Testing Document

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# Introduction

This report will focus on the different testing methodologies that were used in the initial testing of the app and the different methodologies used to test the users to ensure that Nielson’s laws are followed, and the usability of the app is to a high standard. This report will be broken into two sections, Develop and Testing and User testing which will discuss the different techniques used respectively.

# User Testing

In order to determine if the developed app followed Neilson’s 5 laws of usability then user testing had to occur. The test that would be conducted would take these 5 laws into account when and ensure that at least 1 task given to the user revolved around at least 1 of these laws. The initial tests were performed on 10 users to give a realistic view into how well the app caters to Neilson’s 5 laws.

The way the test was conducted was the application was given to the user, they would have a few minutes to familiarise themselves with the app before the test would begin. The users would then be asked to perform specific tasks that would test how easily they could identify the key information required to complete the task.

The tasks that the user was asked to perform were as follows:

1. Can you find more information for one of the earthquakes?
2. Can you sort the earthquakes by most northerly?
3. Can you find filter the list to show all the earthquakes with a 1.5 magnitude?
4. Can you search for all the earthquakes that occurred in Islay?

Each of these tasks will highlight at least 1 specific law in order to determine if the app follows these laws. All of these tasks will reflect on the efficiency law as the users will already have had a chance to familiarise themselves with the app so how well they use it will show how efficient the app is. All the tasks will reflect on the overall learnability of the app as again they had a chance to familiarise themselves with the app so how well they use it caters to the learnability law. Each user was also observed by the tester who kept track of the errors and how they recovered if any errors were made which will give insight into how well the app caters to the error section of the laws.

Another test was performed 1 week later with 5 of the 10 users who were asked to perform the same task but this time they were not given the time beforehand to familiarise themselves with the app so they would have to navigate the app form memory. This was done to test the memorability factor of the app which would give valuable insight into how memorable the app is to use. The tester also tracked the amount of errors made by each user in this test as the more errors they made the less memorable the app would be.

## Questionnaire

A questionnaire was also created for the users to fill in after the completion of these tasks. This was done to further reinforce that the laws already covered were followed correctly and since the only way to test satisfaction is by asking the user directly.

The questionnaire was used a rating system from 1-5 to give the users a range of answers. The questions were as follows:

1. How easy was it to navigate the app when performing the tasks?
2. Were you able to easily identify what you could interact with?
3. How satisfied were you with the app and how it performed?
4. Would you use this app again if you needed to?

The first question will reflect on both the learnability and the efficiency of the app as depending on their answer will clearly reflect how easy the user found it to learn the functions of the app and how easily they navigated it. The second question will also highlight the efficiency of the app and test if the colour scheme selected served its purpose as everything important and everything the user could interact with was a contrasting colour from the background. The third question is the main reason for having a questionnaire as it is the only clear way to highlight how satisfied the user was with the app which will reflect how well the app followed Nielson’s 5th rule. The final question is there to reinforce the satisfaction of the user as if they were to use it again it would clearly show that they were satisfied with the app.

A second questionnaire was also created for the second round of testing to test the memorability of the app. The question was as follows:

1. How easy was it to navigate the app a second time without the familiarity period beforehand?

This question along with the error tracking will determine how well the app follows the memorability law as the only way to properly test this is to do a second round of testing without giving the user a set time to familiarise themselves with the app.

# Results

The testing listed above should be more than enough to determine how well the application follows Nielson’s 5 laws which will directly show how well the usability of the app is. The testing will also highlight any flaws in the application that might deviate from these laws which will allow the developer to either change these flaws completely or optimise them so that they make for better usability.