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Team Triad

Ballad Requirements Document

**Introduction**

The purpose of this document is to summarize the system requirements for the functions of Ballad. In the document, you will find a detailed summary of all of the functions, along with diagrams outlining the utilities. The *Description Model* describes all of the requirements for the system. The *Class Diagram* outlines all of the system objects, their attributes, and methods. The *Use Case Diagram* will show all of the uses of the system. The *Use Case Scenarios* will outline the possible events and any exception/extension conditions. The *Systems Sequence Charts* will provide sequence diagrams for each Use Case Scenario.

**Description Model**

1. **Initial Requirements**

Ballad is a mobile application that works on either Android or Apple platforms. A user of Ballad would require an internet connection to access the sheet music store, profile, and friend list. They would require a *stable* internet connection to perform in a live jam session. Recordings can be accessed without an internet connection.

1. **Security**

Ballad’s security consists of both internal and third party security protocols. Our verification system verifies users through passwords, email authentication, a security question the user creates, and mobile authentication by way of text or automated voice call.

1. **Processes**

* Login Page
  + To use Ballad the user first needs to create a profile. To do this the user would click the “Sign Up” button and enter their email and a password. The password must be between 6 and 36 characters long. The password must also contain at least one symbol and number. A confirmation email will be sent to them, after confirming they will be prompted to set up some type of 2-factor authentication and a security question that they create themselves (question is required). An email can only be associated with one account at a time. The user may also link another social media account such as Twitter or Facebook.
  + If it’s a returning user they can just enter their email address and password then click “Sign In”. If the user doesn’t remember their password or email address they may click the “Forgot Password” and after answering their security question and selecting a 2 factor authentication method (if one was set up) they will be sent an email containing what their password is.
* Home Page
  + The first thing the user sees when logging in is the home page of the app where they will see 4 menus to open: Profile, Jam, Recordings,and Sheet Music.
* Profile
  + If it’s the users first time logging in they will be prompted to customize their profile and make a username (default is just their email). The username can be whatever they wish as long as it passes a profanity filter and is between 3 and 24 characters. Next to their username they can also see a code that is entirely unique to them which is what you would give to someone to be added as a friend. The user can customize their profile by adding a profile picture which is automatically cropped to fit, their location, what instruments (brasswind, percussion, string, and woodwind) they play and at what skill level. From the profile menu they can also add a friend, remove a friend, and delete their account. The recipient of the friend request must accept it for both to be added to each other's friend list.
* Jam
  + Clicking the Jam button will take the user to the Jam menu. The “Options” button takes the user to an options menu where they can change the recording format and video quality. From the same menu they can also either start private sessions where they can invite a maximum of 5 friends or start a random session that will pair them with someone else who selected it mostly at random (they can’t both have the exact same instrument). Each user can leave a private jam whenever they want by clicking the “End Jam” button, this button will also stop the random jam. After the session has ended each user that had recordings enabled will be prompted to name the file, default name is time and date it was created. Clicking the circle button will start or stop the recording feature. Clicking the folder button will let the user view their previous recordings and play them for the whole session.
* Recordings
  + Clicking the “Recordings” button will open a menu showing all of your recordings. Recordings are saved in a folder created when the app is installed called “recordings”. The user can play, delete, or rename files from this menu.To play the file the user must click the button to the right of the file name. Playing the file will open a page that looks similar to the Jam menu but with a moveable slider that shows exactly where in the video the user is watching. Files can be deleted or renamed by holding down on the file name which will select it and open an overlay where you can rename/delete an individual file or select multiple files for deletion.
* Sheet Music
  + Clicking the “Sheet Music” button will open the “My Sheet Music” page which displays their saved sheet music. The user can view each song by clicking the eyeball button to the right of the name. Clicking the purchase button changes the page to the “Sheet Music Store” where the user can purchase sheet music by clicking the shopping cart button, inputting some type of payment information (paypal, Visa, gift card, and mastercard), reviewing the purchase, then finally clicking the “purchase” button. The name of the sheet music can’t be changed but can be removed from the users account through the same method as deleting a recording. Both pages can be searched through by entering some string of letters and/or numbers into the search bar near the top of the screen. Both pages can also be filtered through by clicking the “Filter” button and selecting some kind of filter (decade, year, instrument, difficulty, composer, title).

**Class Diagram**

*See Attached*

**Use Case Diagram**

*See Attached*

**Use Case Scenarios**

*See Attached*

**System Sequence Charts**

*See Attached*