<b>Purpose</b>	User clicks View Friend Request button and cannot see the friend requests.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks view friend request button.
	[A02] System opens pop up screen.
	[A03] User cannot see the friend requests
	- [V01] Observe that system opens pop up screen but it is empty.
<b>Cleanup</b>	Return to the Home Page

## 2.22. UO.VFR.03

<b>TC_ID</b>	UO.VFR.03
<b>Purpose</b>	User clicks accept button and add it to the friend list
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks view friend request button.
	[A02] System opens pop up screen.
	[A03] User sees the friend requests
	[A04] User clicks accept button.
	[A05] System displays successful message.
	[A06] System closes pop up screen.
	- [V01] Observe that system displays successful message.
<b>Cleanup</b>	Return to the Home Page



## 2.23. UO.VFR.04

<b>TC_ID</b>	UO.VFR.04
<b>Purpose</b>	User clicks accept button and add it to the friend list
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks view friend request button.
	[A02] System opens pop up screen.
	[A03] User sees the friend requests
	[A04] User clicks accept button.
	[A05] System displays warning message.
	[A06] System closes pop up screen.
	[V01] Observe that system display warning message.
<b>Cleanup</b>	Return to the Home Page

## 2.24. UO.OFL.01

<b>TC_ID</b>	UO.OFL.01
<b>Purpose</b>	User clicks Friend List button and see their friends.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks friend list button.
	[A02] System opens pop up screen.
	[A03] User see his/her friends.
	- [V01] Observe that system opens pop up screen .
<b>Cleanup</b>	Return to the Home Page

## 2.25. UO.OFL.02

<b>TC_ID</b>	UO.OFL.02
<b>Purpose</b>	User clicks Friend List button and cannot see their friends.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	2-10 seconds.
<b>Dependency</b>	User should be logged in.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User clicks friend list button.
	[A02] System opens pop up screen.
	[A03] User cannot see his/her friends.
	[V01] Observe that system displays friend list is empty.
<b>Cleanup</b>	Return to the Home Page

## 2.26. UO.CL.01

<b>TC_ID</b>	UO.CL.01
<b>Purpose</b>	User sees the create lobby pop-up
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-3 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees "Create Lobby" button.
	[V01] Observe that the create lobby pop-up shown
	-
<b>Cleanup</b>	Return back to main page

## 2.27. UO.CL.02

<b>TC_ID</b>	UO.CL.02
<b>Purpose</b>	“Create lobby” pop-up does not show off
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-3 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees create lobby button.
	[V01] Observe that the create lobby pop-up does not show off
	-
<b>Cleanup</b>	Return back to main page

## 2.28. UO.CL.03

<b>TC_ID</b>	UO.CL.03
<b>Purpose</b>	User enters a string to identify new lobby name
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-3 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees create lobby button.
	[A04] Click on the “Create lobby” button.
	[V01] Observe that the pop-up shows up and input field is ready.
	-
<b>Cleanup</b>	Return back to main page

## 2.29. UO.CL.04

<b>TC_ID</b>	UO.CL.04
<b>Purpose</b>	User enters a non-unique string to identify new lobby name
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-3 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby.
<b>Setup</b>	Database connection should be setup. A member should be created.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees create lobby button.
	[A04] Click on the “Create lobby” button.
	[A05] User enters a non-unique lobby name.
	[V01] Observe that the error pop-up shows up.
<b>Cleanup</b>	Return back to main page

## 2.30. UO.CL.05

<b>TC_ID</b>	UO.CL.05
<b>Purpose</b>	User enters a lobby name and clicks “Join Red Team”
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-2 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees create lobby button.
	[A04] Click on the “Create lobby” button.
	[A05] User enters a lobby name.
	[A06] User clicks “Join Red Team” button.
	[V01] Observe that lobby is created.
	[V02] Observe that user joined red team
<b>Cleanup</b>	Return back to main page

## 2.31.UO.CL.06

<b>TC_ID</b>	UO.CL.06
<b>Purpose</b>	User enters a lobby name and clicks “Join Blue Team”
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-2 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees “Create lobby” button.
	[A04] Click on the “Create lobby” button.
	[A05] User enters a lobby name.
	[A06] User clicks “Join Blue Team” button.
	[V01] Observe that lobby is created.
	[V02] Observe that user joined blue team.
<b>Cleanup</b>	Return back to main page

## 2.32.UO.JL.01

<b>TC_ID</b>	UO.JL.01
<b>Purpose</b>	User clicks “Join Lobby” button
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-1 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby. Lobby must be created.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees “Join Lobby” button.
	[A04] Click on the “Join Lobby” button.
	[V01] Observe that join lobby pop-up shows up
<b>Cleanup</b>	Return back to main page

### 2.33. UO.JL.02

<b>TC_ID</b>	UO.JL.02
<b>Purpose</b>	User enters valid lobby name on join lobby pop-up.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-1 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby. Lobby must be created.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees “Join Lobby” button.
	[A04] Click on the “Join Lobby” button.
	[A05] User enters a valid lobby name.
	[V01] Observe that user can choose between Team Red and Team Blue.
<b>Cleanup</b>	Return back to main page

### 2.34. UO.JL.03

<b>TC_ID</b>	UO.JL.03
<b>Purpose</b>	User enters invalid lobby name on join lobby pop-up.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-1 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby. Lobby must be created.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees “Join Lobby” button.
	[A04] Click on the “Join Lobby” button.
	[A05] User enters a invalid lobby name.
	[V01] Observe that user can not choose join any team after selection.
<b>Cleanup</b>	Return back to main page

## 2.35. UO.JL.04

<b>TC_ID</b>	UO.JL.04
<b>Purpose</b>	User enters a lobby name and clicks join Red Team
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-1 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby. Lobby must be created.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees “Join Lobby” button.
	[A04] Click on the “Join Lobby” button.
	[A05] User enters a valid lobby name.
	[A06] User clicks a “Join Red Team” button.
	[V01] Observe that user join the lobby created and on the red team.
<b>Cleanup</b>	Return back to main page

## 2.36. UO.JL.05

<b>TC_ID</b>	UO.JL.05
<b>Purpose</b>	User enters a lobby name and clicks join BlueTeam
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	0-1 seconds.
<b>Dependency</b>	User should be logged in. User should not be in a current lobby. Lobby must be created.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] User logged in to the system.
	[A02] System directs to the home page.
	[A03] User sees “Join Lobby” button.
	[A04] Click on the “Join Lobby” button.
	[A05] User enters a valid lobby name.
	[A06] User clicks a “Join Blue Team” button.
	[V01] Observe that user join the lobby created and on the blue team.
<b>Cleanup</b>	Return back to main page

## 2.37.SYSO.RTF.01

<b>TC_ID</b>	SYSO.RTF.01
<b>Purpose</b>	Use the camera for game.
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	10 Seconds
<b>Dependency</b>	Login test case should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Enter valid information for login.
	[A03] Enter the app with account.
	[A04] Give permission to app for using camera.
	[V01] Observe that the camera permission enabled and app open.
<b>Cleanup</b>	Link to main page.

## 2.38.SYSO.RTF.02

<b>TC_ID</b>	SYSO.RTF.02
<b>Purpose</b>	Use the camera for game.
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	10 Seconds
<b>Dependency</b>	Login test case should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Enter valid information for login.
	[A03] Enter the app with account.
	[A04] Don't give permission to app for using camera.
	[V01] Observe that the app doesn't open.
<b>Cleanup</b>	Logout from app.



## 2.39.SYSO.RTF.03

<b>TC_ID</b>	SYSO.RTF.03
<b>Purpose</b>	Use the camera for game.
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	5 Second
<b>Dependency</b>	Start game test case should pass.
<b>Setup</b>	Game should started.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Enter to game.
	[A03] Click shoot button in the game.
	[V01] Observe that the app take camera frame with low latency for segmentation.
<b>Cleanup</b>	Frame will use for segmentation.

## 2.40.SYSO.RTF.04

<b>TC_ID</b>	SYSO.RTF.04
<b>Purpose</b>	Use the camera for game.
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	5 Second
<b>Dependency</b>	Start game test case should pass.
<b>Setup</b>	Game should started.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Enter to game.
	[A03] Click shoot button in the game.
	[V01] Observe that the app doesn't take camera frame.
<b>Cleanup</b>	Frame can't use for segmentation.

## 2.41.SYSO.SPB.01

<b>TC_ID</b>	SYSO.SPB.01
<b>Purpose</b>	Segmenting Player Body for Using in the Game
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Shooting button click test case should be pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Enter to game.
	[A03] Click shoot button in the game.
	[V01] Observe that the app take camera frame and segment player body.
<b>Cleanup</b>	Player can be hit opponent players.

## 2.42.SYSO.SPB.02

<b>TC_ID</b>	SYSO.SPB.02
<b>Purpose</b>	Segmenting Player Body for Using in the Game
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 seconds
<b>Dependency</b>	Shooting button click test case should be pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Enter to game.
	[A03] Click shoot button in the game.
	[V01] Observe that the app take camera frame but doesn't segment player body correctly.
<b>Cleanup</b>	Player can't hit opponent players.

## 2.43.SYSO.HPP.01

<b>TC_ID</b>	SYSO.HPP.01
<b>Purpose</b>	Determine correctly hit part of opponent player
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 Seconds
<b>Dependency</b>	Segment player body test case should be pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Enter to game.
	[A03] Click shoot button in the game.
	[A03] Segment body from the AI model.
	[V01] Observe that the app determine hit part of person and deals the right damage.
<b>Cleanup</b>	Correct damage apply to the hit person.

## 2.44.SYSO.HPP.02

<b>TC_ID</b>	SYSO.HPP.02
<b>Purpose</b>	Determine correctly hit part of opponent player
<b>Requirements</b>	
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	1-10 Seconds
<b>Dependency</b>	Segment player body test case should be pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Enter to game.
	[A03] Click shoot button in the game.
	[A03] Segment body from the AI model.
	[V01] Observe that the app doesn't correctly determine hit part of person and doesn't deals the right damage.
<b>Cleanup</b>	Incorrect damage apply to the hit person.

## 2.45.SYSO.OMP.01

<b>TC_ID</b>	SYSO.OMP.01
<b>Purpose</b>	Observe the effect of output stride parameter to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the value of output stride is increased.
<b>Cleanup</b>	-

## 2.46.SYSO.OMP.02

<b>TC_ID</b>	SYSO.OMP.02
<b>Purpose</b>	Observe the effect of multiplier parameter to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the value of multiplier is decreased. The ideal value is 0.5.
<b>Cleanup</b>	-

## 2.47.SYSO.OMP.03

<b>TC_ID</b>	SYSO.OMP.03
<b>Purpose</b>	Observe the effect of quantBytes parameter to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the value of quantBytes is decreased.
<b>Cleanup</b>	-

## 2.48.SYSO.OMP.04

<b>TC_ID</b>	SYSO.OMP.04
<b>Purpose</b>	Observe the effect of segmentation threshold parameter to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the value of segmentation threshold is decreased.
<b>Cleanup</b>	-

## 2.49.SYSO.OMP.05

<b>TC_ID</b>	SYSO.OMP.05
<b>Purpose</b>	Observe the effect of internal resolution parameter to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the value of internal resolution is decreased.
<b>Cleanup</b>	-

## 2.50.SYSO.OBP.01

<b>TC_ID</b>	SYSO.OBP.01
<b>Purpose</b>	Observe the effect of combining and reducing the body parts existing in the head to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the the body parts in the head are combined.
<b>Cleanup</b>	-

## 2.51.SYSO.OBP.02

<b>TC_ID</b>	SYSO.OBP.02
<b>Purpose</b>	Observe the effect of combining and reducing the body parts existing in the arm to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the the body parts in the arm are combined.
<b>Cleanup</b>	-

## 2.52.SYSO.OBP.03

<b>TC_ID</b>	SYSO.OBP.03
<b>Purpose</b>	Observe the effect of combining and reducing the body parts existing in the leg to the speed of the model.
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	3- 10 Seconds
<b>Dependency</b>	Output stride parameter test cases should pass.
<b>Setup</b>	Bodypix model should be loaded.
<b>Procedure</b>	[A01] Enter to app.
	[A02] Start the game.
	[A03] Click shoot button.
	[V01] Observe that the model is accelerated when the the body parts in the leg are combined.
<b>Cleanup</b>	-

### 2.53.SYSO.LLV.01

<b>TC_ID</b>	SYSO.LLV.01
<b>Purpose</b>	User's location permission not granted
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	10 second
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Do not give location permission to application.
	[V01] Observe that a warning appears indicating that the user has not given permission.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.

### 2.54.SYSO.LLV.02

<b>TC_ID</b>	SYSO.LLV.02
<b>Purpose</b>	User's location permission granted and getting latitude and longitude values correctly
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	10 second
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking latitude and longitude values correctly.
	[V01] Observe that the message is sent indicating that the user's information has been correctly obtained.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.



## 2.55.SYSO.LLV.03

<b>TC_ID</b>	SYSO.LLV.03
<b>Purpose</b>	User's location permission granted and getting latitude and longitude values incorrectly
<b>Priority</b>	High.
<b>Estimated Time Needed</b>	10 second
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Login test cases should pass.
	[A02] Give location permission to application.
	[A03] Taking latitude and longitude values incorrectly.
	[V01] Observe that the warning message is sent indicating that the user's information has been incorrectly obtained.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.

## 2.56.SYSO.HIC.01

<b>TC_ID</b>	SYSO.HIC.01
<b>Purpose</b>	User's location permission not granted
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Do not give location permission to application.
	[V01] Observe that a warning appears indicating that the user has not given permission.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.

## 2.57.SYSO.HIC.02

<b>TC_ID</b>	SYSO.HIC.02
<b>Purpose</b>	User's location permission granted and getting heading values from compass correctly
<b>Priority</b>	Medium
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking heading values correctly from compass of the mobile phone.
	[V01] Observe that the message is sent indicating that the user's heading information has been correctly obtained.
<b>Cleanup</b>	The utilization of acquired heading data in the game.

## 2.58.SYSO.HIC.03

<b>TC_ID</b>	SYSO.HIC.03
<b>Purpose</b>	User's location permission granted and getting heading values from compass incorrectly
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking heading values incorrectly from compass of the mobile phone.
	[V01] Observe that the warning message is sent indicating that the user's heading information has been incorrectly obtained.
<b>Cleanup</b>	The utilization of acquired heading data in the game.

## 2.59.SYSO.CD.01

<b>TC_ID</b>	SYSO.CD.01
<b>Purpose</b>	User's location permission not granted
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Do not give location permission to application.
	[V01] Observe that a warning appears indicating that the user has not given permission.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.

## 2.60.SYSO.CD.02

<b>TC_ID</b>	SYSO.CD.02
<b>Purpose</b>	User's location permission granted and getting two latitude and longitude values correctly
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking two latitude and longitude values correctly.
	[V01] Observe that the message is sent indicating that the users' information has been correctly obtained.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.

## 2.61.SYSO.CD.03

<b>TC_ID</b>	SYSO.CD.03
<b>Purpose</b>	User's location permission granted and getting one latitude and longitude values correctly and the other latitude and longitude values incorrectly
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking one latitude and longitude values correctly and the other one is incorrect.
	[V01] Observe that the warning message is sent indicating that the one user's information has been incorrectly obtained.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.

## 2.62.SYSO.CD.04

<b>TC_ID</b>	SYSO.CD.04
<b>Purpose</b>	User's location permission granted and getting two latitude and longitude values incorrectly
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking two latitude and longitude values correctly
	[V01] Observe that the message is sent indicating that the users' information has been incorrectly obtained.
<b>Cleanup</b>	The utilization of acquired GPS data in the game.

## 2.63.SYSO.CD.05

<b>TC_ID</b>	SYSO.CD.05
<b>Purpose</b>	Users' location values are correct and calculating distance correctly.
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking heading values incorrectly from compass of the mobile phone.
	[A04] Calculating distance with haversine formula.
	[A05] Compare the calculated distance with the actual distance to verify its accuracy.
	[V01] Observe that the message is sent indicating that the distance information has been correctly obtained.
<b>Cleanup</b>	The utilization of acquired distance information in the game.

## 2.64.SYSO.CD.06

<b>TC_ID</b>	SYSO.CD.06
<b>Purpose</b>	Users' location values are correct and calculating distance incorrectly.
<b>Requirements</b>	
<b>Priority</b>	Medium.
<b>Estimated Time Needed</b>	10 Second.
<b>Dependency</b>	Login test cases should pass.
<b>Setup</b>	Database connection should be setup.
<b>Procedure</b>	[A01] Go to login page.
	[A02] Give location permission to application.
	[A03] Taking heading values incorrectly from compass of the mobile phone.
	[A04] Calculating distance with haversine formula.
	[A05] Compare the calculated distance with the actual distance to verify its accuracy.
	[V01] Observe that the warning message is sent indicating that the distance information has been incorrectly obtained.
<b>Cleanup</b>	The utilization of acquired distance information in the game.

## 3. Test Results

### 3.1. User Operations Test Results

TC_ID	Priority	Date Run	Result	Explanation
UO.SFR.01	Medium	13.03.2024	Pass	pop up screen closed after request sent.
UO.SFR.02	Medium	13.03.2024	Pass	System displays warning message.
UO.VFR.01	Medium	13.03.2024	Pass	System opens pop up screen.

UO.VFR.02	Medium	13.03.2024	Pass	System opens pop up screen but it is empty.
UO.CLO.01	High	13.03.2024	Pass	Create Lobby operation was successful.
UO.JL.01	High	04.04.2024	Pass	Join Lobby operation was successful.
UO.JL.02	High	04.04.2024	Pass	Join Lobby operation was successful.
UO.RG.01	High	24.05.2024	Pass	Register operation was successful.
UO.RG.02	High.	24.05.2024	Pass	Observed a warning message.
UO.RG.03	High.	24.05.2024	Pass	Observed a warning message.
UO.LG.01	High.	24.05.2024	Pass	Login operation was successful.
UO.LG.02	High.	24.05.2024	Pass	Observed a warning message.
UO.LG.03	High	24.05.2024	Pass	Observed a warning message.

### 3.2. System Operation Test Results

TC_ID	Priority	Date Run	Result	Explanation
SYSO.RTF.01	High	14.02.2024	Pass	Observed that the camera is working properly.
SYSO.RTF.02	High	14.02.2024	Pass	Observed that the camera was not working and app closed
SYSO.RTF.03	High	14.02.2024	Pass	Observed that the camera is working properly and

				the real-time frame received from the camera
SYSO.PB.01	High	27.02.2024	Mostly Pass	Observed that model correctly segmentate body, rarely segmentation does not segment correctly.
SYSO.HPP.01	High	18.03.2024	Mostly Pass	Observed that model correctly determine hit part of the human body. In rare cases, the model may be misidentified.
SYSO.LLV.02	High.	18.02.2024	Pass	Observed a message appears that the user's latitude and longitude values have been correctly obtained.
SYSO.HIC.02	Medium.	25.02.2024	Pass	Observed a message appears that the user's heading values have been correctly obtained.
SYSO.CD.02	Medium.	25.02.2024	Pass	Observed a message appears that the users' information has been correctly obtained.