



**CSC 431**

**Apollo Music Dating and Social Network  
Application**

# Software Requirements Specification (SRS)

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# Version History

| Version | Date    | Author(s)                                       | Change Comments |
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| 1       | 2/21/21 | Samantha Kamath,<br>Megan Page, Yunting<br>Zhao | First Draft     |
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|         |         |   |                 |
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# 1. System Requirements

## 1.1 Functional Requirements

### 1.1.1 Creating User Account

|                   |  |
|-------------------|--|
| Title             | Creating User Account  |
| Description       | System creates a new user account when users register using a new email or phone number.   |
| Priority          | 3  |
| Precondition(s)   | User has a google account, facebook, or phone number to sign up with   |
| Basic Flow        | <ol style="list-style-type: none"><li>1. A first time user will interact with a screen that gives the option to login or sign up.</li><li>2. User will be asked to enter their third party app information or phone number</li></ol> |
| Postconditions(s) | User will be prompted to add profile page information  |
| Use Case Diagram  | 3.1.1  |

### 1.1.2 Creating Profile

|                 |   |
|-----------------|---|
| Title           | Creating Profile  |
| Description     | System creates a user profile and presents users with the option to add personal information. |
| Priority        | 0   |
| Precondition(s) | User registers with the app.  |

|                   |  |
|-------------------|--|
| Basic Flow        | <ol style="list-style-type: none"> <li>1. User will be asked to enter their <ul style="list-style-type: none"> <li>- Age</li> <li>- Location</li> <li>- Picture(s) of user</li> <li>- Bio (optional)</li> <li>- Top artists (optional)</li> <li>- Favorite song (optional)</li> <li>- Compatibility threshold (%)</li> <li>- Spotify and Apple Music access to link top artists to user's profile</li> </ul> </li> </ol> |
| Postconditions(s) | User will be seen on seeking page upon profile creation  |
| Use Case Diagram  | 3.1.2  |

### 1.1.3 Logging In

|                   |   |
|-------------------|---|
| Title             | Logging In  |
| Description       | The system logs in users using the same process and credentials with which they registered.   |
| Priority          | 3   |
| Precondition(s)   | User must have an account set up with third party credentials or phone number   |
| Basic Flow        | <ol style="list-style-type: none"> <li>1. User will be asked to Login or sign up upon deletion and reinstallation of app.</li> <li>2. Returning users will login with the credentials they used to sign up</li> </ol> |
| Postconditions(s) | User will be taken to Seeking Page  |
| Use Case Diagram  | 3.1.3   |

### 1.1.4 Matching Preferences

|                   |  |
|-------------------|--|
| Title             | Matching Preferences   |
| Description       | The system executes the preferences matcher every time a user saves their profile.   |
| Priority          | 3  |
| Precondition(s)   | Users have made changes to their profile.  |
| Basic Flow        | <ol style="list-style-type: none"><li>1. Users save their profile changes.</li><li>2. The preferences matcher is executed, creating a list of compatible matches for the user.</li></ol> |
| Postconditions(s) | The new list of matches is depicted on the user's seeking page.  |
| Use Case Diagram  | 3.1.4  |

### 1.1.5 Users Exploring Profiles

|                   |   |
|-------------------|---|
| Title             | Users Exploring Profiles  |
| Description       | Users view other users' profiles and like or dislike the profiles.  |
| Priority          | 0   |
| Precondition(s)   | User has created and saved a profile and navigated to the Seeking Page.   |
| Basic Flow        | <ol style="list-style-type: none"><li>1. User views another user's profile.</li><li>2. User swipes through the user's profile to learn about their interests and characteristics.</li><li>3. User swipes left or right to indicate their disinterest or interest in the other user, respectively.</li></ol> |
| Postconditions(s) | If the user swiped left, the profile disappears from the user's list of matches. If the user swiped right, the profile may be one potential match.  |

|                  |       |
|------------------|-------|
| Use Case Diagram | 3.1.5 |
|------------------|-------|

### 1.1.6 Messaging Matches

|                   |  |
|-------------------|--|
| Title             | Messaging Matches  |
| Description       | System matches users together with the ability to chat with one another and unmatched one another.   |
| Priority          | 0  |
| Precondition(s)   | Both users have chosen to like each other's profiles, creating a match between them.   |
| Basic Flow        | <ol style="list-style-type: none"> <li>1. The user will enter the matchmaking chat screen and start a quick conversation with the other user.</li> <li>2. The longer users talk and the more messages they send, the more the interaction history will be recorded and more chat features can be unlocked</li> <li>3. The user can choose to keep the chat partner in their list or delete it</li> </ol> |
| Postconditions(s) | The system will record the number of chat messages between two users and the total active chat time  |
| Use Case Diagram  | 3.1.6  |

### 1.1.7 Previewing Suggested Upcoming Concerts

|             |   |
|-------------|---|
| Title       | Previewing Suggested Upcoming Concerts                            |
| Description | Users preview suggested upcoming concerts upon messaging a match. |
| Priority    | 3   |



|                   |  |
|-------------------|--|
| Precondition(s)   | The number of chat messages between two users exceeds a certain value, or the total active chat time exceeds a certain value   |
| Basic Flow        | <ol style="list-style-type: none"> <li>1. If either of the two condition exceeds a certain value, the system will recommend the closest concert to both users</li> <li>2. A brief message regarding the concert will appear on the user's chat screen, and the user can choose to click on it or turn it off.</li> <li>3. If the user clicks in, he or she will be taken to a screen introducing the upcoming concert near both of them</li> </ol> |
| Postconditions(s) | Users can choose to stay in the chat screen and continue chatting or go back to the seeking page   |
| Use Case Diagram  | 3.1.7  |

## 1.2 Non-Functional Requirements

### 1.2.1 User Registration Load Speed

|                  |   |
|------------------|---|
| Title            | User Registration Load Speed  |
| Description      | When registering with Google or Facebook, the third-party login should load within two seconds. |
| Priority         | 4   |
| Applicable FR(s) | 1.1.1   |

### 1.2.2 User Profile Page Load Time

|             |  |
|-------------|--|
| Title       | User Profile Page Load Time  |
| Description | User profile pages are created and load within two seconds of new users registering. |
| Priority    | 3  |

|                  |       |
|------------------|-------|
| Applicable FR(s) | 1.1.2 |
|------------------|-------|

### 1.2.3 Login Page Security

|                  |                                    |
|------------------|------------------------------------|
| Title            | Login Page Security                |
| Description      | User login data will be encrypted. |
| Priority         | 1                                  |
| Applicable FR(s) | 1.1.3                              |

### 1.2.4 Preferences Matcher Compatibility

|                  |   |
|------------------|---|
| Title            | Preferences Matcher Compatibility   |
| Description      | Users match with others based on a user-defined percent compatibility threshold |
| Priority         | 2   |
| Applicable FR(s) | 1.1.4   |

### 1.2.5 Seeking Page Usability

|                  |   |
|------------------|---|
| Title            | Seeking Page Usability  |
| Description      | Users do not see previously-disliked users on the seeking page. |
| Priority         | 1   |
| Applicable FR(s) | 1.1.5   |

### 1.2.6 Matches Page Security

|             |  |
|-------------|--|
| Title       | Matches page security                              |
| Description | User matches and match chats will be confidential. |
| Priority    | 1  |

|                  |       |
|------------------|-------|
| Applicable FR(s) | 1.1.6 |
|------------------|-------|

### **1.2.7 Suggested Upcoming Concerts**

|                  |   |
|------------------|---|
| Title            | Suggested upcoming concerts   |
| Description      | Users expect to see concerts close to their location based on their artist, genre and concert venues preferences. |
| Priority         | 3   |
| Applicable FR(s) | 1.1.7   |

## **2. System Constraints**

### **2.1 Tool Constraints**

#### **2.1.1 Mobile Application Framework Constraint**

|             |  |
|-------------|--|
| Title       | Mobile Application Framework Constraint    |
| Description | We will be using Firebase for the backend. |
| Priority    | 1  |

### **2.2 Language Constraints**

#### **2.2.1 BackEnd Language**

|       |                  |
|-------|------------------|
| Title | BackEnd Language |
|-------|------------------|

|             |                        |
|-------------|------------------------|
| Description | Backend will use Java. |
| Priority    | 1                      |

### 2.2.2. FrontEnd Language

|             |                         |
|-------------|-------------------------|
| Title       | FrontEnd Language       |
| Description | Frontend will use Dart. |
| Priority    | 1                       |

## 2.3 Platform Constraints

### 2.3.1 iOS

|             |                      |
|-------------|----------------------|
| Title       | iOS                  |
| Description | App must run on iOS. |
| Priority    | 0                    |

## 2.4 Hardware Constraints

### 2.4.1 iPhone Required

|             |   |
|-------------|---|
| Title       | Devices required                            |
| Description | User must have an iPhone to access the app. |
| Priority    | 0   |

## **2.5 Network Constraints**

### **2.5.1 Internet Required**

|             |   |
|-------------|---|
| Title       | Internet Required   |
| Description | Users must be connected to the Internet via data or wifi to access the app. |
| Priority    | 0   |

## **2.6 Deployment Constraints**

### **2.6.1 FireBase Deployment**

|             |   |
|-------------|---|
| Title       | FireBase Deployment   |
| Description | This service will be deployed using FireBase, a development platform for building secure, scalable mobile application |
| Priority    | 1   |

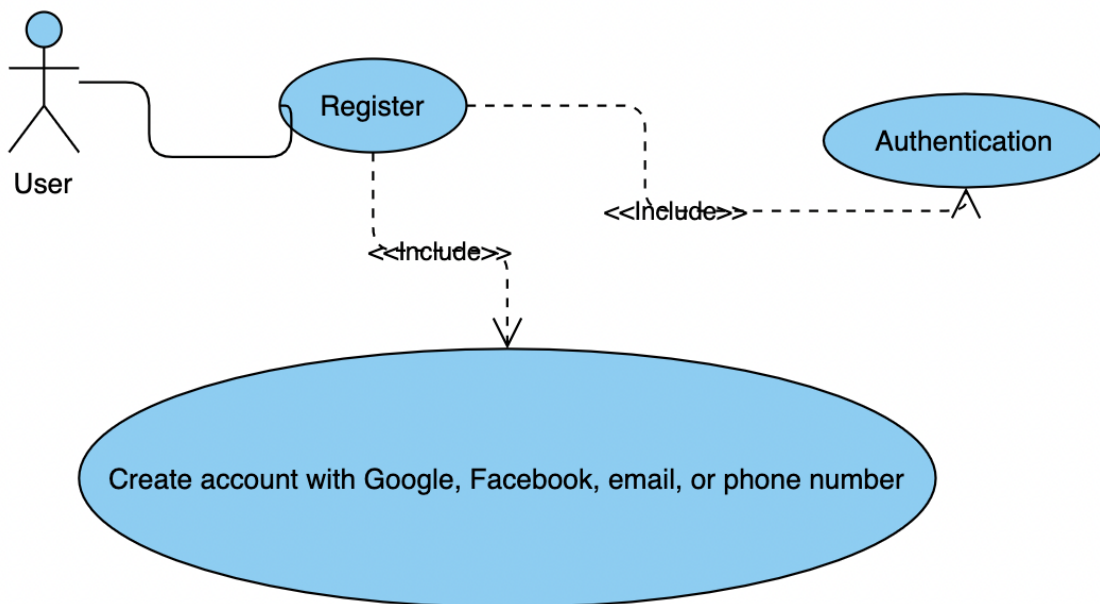
## **2.8 Budget & Schedule Constraints**

### **2.8.1 Design and Requirement Schedule**

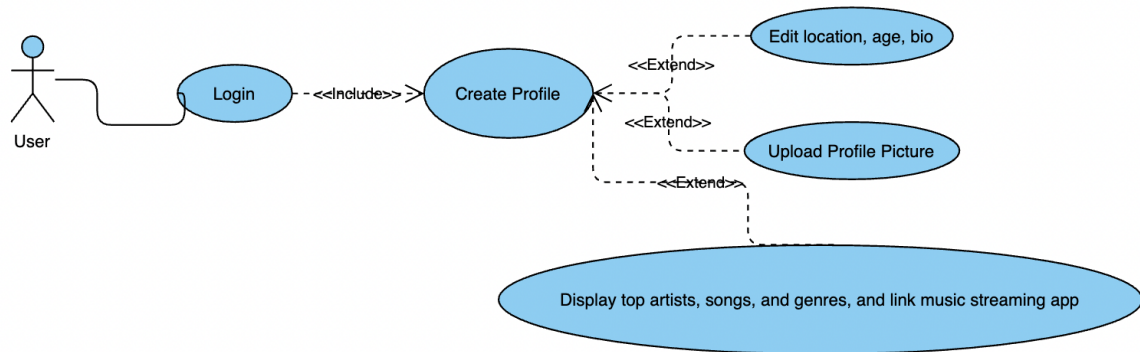
|             |   |
|-------------|---|
| Title       | Design and Requirement Schedule   |
| Description | The design and requirements of the app must be completed in three months. |
| Priority    | 0   |

### 3. Requirements Modeling

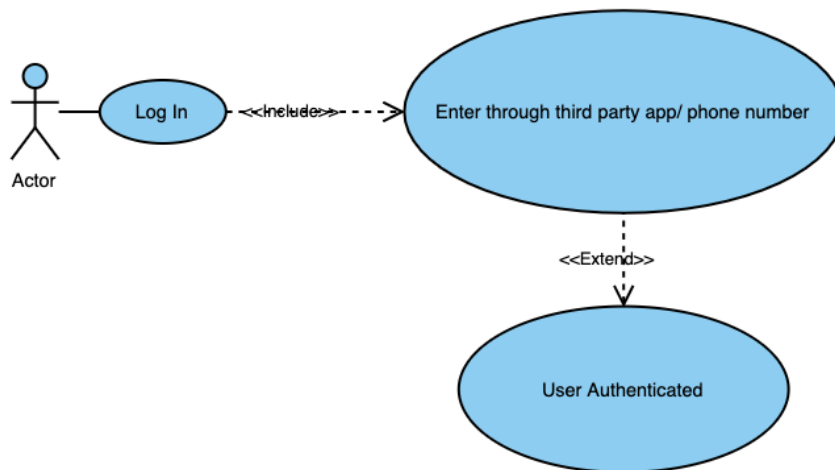
#### 3.1.1 Creating User Account



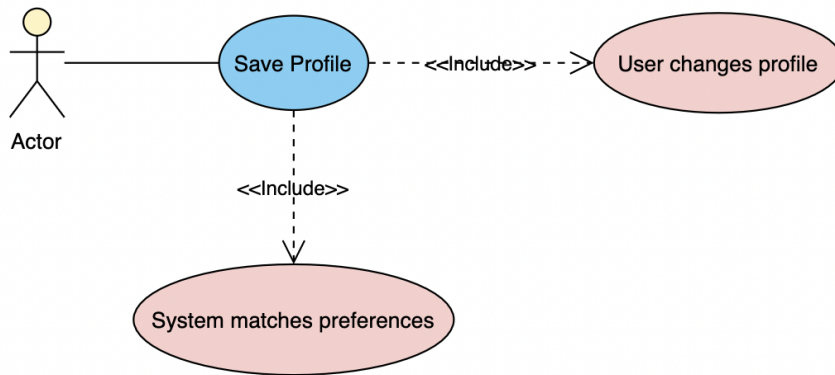
### 3.1.2 Creating Profile



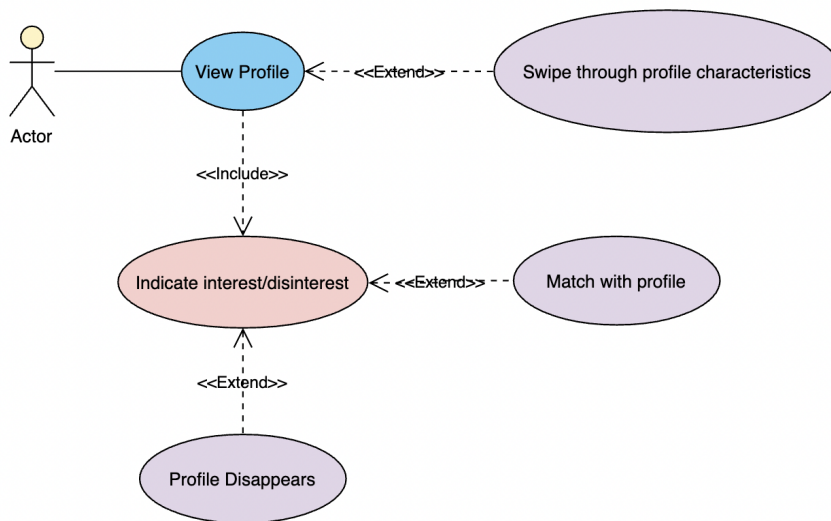
### 3.1.3 Logging In



### 3.1.4 Matching Preferences

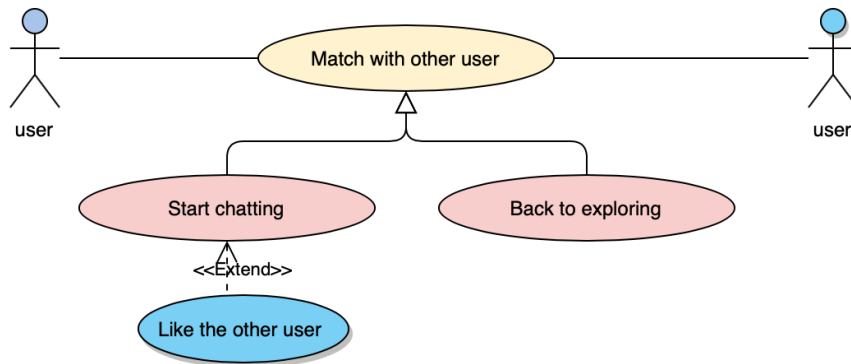


### 3.1.5 Users Exploring Profiles

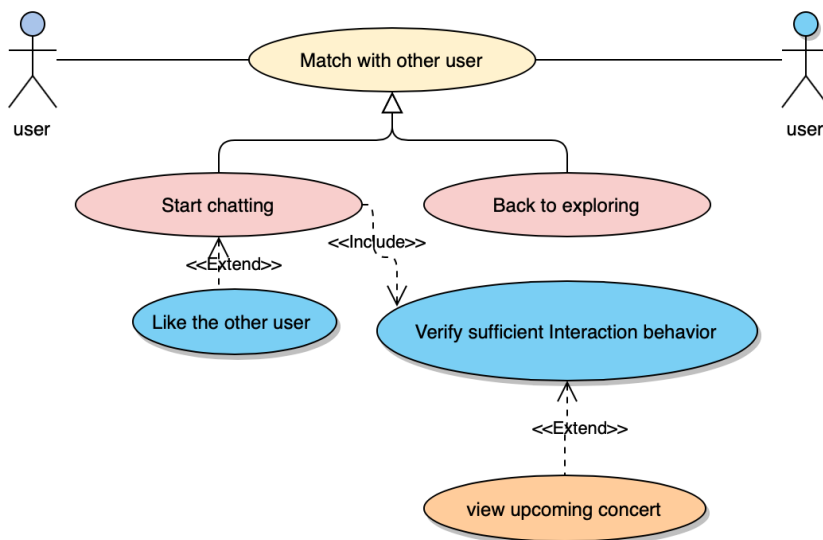




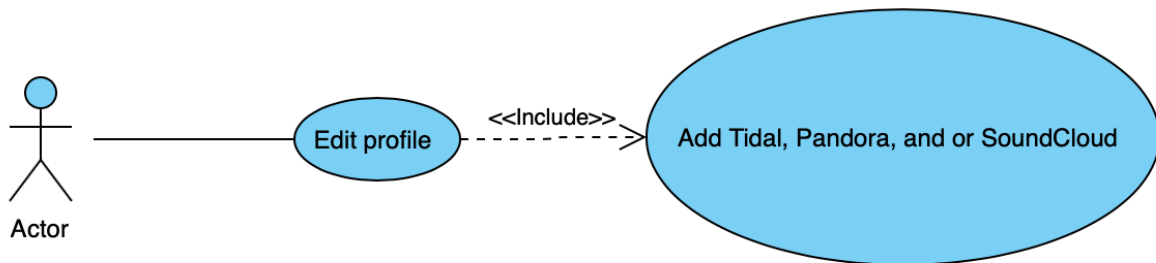
### 3.1.6 Messaging Matches



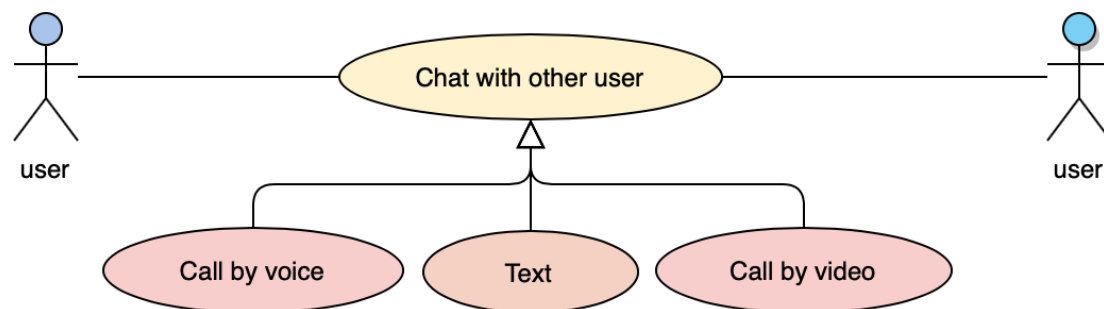
### 3.1.7 Previewing Suggested Upcoming Concerts



### 3.1.8 Adding additional music streaming services for users



### 3.1.9 Adding phone and video calling capabilities



## 4. Evolutionary Requirements

### 4.1 Functional Requirements

#### 4.1.1 Adding additional music streaming services for users

|             |   |
|-------------|---|
| Title       | Adding additional music streaming services for users  |
| Description | Users add their information from additional streaming services like Pandora or Tidal in their profile |

|                   |   |
|-------------------|---|
| Priority          | 3   |
| Precondition(s)   | User logs in or registers and enters the profile page.                    |
| Postconditions(s) | Users save their profile, executing preferences matching on nearby users. |
| Use Case Diagram  | 4.1.1   |

## 4.1.2 Adding phone and video calling capabilities

|                   |  |
|-------------------|--|
| Title             | Adding phone and video calling capabilities  |
| Description       | Users chat with matches through the app's voice calling and video calling features.          |
| Priority          | 2  |
| Precondition(s)   | Both users have liked each other's profiles, creating a match between them.                  |
| Postconditions(s) | The system records the number of chat calls between two users and the total active chat time |
| Use Case Diagram  | 4.1.2  |

## 4.2 Non-Functional Requirements

### 4.2.1 Music streaming service connection speed

|                  |  |
|------------------|--|
| Title            | Music streaming service connection speed   |
| Description      | When connecting to third party music streaming platform, the platform will load in two seconds |
| Priority         | 3  |
| Applicable FR(s) | 4.1.1  |

## 4.2.2 Phone and video call encryption

|                  |   |
|------------------|---|
| Title            | Phone and video call encryption                         |
| Description      | Contents of users' phones and video calls are encrypted |
| Priority         | 3   |
| Applicable FR(s) | 4.1.2   |