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# **Software Requirements Specification**

**for**

## **SE2 Project – Media Aggregation Platform**

**Version 1.0**

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## **Revision History**

<b>Name</b>	<b>Date</b>	<b>Reason For Changes</b>	<b>Version</b>

# **1. Introduction**

## **1.1 Purpose**

*The purpose of this document is to provide context for the media aggregation platform, including its features and associated requirements.*

## **1.2 Document Conventions**

*Overarching high-level requirements are assumed to be inherited by detailed requirements.*

## **1.3 Intended Audience and Reading Suggestions**

*The primary audiences of this document are the developers for future reference and the project supervisor (Prof. Conlon) for purposes of project approval.*

## **1.4 Product Scope**

*As this project is part of an academic course, its scope is largely defined by the constraints of completing it according to the grading guidelines and within the timeline of the semester. With these factors in mind, the project is intended to produce an application satisfying all of the requirements outlined in this document.*

## **1.5 References (Not completed)**

*\*To be completed at a later date once requirements are more fully determined\**

# **2. Overall Description**

## **2.1 Product Perspective**

*This product will be built from the ground-up as a standalone application. Since this project is designed to showcase the developers' understanding of software engineering principles, its development will be treated as a self-contained platform.*

## **2.2 Product Functions**

*The central function of the product is to provide the user with an aggregation of several news and media sources. The features associated with this functionality include interactions with the individual news and media entries to access expanded information, a preference system in which the user can notate that they prefer similar news or media, and a hide system to allow the*

*user to unlist specific news and media sources. An additional function is a profile system that allows for the user to log-in and save their source preferences and settings.*

## **2.3 User Classes and Characteristics**

*Anticipated users include individuals familiar with web page standards and typical consumers of online news and media.*

## **2.4 Operating Environment**

*The aggregation platform is designed to be run as a dynamic web application, compatible with Google Chrome, Firefox, Edge, and Safari.*

## **2.5 Design and Implementation Constraints**

*Due to the time constraints of developing this project, adjustments may be made over time as the appropriate scope of the software is determined. Additionally, as this software is being developed independently by students, access to third party tools may be limited. As such, features such as storage capacity and server uptime will be restricted to the levels of the free versions of AWS. This may be compounded by the developer's lack of experience working with database technology and web-hosting services.*

## **2.6 User Documentation (Not Completed)**

*As this is a relatively simplistic web application with a scope determined by that of the course, in-depth user documentation has been deemed unnecessary.*

## **2.7 Assumptions and Dependencies**

*The webpage implementation of the platform depends on the availability and stability of the Amazon EC2 web service it is to be hosted on. Additionally, user profile access will depend on the maintenance of the MySQL database the user info is to be stored in.*

# **3. External Interface Requirements**

## **3.1 User Interfaces**

- *Search Bar*
- *Preference Button*
- *Hide Button*
- *Refresh Button*
- *User Profile Tab*

*The search bar will allow the user to search for news and media articles that match the provided keywords. This will refresh the articles displayed to those that satisfy the search criteria. Each article displayed on the platform will have a preference button and a hide button as part of the article panel. A refresh button will allow the user to manually refresh the article feed to reflect the latest data. The user profile can be accessed via a side-tab, and will display the user's name, list of preferred sources, list of hidden sources, and an option for the user to log-out.*

## **3.2 Hardware Interfaces**

*Being a web application, the platform requires access via a device compatible with the browsers specified. This includes personal computers, laptops, phones, and tablets.*

## **3.3 Software Interfaces**

*As this product is designed to function as a dynamic web application, it is planned to be hosted using the trial version of the Amazon Elastic Compute Cloud (Amazon EC2) web service. A relational database is intended to be used to store and retrieve user information for the application, which is to be managed by the MySQL database management system. The data to be passed between the application and the database will contain user-specific ID's and passwords, as well as information each user specifies regarding their displayed media preferences.*

## **3.4 Communications Interfaces**

*As the aggregation platform assembles news and media from external sites, it relies on the API's of these third-party platforms to effectively provide these articles.*

# **4. System Features**

## **4.1 Account Creation**

### **4.1.1 Description**

*The system shall allow for account creation and logging-in to existing accounts. Medium priority feature, medium cost as it depends on database integration.*

### **4.1.2 Stimulus/Response Sequences**

*The system shall prompt the user to create an account or log-in upon loading the application.*

### **4.1.3 Functional Requirements**

- REQ-1: The system shall prompt new users to create an account with a username and password.
- REQ-2: The system shall prevent new accounts from being made using credentials in-use by other accounts.

- REQ-3: The system shall allow returning users to log-in using previously provided credentials.
- REQ-4: The system shall notify the user if provided credentials have not been used to create an account.

## 4.2 News/Media Article Display

### 4.3.1 Description

*The platform shall retrieve news and media articles from external sources and display them on the formatted home page. High priority feature, basis of the entire platform. High cost feature, depends on integrating several different API's and creating a standardized formatting template.*

### 4.3.2 Stimulus/Response Sequences

*Occurs automatically upon opening the webpage.*

### 4.3.3 Functional Requirements

- REQ-1: The platform will automatically retrieve the latest set of news and media articles from the set of preferred sources upon the user logging-in.
- REQ-2: The platform will display the latest set of news and media articles in a standardized formatting.
- REQ-3: In the case where the platform fails to retrieve a news or media article, the platform will notate this by displaying a connection issue message in the place of the article.

## 4.3 Article Source Preferences

### 4.4.1 Description

*The platform will support user-specified preferences regarding news/media sources and types. The user shall be able to mark a source as "preferred", increasing the appearance rate of articles sharing the same source and/or topic. Low priority feature, depends on successful completion of core features.*

### 4.4.2 Stimulus/Response Sequences

*The preference feature shall be activated upon the user manually selecting the preference button on the article display.*

### 4.4.3 Functional Requirements

- REQ-1: The system will log the source and topic of user-preferred articles as user-specific data.
- REQ-2: The systems shall display preferred sources and topics with higher priority compared to neutral and hidden sources/topics.
- REQ-3: The system shall allow for modifications to preferred sources and topics within the user-profile menu.

## 4.4 News/Media Article Hiding

### 4.5.1 Description

*The platform will support user-specified hiding of specific article sources and/or topics. Hiding sources/topics will lower the appearance rate of similar articles. Low priority feature, depends on successful completion of core features.*

### 4.5.2 Stimulus/Response Sequences

*The hiding feature shall be activated upon the user manually selecting the hide button on the article display.*

### 4.5.3 Functional Requirements

- REQ-1: The system will log the source and topic of user-hidden articles as user-specific data.
- REQ-2: The systems shall display hidden sources and topics with lower priority compared to neutral and preferred sources/topics.
- REQ-3: The system shall allow for modifications to hidden sources and topics within the user-profile menu.

## 4.5 User Information Privacy

### 4.5.1 Description

*The platform shall prevent access to user-specific information (i.e. name, password, source preferences) by users other than the one they are associated with.*

### 4.5.2 Stimulus/Response Sequences

*User information privacy will be handled automatically by the system at all times.*

### 4.5.3 Functional Requirements

- REQ-1: The system will associate information for each user to their specific accounts.
- REQ-2: The system shall only display the profile information associated with the user currently logged-in.

## 5. Other Nonfunctional Requirements

### 5.1 Performance Requirements

- *The system shall load within 5 seconds 90% of the time.*
- *In the case of a failure to retrieve a media or news article, the display of other articles will not be affected.*
- *The system shall transition between menus within 1 second.*
- *The user login process shall take no longer than 5 seconds.*
- *The web server shall have an uptime of 90%*



## 5.2 Safety Requirements

*Due to this project being developed as an independent platform without any required safety certifications or external policies, no safety requirements will be specified.*

## 5.3 Security Requirements

*Depending on time constraints and developer understanding of database technology, data encryption may be implemented for account information stored in the database.*

## 5.4 Software Quality Attributes

*The system shall be designed as a highly intuitive platform, with a simple interface prioritizing ease of use. Additionally, the future addition of other external media sources will be kept in mind when developing the API integration features.*

## 5.5 Business Rules

*Only registered users may utilize the source preferences and hide features, as they are stored as user-specific data.*

# 6. Other Requirements

*The database shall be able to store a large amount of users and their information. The database shall store the users preference for what news/media articles are shown.*

## Appendix A: Glossary

*<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>*

## Appendix B: Analysis Models

*<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>*

## Appendix C: To Be Determined List

*<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>*