TSE3251 - SOFTWARE VERIFICATION & VALIDATION

NEIGHBOURHOOD WATCH SYSTEM TESTING

TEST DESIGN 1.0

Prepared by:

Group i-Dea

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Objectives

The objective and goal of this document is to:

1.   Describe a structured Test Plan to test the neighbourhood watch system website and mobile application.

2.   Document and describe the testing scope and strategies to the neighbourhood watch system.

3.   Serve as a formal document to formulate and layout out the task description for each member of the group.

Tasks

1. Describe and document and bugs encountered in the system.

Test Assignment

The table below states the delegated tasks corresponding to the assigned team member.

Role	Delegated Task	Team Member
Project Manager	Document Control/ Functional Testing	Mohamad Amirul Ariff Bin Mohamad Yusof
Document Manager	Document Control/ Non-Functional Testing	Siti Kuni Taibah Binti Imam Syafii
Test Lead Manager	Document Control / Functional Testing	Muhamad Syahmi Bin Sabudini
Test Designer	Document Control/ Non- Functional Testing	Wan Nurul Azlin Binti Wan Nordin

Test Strategy

The following Testing Strategies will be performed

1. Automated Testing
2. Manual Testing

Test Scope

The scope of the tests will cover both **Functional** and **Non-functional** testing.

Types of Testing

The types of testing that will be covered are:

- Functional testing
    - Unit testing

- Non-Functional Testing
    - Performance Testing
    - Load Testing
    - Usability Testing

Testing Environment

Operating System : Windows 10
Operating System Version : 1909

Testing Tools

Listed below are some of the tools that will be used throughout the duration of the testing phase.

Tools	Version	Description
Apache JMeter	5.2.1	Apache JMeter to conduct load and performance testing.
Chrome Developer Tools	-	Provide Statistics such as Network,Memory and Performance on Websites.

Test Design Specification

This section of the document will specify the Test Cases, Test Procedures and the Pass Fail cre

Functional Testing

Test Case Id	FT01
Test Case	Admin register website
Test Procedure Id	FTP01
Test Procedure	1. User click apply now to register 2. User enter information (fullname, username, email, password contact) 3. user click button register
Pass/Fail Criteria	Pass: Tester is able to successfully create an account and redirect to the landing page. Fail: Tester fails to create an account and redirects back to the login page.

Test Case Id	FT02
Test Case	Admin login website
Test Procedure Id	FTP02
Test Procedure	1. User click login button to login 2. User enter information (username, password) 3. user click button login
Pass/Fail Criteria	Pass: admin able to successfully login to the website redirect to the landing page. Fail: the website display error message and fail to view landing page

Test Case Id	FT03
Test Case	the admin view dashboard page
Test Procedure Id	FTP03
Test Procedure	1. User login as admin 2. User click My Neighbourhood button 3. user able to view total of registered residents, unapproved residents, unreviewed reservations, feedback.
Pass/Fail Criteria	Pass: Tester successfully view dashboard page with the correct information Fail: Tester fails to view the dashboard page with correct information.

Test Case Id	FT04
Test Case	Admin approve/delete resident
Test Procedure Id	FTP04
Test Procedure	1. user login as an admin 2. User click resident button 3. Users view the list of the resident and pending resident. 4. User click view in the table 5. user view resident's detail 6. User click approve button to approve resident and delete button to delete resident
Pass/Fail Criteria	Pass: Testers are able to successfully approve/delete pending residents. Fail: Tester fails to approve /delete pending resident.

Test Case Id	FT05
Test Case	The admin view/create event
Test Procedure Id	FTP05
Test Procedure	1. User login as admin 2. User click event button 3. User able to view event list 5. User click add button to create event 6. User enter proper information (Name, description, start date, end date) 7. User click add button to create that event
Pass/Fail Criteria	Pass: Tester is able to successfully create the event and view all updated event list Fail: Tester fails to create the event

Test Case Id	FT06
Test Case	The admin view/create facilities
Test Procedure Id	FTP06
Test Procedure	1. User login as admin 2. User click facility button 3. user click view button in facility list to view facility's detail 4. User able to view facility list/facility booking list 5. User click add button to create facility 6. User enter proper information (Name, description, venue) 7. User click add button to create that event
Pass/Fail Criteria	Pass: Tester is able to successfully create the facility and view all updated facility list/ facility booking list Fail: Tester fails to create the event

Test Case Id	FT07
Test Case	the admin view/delete the feedback
Test Procedure Id	FTP07
Test Procedure	1. User login as admin 2. User click feedback button 3. user able to view list of feedback 4. user click view button in feedback list to view feedback's details 5. User click delete button to delete feedback
Pass/Fail Criteria	Pass: Tester successfully view feedback list and delete the feedback Fail: Tester fails to view the feedback list and delete feedback.

Test Case Id	FT08
Test Case	the admin view/edit profile
Test Procedure Id	FTP08
Test Procedure	1. User login as admin 2. User click my profile button 3. user able to view profile 4. user click edit button in profile page to edit profile 5. User insert new information
Pass/Fail Criteria	Pass: Tester successfully view profile and edit the profile Fail: Tester fail to view profile and edit the profile

Test Case Id	FT09
Test Case	Resident register application
Test Procedure Id	FTP09
Test Procedure	1. User click apply now to register 2. User enter information (fullname, username, email, password contact) 3. User click button register
Pass/Fail Criteria	Pass: Tester is able to successfully create an account and redirect to the landing page. Fail: Tester fails to create an account and redirects back to the login page.

Test Case Id	FT10
Test Case	Resident login application
Test Procedure Id	FTP10
Test Procedure	1. User click login button to login 2. User enter information (username, password) 3. User click button login
Pass/Fail Criteria	Pass: Resident will be able to successfully login to the website redirect to the 'My Neighbourhood' page.. Fail: The application displays an error message and fails to view the 'My Neighbourhood' page.

Test Case Id	FT11
Test Case	The Resident register into a Neighbourhood
Test Procedure Id	FTP11
Test Procedure	1. User login as an Resident 2. User clicks on the 'Resident Registration' button 3. User fills in the required information (Neighbourhood ID, Residence Contact, Residence Address) 4. User click on the 'Submit' button
Pass/Fail Criteria	Pass: Tester is able to successfully register to a neighbourhood Fail: Tester fails to register to a neighbourhood

Test Case Id	FT12
Test Case	The Resident joins an event
Test Procedure Id	FTP12
Test Procedure	1. User login as Resident 2. User click on 'Neighbourhood' button 3. User click on 'Event' button 4. User will be able to view available events 5. User selects an event 6. User clicks the 'Participate' button
Pass/Fail Criteria	Pass: Tester is able to successfully join the event and view the event's participants Fail: Tester fails to join the event

Test Case Id	FT13
Test Case	The Resident books a facility
Test Procedure Id	FTP13
Test Procedure	1. User login as Resident 2. User click on 'Neighbourhood' button 3. User click on 'Facility' button 4. User will be able to view available facilities 5. User select a facility 6. User clicks the 'Reserve' button 7. User insert the start and finish time for their reservation
Pass/Fail Criteria	Pass: Tester is able to book the facility and will be redirected to the 'My Reservation' page while the reservation request is pending approval. Fail: Tester fails to book the facility

Test Case Id	FT14
Test Case	the Resident posts a feedback
Test Procedure Id	FTP14
Test Procedure	1. User login as Resident 2. User click on 'Neighbourhood' button 3. User click on 'Feedback' button 4. User fills in the textbox with their feedback 5. User clicks the 'Submit' button
Pass/Fail Criteria	Pass: Tester successfully posts a feedback Fail: Tester fails to post a feedback

Non-Functional Testing

Performance Testing

Performance Testing is carried out to see what the minimum internet speed is needed in order to operate the system.

Test Case Identification

Test Case ID	PT01
Test Scenario	The purpose of this test is to find out the load times of the website based on user's internet speed
Test Procedure ID	NFTP01
Test Module	Purchase Requisition
Test Procedure	1. User login as admin to the system 2. User click view resident button 3. Step 2 is repeated with different network speed.

Pass/Fail Criteria

Pass Criteria
- The tester is able to successfully log in the website and view the resident list page.

Fail Criteria
- The tester fails to log in the website and view the resident list page.

Load Testing

Load testing is carried out to see how well the system can perform under a specified amount of users.

Test Case Identification

Test Case ID	LT01
Test Scenario	Find the success rate of logging in to the system under heavy user load.
Test Procedure ID	NFTP02
Test Modules	Login
Test Procedure	1. Using JMeter to send 100 requests of login. 2. Step 1 is repeated with 10,000 requests of login.

Pass/Fail Criteria

Pass Criteria
- The tester is able to successfully log in the website under heavy load.

Fail Criteria
- The tester fails to log in the website while under heavy load.

Usability Testing

Performed to gain feedback from the users on the usability of the system.

Test Case Identification

Test Case ID	UT01
Test Scenario	To identify whether the system meets with the user's expectation.
Test Procedure ID	NFTP04
Test Procedure	1. The user survey is prepared. 2. The system is prepared. 3. Users test the system accordingly. 4. Users report their experience through the prepared survey.

Pass/Fail Criteria

Pass Criteria:
● The tester has an overall good experience using the system.

Fail Criteria:
● The tester has a difficult time using the system.