

---

# **Software Requirements Specification**

**for**

## **A Facebook-Like Social Media Platform**

**Version 1.0 approved**

**Prepared by Group 1 Members - Michelle Hardin, Philip Haggard,  
Connor Brooks, Peter Tisler**

**CSE 4214: Introduction to Software Engineering  
Mississippi State University**

**February 11, 2021**

# **1. Introduction**

## **1.1 Purpose**

The purpose of this project is to build a Facebook-like social media platform. The user should be able to create an account, login/logout, make and edit posts, and share post. A user should also be able to send friend request or accept them. This documentation serves to give an overview of the functional and nonfunctional requirements of the social media platform.

## **1.2 Document Conventions**

This document will follow all criteria set forth by the lab grading document. All functional requirements statement will explicitly state the priority.

## **1.3 Intended Audience and Reading**

This document is primarily intended to serve as documentation for the TA, professor, and other Mississippi State Intro to Software Engineering students to better understand the software and system requirements. The document should be read in chronological order, unless explicitly stated with a direct reference.

## **1.4 Product Scope**

The social media platform is an online community to aid with social interaction between peers. It will serve to help maintain peer-to-peer relationships via interactive posts. The main objective is to be able to share their thoughts, experiences, etc. with friends or family, which can be read by anyone connected to the user via friend request.

## **1.5 References**

This document will refer to the project topic document provided by the TA as well as the 2022 CSE4214: Intro to Software Engineering Lab Guideline.

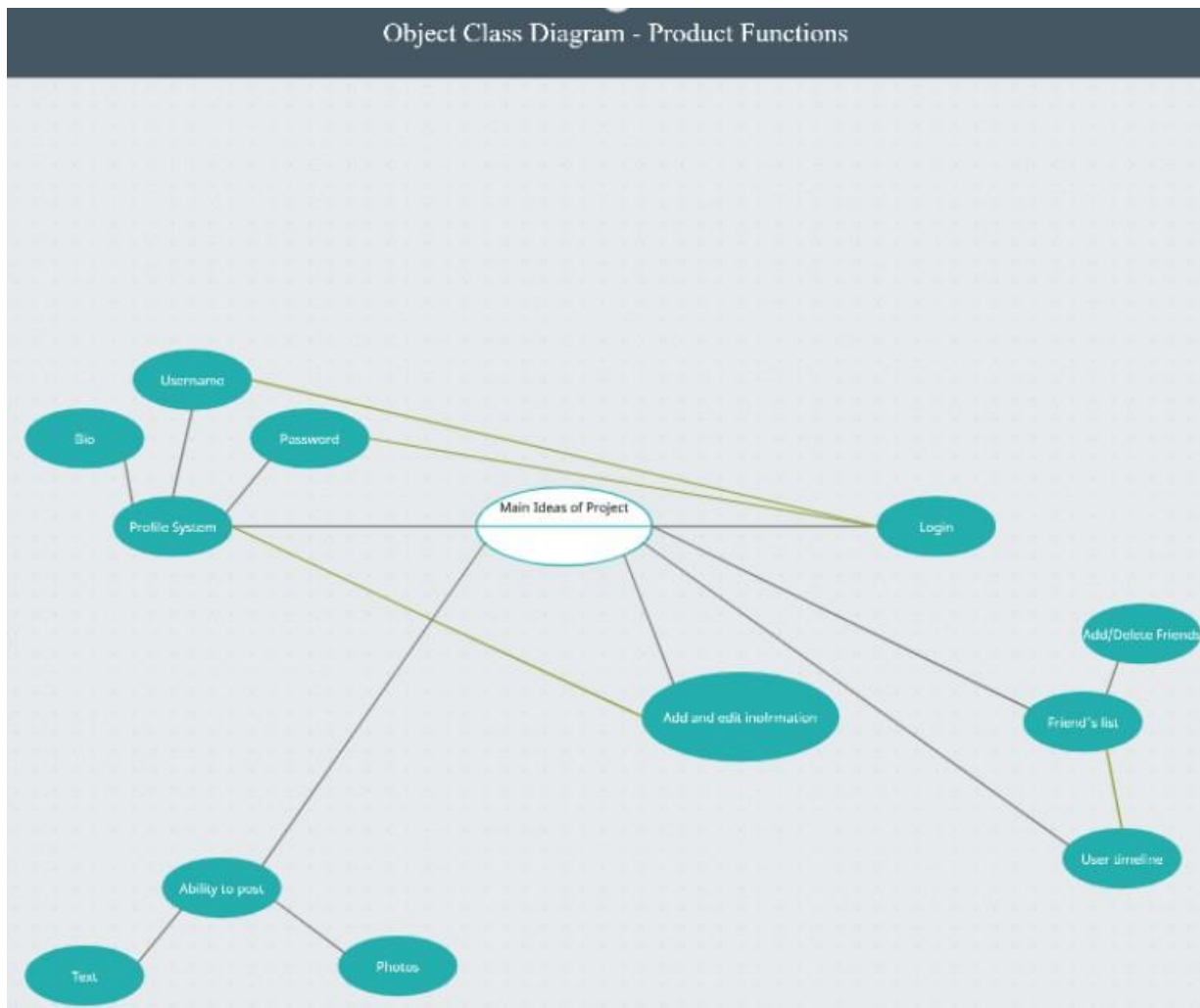
# **2. Overall Description**

## **2.1 Product Perspective**

The product is a social media website that resembles and will support similar user actions to those of Facebook, per the Project Topic guidelines.

## 2.2 Product Functions

- A user should be able to create an account.
- A user should be able to login or logout of their account.
- A user should be able to edit their account information.
- A user should be able to compose, edit and post a status.
- A user should be able to accept friend requests or be able to send friend requests so that others can interact with them.
- A user should be able to like, comment and share the status/timeline post of their friends.



## 2.3 User Classes and Characteristics

The system will support member users and administrators.

Member user privileges require a basic computer knowledge and access to the internet via web browser. Demographically, they can be of any gender, race, education status, and/or employment status. A user will be required to be age 13+. A user will have access to view and interact with their account and timeline, as well as interact with their friends' posts.

Administrators will have access to all user functions as well as special-authorization functions, regarding security, and account access.

## 2.4 Operating Environment

### HARDWARE REQUIREMENTS:

- Considering this website is to have similar functionality to Facebook, it is expected to have similar system requirements. Facebook requires at minimum a single core 2.4 GHZ CPU, 512 MB of ram, Nvidia GeForce 5xxx GPU, 5 GB hard drive, and a network connection.

### SOFTWARE REQUIREMENTS:

- The website will be operational with any operating system that can use modern browsers that support HTML and/or CSS.

This project will be programmed in Windows x64. It will be programmed through Visual Studio (2019) and then hosted through GitHub. The website should stand alone and not rely on any other website.

## 2.5 Design and Implementation Constraints

The project will comply with all student policies set forth by Mississippi State University and must be submitted in a specified timeline, per the Lab Guideline pdf. The website is intended to be used by desktop browser only. Currently, it can only support the English language. After the course of the semester, an appropriate university representative will be responsible for maintaining the delivered software.

# 3. System Features

*<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>*

## 3.1 User Registration

### 3.1.1 Description and Priority

User will be able to create an account if there is no associated account with their email address. User should provide email address, first name, last name, date of birth, and password.

Priority Level: High  
Benefit: 9  
Penalty: 9  
Cost: 3  
Risk: 6

### 3.1.2 Stimulus/Response Sequences

The user will launch the website then be prompted to enter an email address and password to sign in. The option to create an account will be available at this stage as well. To create an account the user will select that option. The user must enter the following required information: email address, first name, last name, date of birth, and password. The user must confirm the password by reentering it in the confirm password box. The user must be 13 years or older. The user must have a valid email address that is not already registered. The user must have a password that is a minimum of 8 characters. The user will then be prompted to add the required information to create an account. After entering all required information, the user will click confirm.

### 3.1.3 Functional Requirements

REQ-1: The system must allow users to enter personal, required information.  
REQ-2: The system must store the user information in a database.

## 3.2 User Login

### 3.1.1 Description and Priority

The user should be able to login to his or her account. The user will have to enter an email and associated password to gain access to their account.

Priority Level: High  
Benefit: 9  
Penalty: 9  
Cost: 2  
Risk: 6

### 3.1.2 Stimulus/Response Sequences

The user will launch the website then be prompted to enter their email address and password to sign in. The system will check the email for valid format. If incorrect, the system will return an error message. The system will check the email and password combination for correctness in the database. If incorrect, the system will return error message. The system will forward the user to their timeline upon verification.

### 3.1.3 Functional Requirements

REQ-1: The system must allow users to login by entering their email address and password.  
REQ-2: The system must return an error message if verification returns false.  
REQ-3: The system must allow users access to their homepage if verification returns true.

## 3.3 User Logout

### 3.1.1 Description and Priority

The user should be able to logout of his or her account. The user will have to click a log out button.

Priority Level: Medium

Benefit: 6

Penalty: 7

Cost: 1

Risk: 4

### 3.1.2 Stimulus/Response Sequences

The user will launch the website and login to the system by entering their email and password. The system will forward the user to their timeline. The user must locate the logout button in the browser and click it. The system must exit the users account. The system will return to the welcome screen / home, prompting user login or create account.

### 3.1.3 Functional Requirements

REQ-1: The system must exit the specified user account

REQ-2: The system must return to the website home page.

## 3.4 Friend Request

### 3.1.1 Description and Priority

The user should be able to connect his or her account to friends' accounts by sending friend request and/or accepting friend request.

Priority Level: Medium

Benefit: 7

Penalty: 8

Cost: 3

Risk: 5

### 3.1.2 Stimulus/Response Sequences

The user will launch the application, sign into his or her account, and search for friends on the application using their usernames. From there they can send friend request to the searched individual. The user will check his friend request. The user will accept or reject the request. If accepted, the user can see where they added friends to their friend's list and manage their friendship.

### 3.1.3 Functional Requirements

REQ-1: The system must be able to search for other users on the website.

REQ-2: The system must allow users to view their friend list.

REQ-3: The system must allow users to accept friend requests.

REQ-4: The system must send a friend request to the correct requested user.

REQ-5: The system must add a user to a friend list.

REQ-6: The system must disconnect friends upon request.

## 3.5 User Timeline

### 3.1.1 Description and Priority

The user should be able to compose and post content to their timeline that friends will be able to see. The user should be able to edit a post that they have previously posted.

Priority Level: High  
Benefit: 8  
Penalty: 8  
Cost: 5  
Risk: 5

#### 3.1.2 Stimulus/Response Sequences

The user will launch the website and sign in to their account. The system will give the user access to his/her account and forward the user to his/her timeline. The user must click to prompt the status box. The user must type the desired status content. The user must click a button labeled 'POST'. The system will log the action. The system will post the status on the user's timeline. The user can navigate to the status and click an options button. The user will click 'EDIT'. The system will open the status box with the status box to be edited. The user will change the text. The user must click 'POST' to resubmit the status. The system will edit the post to save the updated text.

#### 3.1.3 Functional Requirements

REQ-1: The system must allow the user to type into a specified status box.  
REQ-2: The system must log the status to the user's account.  
REQ-3: The system must post the status to the user's timeline.  
REQ-4: The system must post the status to the user's friends' timelines.  
REQ-5: The system must save the user's edit changes.

### 3.6 Timeline Interactions with Friends

#### 3.1.1 Description and Priority

The user should be able to interact with their friends' posts, such as like, comment, and sharing a friend's post.

Priority Level: Low  
Benefit: 6  
Penalty: 4  
Cost: 5  
Risk: 3

#### 3.1.2 Stimulus/Response Sequences

The user will launch the website, sign into his or her account, and will be automatically sent to a display of a chronological mixture their own post and their friends recent timeline activity. From this display the user should be able to interact with their friends' timeline post, such as liking, commenting on, and sharing a post.

#### 3.1.3 Functional Requirements

REQ-1: The system must display the timeline in chronological order from newest to oldest.  
REQ-2: The system must allow a user to like a friend's post.  
REQ-3: The system must allow a user to share a post from another user's timeline.  
REQ-4: The system must allow a user to comment on a post on another user's timeline.

## **4. Other Nonfunctional Requirements**

### **4.1 Performance Requirements**

The website should be able to handle a large amount of users using the system at any given time and loading speed should be fast. As stated in the hardware requirement, the user will need minimum a single core 2.4 GHZ CPU, 512 MB of ram, Nvidia GeForce 5xxx GPU, 5 GB hard drive, and a network connection for the system to perform correctly. This may vary though based on how many features have been implemented and how optimized they are.

### **4.2 Safety Requirements**

Usage of the website must follow U.S. Constitutional laws as well as Mississippi State University safety and social media policies. Any form of reported harassment, misconduct, misuse, or attempts at unauthorized access may result in the user losing privilege to the website.

### **4.3 Security Requirements**

Ideally, the product will have automatic censoring of curse and swear words for users under 16. Username and passwords must be secure to protect members from unauthorized account access and any possible consequences. The system will require users to enter a matching password that corresponds with the information stored by the system.

If this social media product wishes to access the E.U. market, it must have the feature of deleting user profile and any collected data because of the E.U.'s Right to be Forgotten laws.

### **4.4 Software Quality Attributes**

- Availability and Flexibility: Optimizing the site will allow more users to browse it.
- Correctness: A spell check feature.
- Interoperability and Usability: A clear and easy to understand UI will be essential to attract and keep users on the site.
- Maintainability and Testability: Adequate and concise commenting during coding should make the software more readable to developers. The use of agile coding techniques should keep the website easy to maintain. The software should be developed in a way that makes it easy to add new features.
- Portability: Adding a mobile version could attract more users.
- Reliability and Robustness: Reducing the number of bugs will be paramount to keeping users on the site.

## **5. Other Requirements**



TBD

## **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.>*

TBD – To Be Determined

TA – Teacher's Assistant

E.U. – European Union

## **Appendix B: Analysis Models**

N/A

## **Appendix C: To Be Determined List**

Any additional other requirements to be discovered.