Deliverable 1

An identification of problems, derivation of high level requirements and an articulation of features using controlled notation

Epic Group

Introduction

The purpose of this report is to identify and express high level requirements regarding a potential software system via structured notation. We will express the contents of our report in the following format.

1. **Problem Statements**: A series of problem statements which will investigate a number of problems we will solve via our software prototype.
2. **User Stories**: An identification of features based on the problem statement previously specified.
3. **Low-Fidelity Prototype**: A paper physical sketch of the UI elements integrated with a storyboard-like chronological script.
4. **High-Fidelity Prototype**: A computerised render of the low-fidelity prototype previously specified.

Our report will strictly harbour to controlled software engineering notation, such as the utilisation of user stories and Connextra notation.

1 Problem Statements

We will enumerate over a series of problem statements tangibly solved by software to be resolved in our prototype.

1.1 Restricted Database Problem Statement

Contemporary internet recommendation algorithms are typically a smaller software component of a larger media streaming or distribution service, restricting the scope of recommendation to media within such a service.

1.2 Speculative Result Problem Statement

Current media recommendation services typically infer recommendations based on the initial media consumption habits of its users. Consequently, the resultant recommendations are implicitly obtained and therefore unreliable and largely erroneous.

1.3 Cheap Implementation Problem Statement

The computational requirements of competing recommendation algorithms are often minimised in order to mitigate the resource load on a multifaceted service which also provides streaming or forum capabilities.

1.4 User Requirement Problem Statement

Database leaks are prevalent and inevitable, and any service which needlessly requires user account creation risks fracturing the privacy and trust of its user base upon such a database breach.

1.5 User Input Sanitisation Problem Statement

Contemporary internet recommendation algorithms rely solely on the input of its user base in providing results, enabling the possibility of malicious actors exploiting the system to redirect users to dangerous or illicit content.

1.6 Corporate Bias Problem Statement

Due to the for-profit nature of widely used media recommendation algorithms, results are often skewed towards benefiting publishers who can afford to partner with media recommendation service providers.

2 High Level Requirements and Features

1. **High Level Requirement**: An unrestricted, encompassing movie database.
   Feature: An IMDb (Internet Movie Database) and OMDb (Open Movie Database) sourced database.
   User Story: As an avid film watcher, I want to receive tailored, specific recommendations relevant to me.
   Scenario: Given that I am on the website and that I perform a movie search, when I receive results, then I should see results which are most relevant to me.

2. **High Level Requirement**: An explicitly obtained search profile.
   Feature: The serving of a procedurally generated series of questions based solely on the reponses of the current session.

User Story: As someone who enjoys multiple movie genres, I want to receive recommendations which are not based on my previous viewing sessions.
Scenario: Given that I am on the website and I have previously made a search and I perform a new search, when I receive results, then the results should not be an amalgamation of my previous sessions.

3. **High Level Requirement**: Unlimited movie search sessions.
   Feature: Untracked user sessions; sessions are tracked only via the client.
   User Story: As a power user, I wish to be able to receive many movie recommendations over a short period of time.
   Scenario: Given that I have performed many searches recently, and I want to perform a new search, when I receive results, then the new results are not rate limited.

4. **High Level Requirement**: Non compulsory user account creation.
   Feature: An accountless search ability.
   User Story: As a first time website visitor, I wish to be able to perform a search without offering my credentials and other personal information to first generate an account.
   Scenario: Given that I have visited the website, and I want to make my first search, when I attempt to search, then I am not prompted to first create an account.

5. **High Level Requirement**: No user input effect on database.
   Feature: Complete sourcing of database information from a single, immutable authority.
   User Story: As a user of the service, I wish to be able to use the service in its full capability without malicious content from ever corrupting my movie suggestions.
   Scenario: Given that I have visited the website, and I make my search, when I receive my results, then the results should be free from user generated content.

6. **High Level Requirement**: No corporate influence on recommendations.
   Feature: A keyword based search mechanism.
   User Story: As a user of the service, I do not wish to receive recommendations based on corporate interests or monetary influence.
   Scenario: Given that I have visited the website, and I make my search, when I receive my results, then the results should be free from corporate bias.

3 Low-Fidelity Prototype

The following images are rough sketches of a potential final website design.

3.1 Landing Page

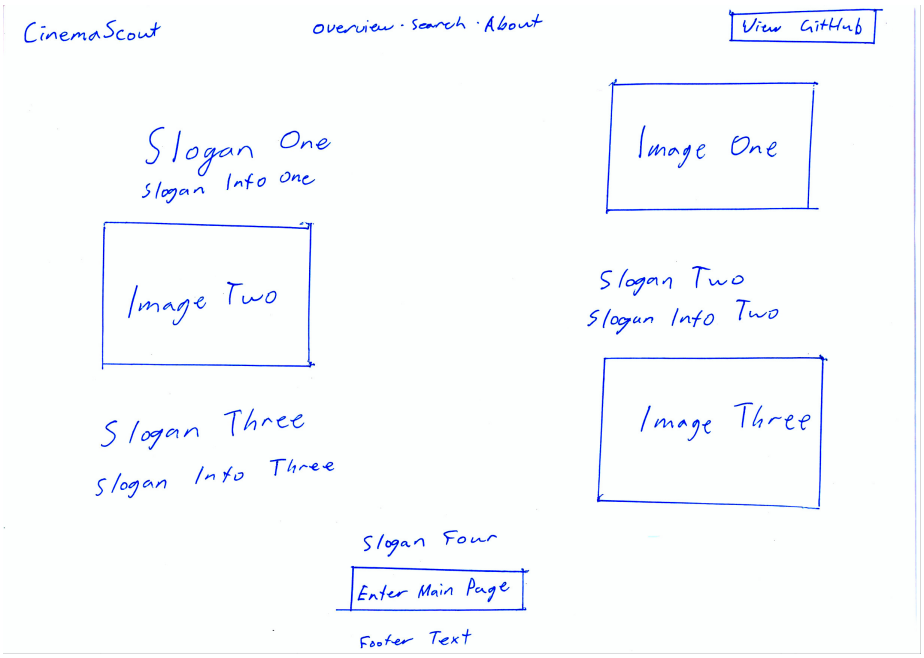

Figure 1: Rough sketch of the landing page.

3.2 Search Page

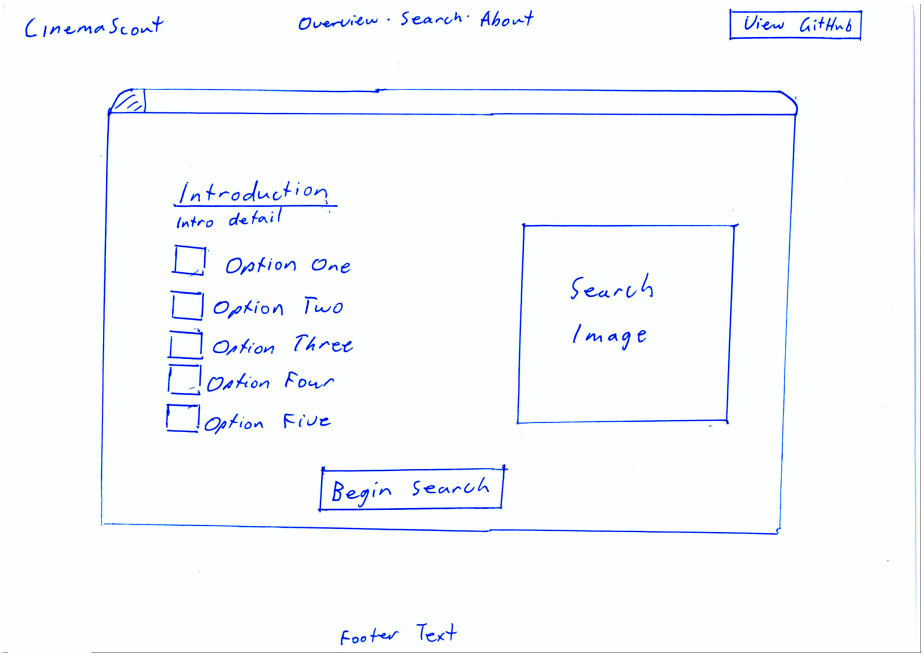

Figure 2: Rough sketch of the initialise search state of the search page.

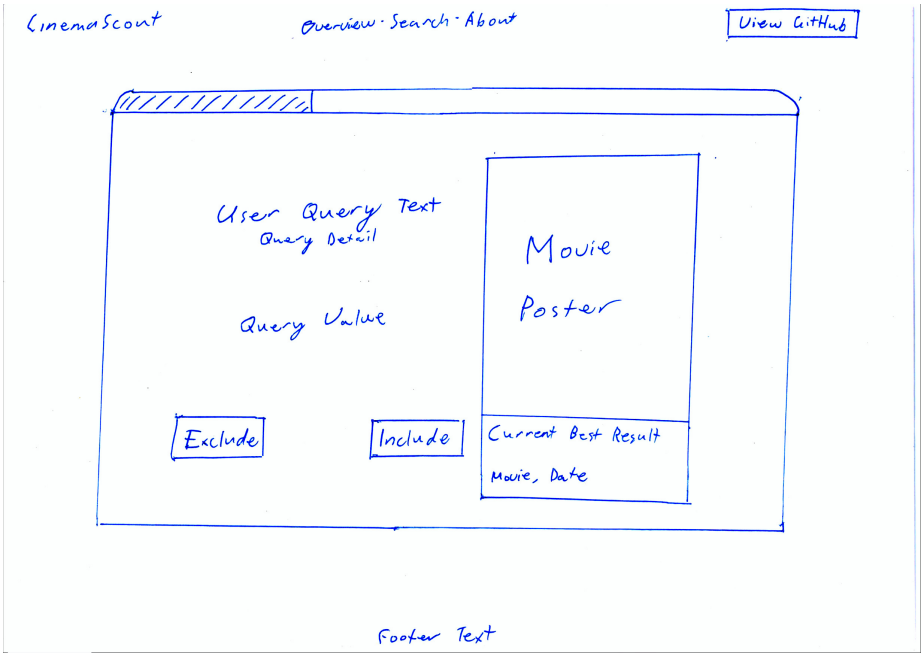

Figure 3: Rough sketch of the in progress state of the search page.

3.3 About Page

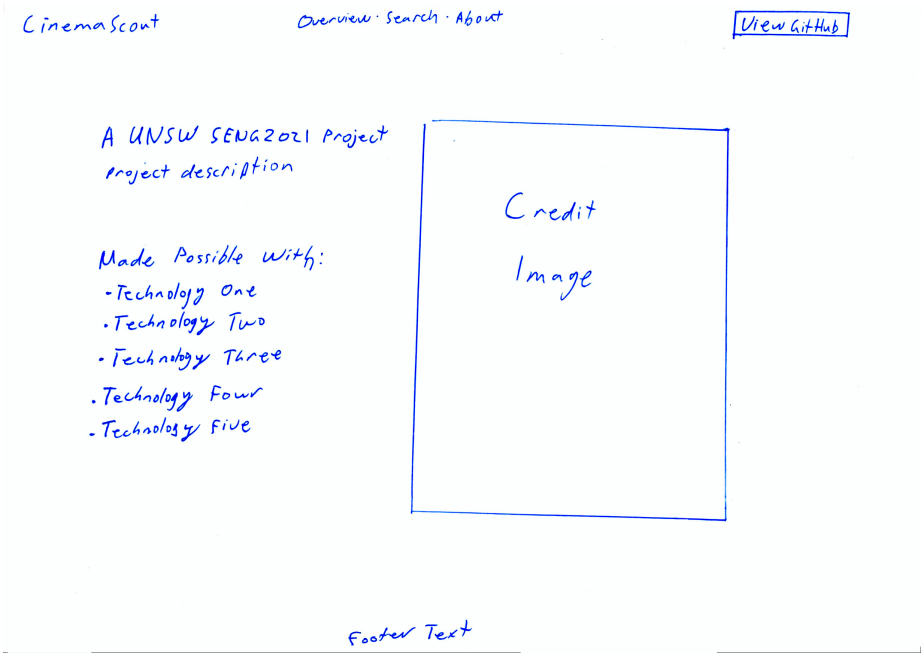

Figure 4: Rough sketch of the about page.

3.4 Storyboard Composite

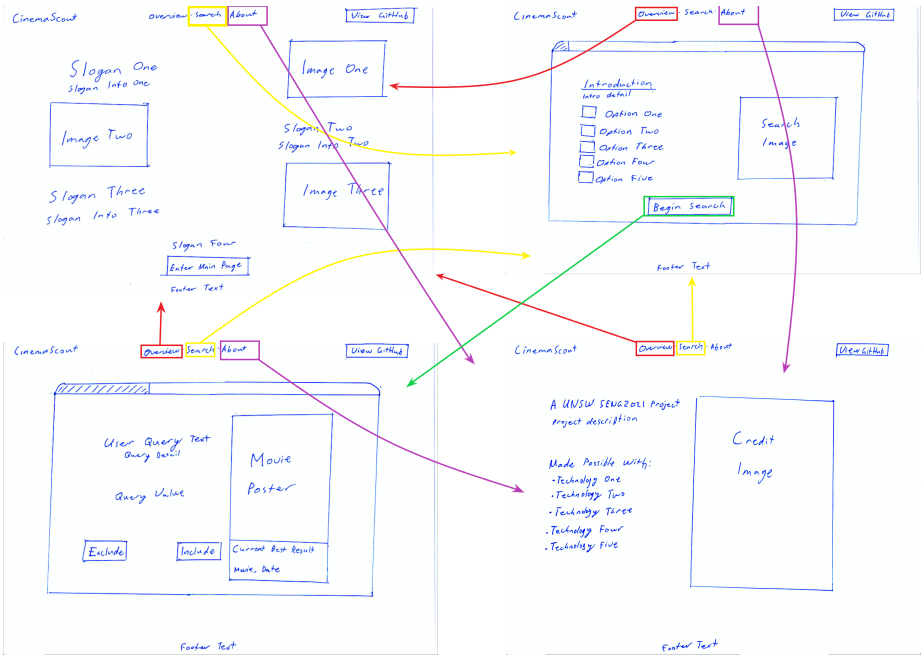

Figure 5: Storyboard sketch of all previous figures.

4 High-Fidelity Prototype

The following images are a work in progress and do not represent the final design of the product. All images were captured at a resolution of 1920 x 1080 using a default Chromium browser on Arch Linux. An interactive, high-fidelity prototype is available on GitHub.

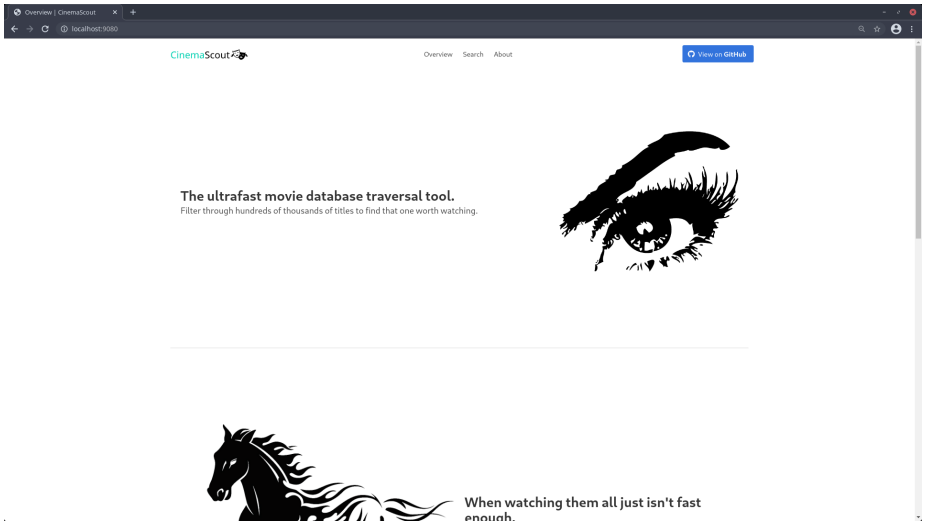

Figure 6: Upper portion of the landing page.

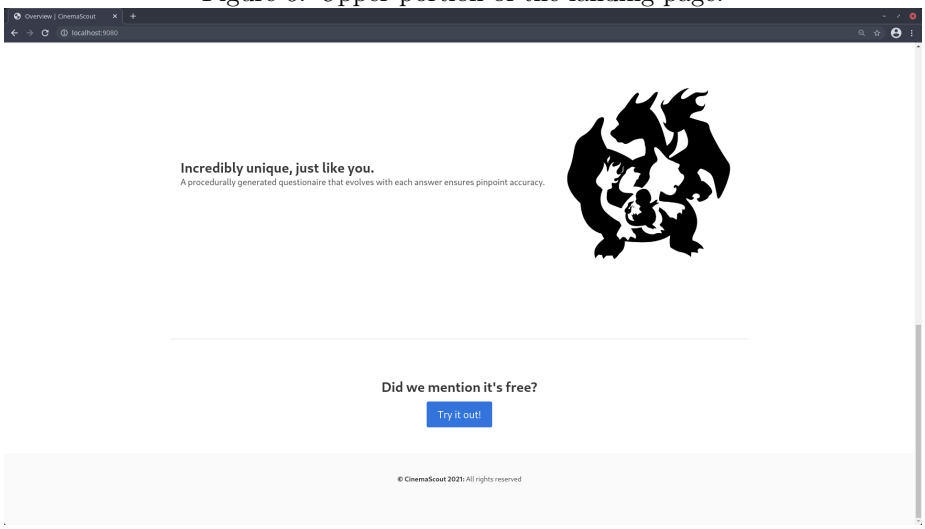

Figure 7: Lower portion of the landing page.

4.1 Landing Page

4.2 Search Page

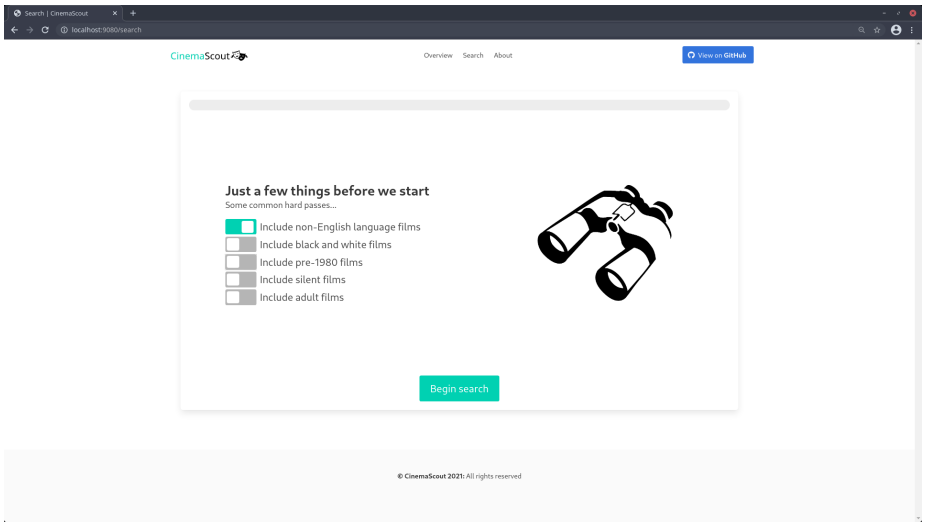

Figure 8: Initialise search state of the search page.

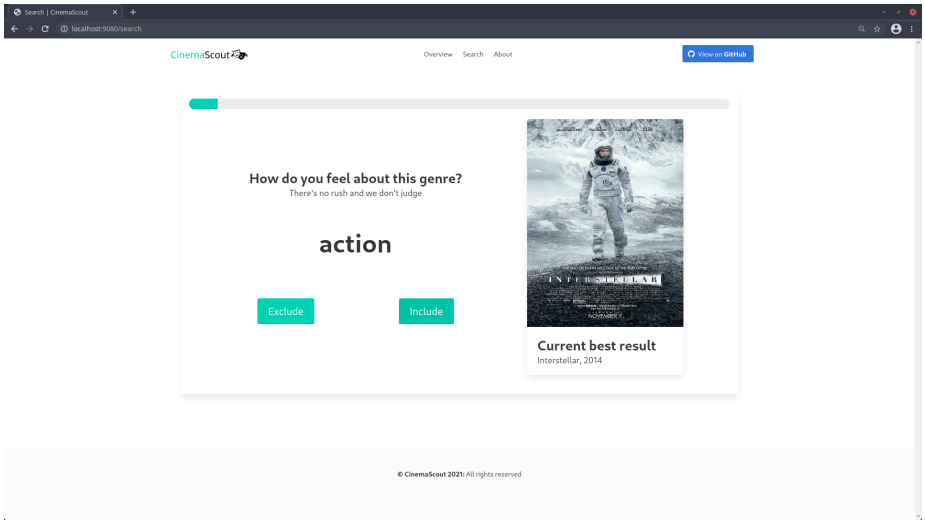

Figure 9: Search in progress state of the search page.

4.3 About Page

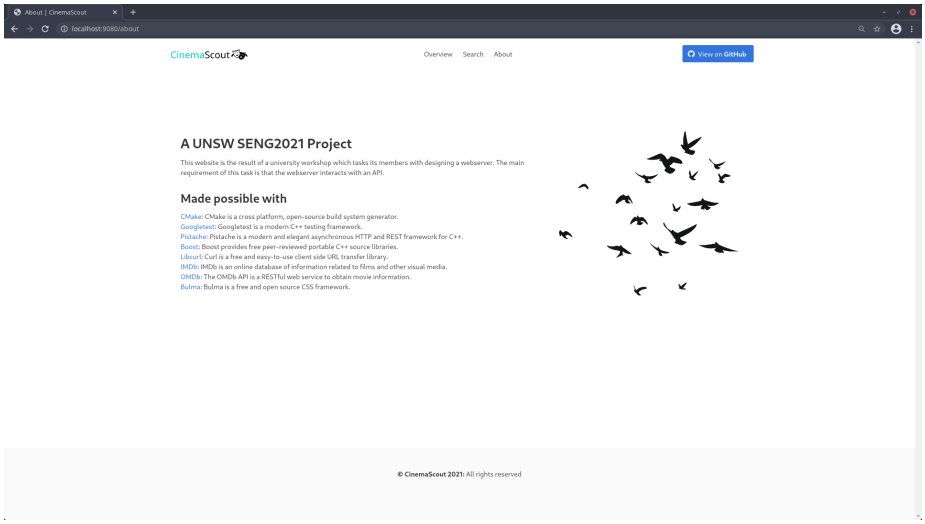

Figure 10: Entire portion of the about page.