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# Test Cases & Requirements Test Coverage Report

**Group:** Team Inspiration

**Project:** Friendstagram

Requirements	No. of Test Cases	Test Cases Passed	Test Cases Failed
Register account	20	20	0
Log into account	2	2	0
Log out account	1	1	0
Find friends	2	2	0
View recommended friend profile	1	1	0
View personal profile	1	1	0
Edit personal profile	3	3	0
Register account	3	3	0

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## Blackbox Test Cases

### Register Account

Test Scenario ID	1	Test Case ID	1	
Test Case Description	Ensure that the user is able to enter valid email and password within confined constraints.	Test Priority	Medium	
Prerequisite	-	Post-Requisite	User is brought to the questionnaire page.	
Test Execution Steps:				
Test Cases	Email's Input	Password's Input	Expected output	Test Output
<b>Key in Email &amp; Password</b>				
Empty Email	-	-	Email field is empty!	Email field is empty!
Empty Password	-	-	Password field is empty!	Password field is empty!
Invalid Email	hello	-	Invalid email address!	Invalid email address!
Common Password (Need special characters)	-	123456	The password is too common.	The password is too common.
Not matching password	-	1234	The passwords do not match.	The passwords do not match.

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Password is too short (Lower than 8 characters)	-	hello	Password is too short!	Password is too short!
Only Numeric Password	-	123456	This password is entirely numeric	This password is entirely numeric

#### Questionnaire 1 - Select a hall

Test Cases	Input	Expected output	Test Output
User does not select any hall.	-	“Continue to next question” button is light-blue and user not allowed to click on it.	“Continue to next question” button is light-blue and user not allowed to click on it.
User selects a hall.	Hall 1	“Continue to next question” button turns dark blue and user is allowed to click on it.	“Continue to next question” button turns dark blue and user is allowed to click on it.

#### Questionnaire 2 - Interests Selection

Test Cases	Input	Expected output	Test Output
User does not select any interest.	-	“Continue to next question” button is light-blue and users are not allowed to click on it.	“Continue to next question” button is light-blue and users are not allowed to click on it.
User select an interest	playing computer games	(1) The background of the selected interest turns grey. (2) “Continue to next question” button turns dark blue and the user is allowed to click on it.	(1) The background of the selected interest turns grey. (2) “Continue to next question” button turns dark blue and the user is allowed to click on it.
User selects multiple interests	playing computer games, studying	(1) The background of the selected interest turns grey.	(1) The background of the selected interest turns grey.

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		(2) “Continue to next question” button turns dark blue and the user is allowed to click on it.	(2) “Continue to next question” button turns dark blue and the user is allowed to click on it.
User unselects interest and the total number of selection > 1	playing computer games [studying] Note: []; indicates removal	(1) When unselected, the background of the image should transit from grey to default. (2) “Continue to next question” button turns dark blue and the user is allowed to click on it.	(1) When unselected, the background of the image should transit from grey to default. (2) “Continue to next question” button turns dark blue and the user is allowed to click on it.
User unselects interest and the total number of selection < 1	[studying] Note: []; indicates removal	1) When unselected, the background of the image should transit from grey to default. 2) “Continue to next question” button is light-blue and user not allowed to click on it.	1) When unselected, the background of the image should transit from grey to default. 2) “Continue to next question” button is light-blue and the user is not allowed to click on it.

### Questionnaire 3 - Rate Interests

Test Cases	Input	Expected output	Test Output
User drags the button across the slider bar	User drags	Position of button & value changes accordingly from 1 to 5.	Position of button & value changes accordingly from 1 to 5.
User drags the button to the most right end of the slider bar.	5	Position of the button is at the most right end of the slider bar and the value reflects 5.	Position of the button is at the most right end of the slider bar and the value reflects 5.
User drags the button to the most left end of the slider bar.	1	Position of the button is at the end of the slider bar and the value reflects 1.	Position of the button is at the end of the slider bar and the value reflects 1.

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<b>Questionnaire 4 - Input Bio</b>			
Test Cases	Input	Expected output	Test Output
User does not have any input.	-	“Continue to next question” button is light-blue and the user is not allowed to click on it.	“Continue to next question” button is light-blue and the user is not allowed to click on it.
User inputs less than 10 characters. (Inclusive of white spaces)	hello	“Continue to next question” button is light-blue and the user is not allowed to click on it.	“Continue to next question” button is light-blue and the user is not allowed to click on it.
User inputs more than 10 characters. (Inclusive white spaces)	Hello I am great	“Continue to next question” button turns dark blue and the user is allowed to click on it.	“Continue to next question” button turns dark blue and the user is allowed to click on it.

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## Log into account

<b>Test Scenario ID</b>	2	<b>Test Case ID</b>	2
<b>Test Case Description</b>	Authenticate the user into the system	<b>Test Priority</b>	High
<b>Prerequisite</b>	1. User is not yet authenticated into the system 2. User is in home page	<b>Post-Requisite</b>	User successfully logs into account

Test Execution Steps:

S.No	Action	Inputs	Expected Output	Actual Output	Test Result	Test Comments
1	User enters the required fields	1. Users enter their registered email 2. Users enter their registered password	The input entered in the fields are displayed for the user to see, except for the password which is shown as dots.	The input entered in the fields are displayed for the user to see, except for the password which is shown as dots.	Pass	User is able to view the inputs entered into email field
2	User press the “Sign in” button	NIL	User is brought to the Home Page and is able to access the “Find Friend” button. “My Profile” & “Log Out” buttons are also accessible via the navbar.	User is brought to the Home Page and is able to access the “Find Friend” button. “My Profile” & “Log Out” buttons are also accessible via the navbar.	Pass	User is brought to the Main Menu and is able to access the “Find Friend” button. “My Profile” & “Log Out” buttons are also accessible via the navbar.

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## Log out account

<b>Test Scenario ID</b>	3	<b>Test Case ID</b>	3
<b>Test Case Description</b>	User logs out of their personal account	<b>Priority</b>	Medium
Prerequisite	User must be logged in	<b>Post-requisite</b>	<ul style="list-style-type: none"> <li>1. User will be logged out of their account</li> <li>2. System will return to the state for an unauthenticated user</li> </ul>
Test Execution Step:			
<b>Test Case</b>	<b>Actions</b>	<b>Expected Output</b>	<b>Test Output</b>
Log out	User press the “Logout” button	User is brought to the Main Menu and is not able to access the browse and profile page now	User is brought to the Main Menu and is not able to access the browse and profile page now

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## Find Friends (Match Page)

<b>Test Scenario ID</b>	4	<b>Test Case ID</b>	4
<b>Test Case Description</b>	User requests for recommendation on new potential friends	<b>Test Priority</b>	High
<b>Prerequisite</b>	Users is logged in and is in homepage	<b>Post-Requisite</b>	User sees a ‘friends matched’ page, showing a list of cards. Each card represented a potential new friend.
<b>Test Case</b>	<b>Actions</b>	<b>Expected Output</b>	<b>Test Output</b>
User waits for the friends matching result.	-	UI display loader animation to indicate that the client is awaiting for server’s data.	UI displays loader animation to indicate that the client is awaiting for server’s data.
Successful Friends matching result.	-	User is shown a catalog of matched friends, each represented as a card.	User is shown a catalog of matched friends, each represented as a card.

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## View recommended friend profile

<b>Test Scenario ID</b>	5	<b>Test Case ID</b>	5
<b>Test Case Description</b>	User chooses to see a recommended friend profile	<b>Test Priority</b>	High
<b>Prerequisite</b>	1. User is on the 'friends matched' page. 2. User is logged in.	<b>Post-Requisite</b>	User sees the profile of the chosen recommended friend which shows the name, lists of interests and email

<b>Test Case</b>	<b>Actions</b>	<b>Expected Output</b>	<b>Test Output</b>
User is able to view a friend's profile by clicking on the 'View Profile' button.	User clicks on the 'View Profile' button.	User will be brought to the selected profile page. Selected profile page will contain the following categories, 'email', 'bio', 'hall' and 'interests'.	User brought to the selected profile page. Selected profile page will contain the following categories, 'email', 'bio', 'hall' and 'interests'.

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## View Personal Profile

<b>Test Scenario ID</b>	6	<b>Test Case ID</b>	6
<b>Test Case Description</b>	User wants to view his/her personal profile	<b>Test Priority</b>	High
<b>Prerequisite</b>	User is logged in	<b>Post-Requisite</b>	User sees his/her own profile and history of matched friends

<b>Test Case</b>	<b>Actions</b>	<b>Expected Output</b>	<b>Test Output</b>
User will be able to view the personal profile by clicking on the 'My Profile' button.	User clicks on the 'My Profile' button.	User will be brought to the personal profile page. The personal profile will contain the following categories, 'personal information', 'selected interests' and 'matched history'.	User was brought to the personal profile page. The personal profile will contain the following categories, 'personal information', 'selected interests' and 'matched history'.

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## Edit personal profile

<b>Test Scenario ID</b>	7	<b>Test Case ID</b>	7
<b>Test Case Description</b>	User wants to edit his/her personal profile	<b>Test Priority</b>	Medium
<b>Prerequisite</b>	1. User is logged in  2. User is in the “Profile” Page.	<b>Post-Requisite</b>	User sees his/her own updated profile with personal information like email, interest, hall accommodation details and history of matched friends

<b>Test Case</b>	<b>Actions</b>	<b>Expected Output</b>	<b>Test Output</b>
User hovers the cursor over the ‘Edit’ button in the ‘My Profile’ page.	User hovers the cursor over the ‘Edit’ Button.	Button changes from plain to dark blue.	Button changes from plain to dark blue.
User clicks on the button ‘Edit Button’.	User clicks on the ‘Edit Button’	User is brought to Questionnaire 1 Page - Selection of Hall.	User is brought to Questionnaire 1 Page - Selection of Hall.
User is able to view the successfully edited personal profile.	<ol style="list-style-type: none"> <li>1. User inputs hall 7 (previously hall 7).</li> <li>2. User selects the same interest of ‘dancing’ (previously dancing).</li> <li>3. User choose the same rating of dancing ‘4’ (previously ‘4’).</li> <li>4. User inputs a different bio <u>I am fun person</u> (previously ‘I am studious’)</li> </ol>	User is brought back to the ‘My Profile’ page with the successfully edited changes of bio ‘I am fun person’ instead of the ‘I am studious’ person.	User is brought back to the ‘My Profile’ page with the successfully edited changes of bio ‘I am fun person’ instead of the ‘I am studious’ person.

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## Whitebox Testing

### Test Coverage for Backend

Coverage report: 80%				
Module	statements	missing	excluded	coverage
AccountsAndRecommendations/__init__.py	0	0	0	100%
AccountsAndRecommendations/admin.py	1	0	0	100%
AccountsAndRecommendations/apps.py	4	0	0	100%
AccountsAndRecommendations/managers.py	21	9	0	57%
AccountsAndRecommendations/migrations/0001_initial.py	8	0	0	100%
AccountsAndRecommendations/migrations/0002_auto_20220207_1656.py	7	0	0	100%
AccountsAndRecommendations/migrations/0003_auto_20220216_2053.py	4	0	0	100%
AccountsAndRecommendations/migrations/0004_auto_20220221_1659.py	4	0	0	100%
AccountsAndRecommendations/migrations/__init__.py	0	0	0	100%
AccountsAndRecommendations/models.py	132	20	0	85%
AccountsAndRecommendations/serializers.py	23	0	0	100%
AccountsAndRecommendations/tests/__init__.py	0	0	0	100%
AccountsAndRecommendations/tests/data_mockers.py	30	4	0	87%
AccountsAndRecommendations/tests/test_models.py	65	3	0	95%
AccountsAndRecommendations/tests/test_views.py	120	3	0	98%
AccountsAndRecommendations/urls.py	3	0	0	100%
AccountsAndRecommendations/views.py	183	65	0	64%
Inspiration/__init__.py	3	0	0	100%
Inspiration/asgi.py	4	4	0	0%
Inspiration/settings.py	47	5	0	89%
Inspiration/urls.py	7	0	0	100%
Inspiration/wsgi.py	4	4	0	0%
manage.py	12	2	0	83%
populate_db.py	20	20	0	0%
<b>Total</b>	<b>702</b>	<b>139</b>	<b>0</b>	<b>80%</b>
coverage.py v6.3.2, created at 2022-03-09 13:57 +0000				

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## Performance Testing

We performed load/stress testing to measure the reliability of the system under load. Since we host on free tranches of our service providers Netlify and PythonAnywhere, we limit projected load to 50 users. Under our reliability metrics, we must keep our uptime above five 9's of availability. We demonstrate that we can fulfill this requirement, with no packet loss under heavy load, with the server remaining up. Responses are provided at 1.1s on average.

Locust Test Report									
During: 4/9/2022, 6:28:43 PM - 4/9/2022, 6:30:04 PM									
Target Host: <a href="https://zhuweiji.pythonanywhere.com/">https://zhuweiji.pythonanywhere.com/</a>									
Script: locustfile.py									
Request Statistics									
Method	Name	# Requests	# Fails	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)	RPS	Failures/s
GET	/interests/	2483	0	1105	254	2683	1499	30.9	0.0
	Aggregated	2483	0	1105	254	2683	1499	30.9	0.0
Response Time Statistics									
Method	Name	50%ile (ms)	60%ile (ms)	70%ile (ms)	80%ile (ms)	90%ile (ms)	95%ile (ms)	99%ile (ms)	100%ile (ms)
GET	/interests/	1000	1200	1400	1600	1800	2000	2500	2700
	Aggregated	1000	1200	1400	1600	1800	2000	2500	2700

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