BandsNearMe

Work in Progress

Team 7

Spring 2017

Fahad Alsaudee

James Lindsey

Samuel McGuire

Merrillee Palmer

Terrance Santilli

John Schumm

Rachel Snyder

Table of Contents

Contents

[Overview 2](#_Toc474860972)

[Customer Wish List 3](#_Toc474860973)

[High-Level Use Case Diagram 4](#_Toc474860974)

[Use Case Summary List 5](#_Toc474860975)

[Login 6](#_Toc474860976)

[Logout 7](#_Toc474860977)

[Search 8](#_Toc474860978)

[Search by Location 9](#_Toc474860979)

[Search by Band 10](#_Toc474860980)

[Search for Venue 11](#_Toc474860981)

[Save Favorites 12](#_Toc474860982)

[Suggest Similar Bands 13](#_Toc474860983)

[Create Profile 14](#_Toc474860984)

[View User Profile 15](#_Toc474860985)

[View Band Profile 16](#_Toc474860986)

[View Venue Profile 17](#_Toc474860987)

[Update Venue Profile 18](#_Toc474860988)

[Update Band Profile 19](#_Toc474860989)

[Update User Profile 20](#_Toc474860990)

[Review 21](#_Toc474860991)

[Create Show at Location 22](#_Toc474860992)

[Bulk Data Import 23](#_Toc474860993)

[Get User Statistics 24](#_Toc474860994)

[Get User Statistics: Sign Up Rate 25](#_Toc474860995)

[Get User Statistics: Traffic 26](#_Toc474860996)

[Get User Statistics: Types of Users 27](#_Toc474860997)

[Notifications 28](#_Toc474860998)

[Non-functional requirements 29](#_Toc474860999)

# Overview

The project is an app that allows users to find live music in their area that will be displayed through the google maps API and allow users to search for a venue or band’s profile. Additionally, this app will give users an overview of both the bands and the venues in which they play. These overviews will include information like when a venue has happy hour and what genre of music a band plays, a rating system for both the bands and the venues and allow individual users to write reviews on the bands and venues.

Currently the principals that are focusing on most on for this project are usability and rapid development. Our app needs to be easy to use and understand so that it will appeal to the largest user base and needs to accomplish this before the Symposium on April 21st. We will require development for a web and a mobile front end with a database supplying the backend for both.

The following table lists our members and explains their responsibilities.

|  |  |
| --- | --- |
| Sam McGuire | Google API (Web/Mobile)  Security (Mobile)  Search engine (Mobile)  Presenter |
| John Schumm | Database implementation  Profiles (Web) |
| Rachel Snyder | Security (Web) GUI design (Mobile/Web)  GUI coding (Web) |
| Merrillee Palmer | Login (Mobile)  Profiles (Mobile) |
| Terrance Santilli | Data population  Profiles (Mobile)  Suggestions algorithm (Mobile)  Presenter |
| Fahad Alsaudee | GUI coding (Mobile)  Rating System (Mobile) |
| James Lindsey (Leader) | Database implementation  Search engine (Web) |

# Customer Wish List

A numbered list of the initial requirements that you had in mind when you decided to do this project. These would normally be provided by a customer, but since you are creating the project based on your own team’s ideas, you should produce this list.

* Ability to mark event location on google maps (users, bands, and venues)
* Profiles for Venues, Bands, and Single Users
  + Venues
    - Drink Specials
    - Food Specials
    - Menu
    - Request a band
    - Show times
    - Entry Costs
    - Inside/Outside
    - Non-smoking/Smoking
    - Special Nights (military, lady’s night, singles night, etc.)
    - Age i.e. 21+, all ages...
  + Bands
    - Advertise for possible gigs
    - Profile
      * Genre
      * Pictures
      * Song List
    - Future Events
  + Single Users
    - Search for bands and venues by location
      * Search by band name
      * Search by venue
    - What is playing “near me” feature
    - Rate venues and bands
    - Favorite Bands
      * Suggest other bands based on those favorites

# High-Level Use Case Diagram

HighLevelUseCase.png

# Use Case Summary List

|  |  |
| --- | --- |
| **Use Case Type** | **Use Case** |
| **Account Access** | Login |
|  | Logout |
| **Searching** | Search |
|  | Search by Location |
|  | Search by Band |
|  | Search by Venue |
| **Favorites** | Save Favorites |
|  | Suggest Similar Bands |
| **Profiles** | Create Profile |
|  | View User Profile |
|  | View Band Profile |
|  | View Venue Profile |
|  | Update Venue Profile |
|  | Update Band Profile |
|  | Update User Profile |
|  | Review |
| **Event Creation** | Create Show at Location |
|  | Bulk Data Import |
| **Statistics** | Get User Statistics |
|  | Get User Statistics: Sign Up Rate |
|  | Get User Statistics: Traffic |
|  | Get User Statistics: Types of Users |
| **Miscellaneous** | Notifications |

Login.png

|  |  |
| --- | --- |
| Use Case Name | Login |
| Summary | Users are required to login to their account before accessing the features that are available to them. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | A user wishes to login to the BandsNearMe app or web page. |
| Assumptions | 1. User has an account. 2. User is not currently logged in to their account. |
| Basic Course of Events | 1. User enters their login email and password into the available fields. 2. The system looks up their account using the email 3. The system verifies the submitted password with the password that is recorded on file. 4. The app/web page allows them access. |
| Exceptions Paths | 1. If the submitted email is not found, the system displays an associated error message. 2. If the submitted password is incorrect, the system displays an associated error message. |
| Postconditions | User is logged in and can use whatever permissions are associated with their account type. |

Logout.png

|  |  |
| --- | --- |
| Use Case Name | Logout |
| Summary | Users are encouraged to logout after use for security reasons. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | User wants to logout of their account |
| Assumptions | 1. User has an account. 2. User is currently logged in to their account |
| Basic Course of Events | 1. User clicks the logout button 2. The user is signed out of the application/webpage |
| Exceptions Paths | If the logout was accidental, the user must log back in. |
| Postconditions | User is signed out of the system and their account is more secure. |

Search.png

|  |  |
| --- | --- |
| Use Case Name | Search |
| Summary | Individual Users can search for bands playing with three filters: location, by Band User, or by Venue User. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | An Individual User is interested in finding a show |
| Assumptions | 1. Venues have their profiles created and where they are located on the map. 2. Bands/Venues submitted a booked performance at the venue. 3. Bands have their profiles created with all their information. |
| Basic Course of Events | 1. User navigates to search bar and searches for booked shows by their desired category. 2. The system then displays the booked shows that meet their specifications using the Google API. 3. The system checks for venues and displays them with a red tick. Also, checks any bands performing in the area with a blue tick. 4. User can click on venue or band ticks which will open the venues or the bands profile. 5. System looks for band/venue and displays the profile to the user. |
| Exceptions Paths | None |
| Postconditions | 1. System updates venues rating if user rates it. 2. System updates user’s profile with favorites |

SearchLocation.png

|  |  |
| --- | --- |
| Use Case Name | Search by Location |
| Summary | Users can search nearby venues in their current location and what band (if any) are playing. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | A potential audience |
| Assumptions | 1. Venues have their profiles created and where they are located on the map. 2. Bands/Venues submitted a booked performance at the venue. 3. Bands have their profiles created with all their information. |
| Basic Course of Events | 1. User navigates to search bar and searches for venues or bands that in a given location. 2. The system then displays a varying radius map of the Google API to the user. 3. The system checks for venues and displays them with a red tick. Also checks any bands performing in the area with a blue tick. 4. User can click on venue or band ticks which will open the venues or the bands profile. 5. System looks for band/venue and displays the profile to the user. |
| Exceptions Paths | User enters incorrect location, give error message asking user to enter a valid address. |
| Postconditions | 1. System updates venues rating if user rates it. 2. System updates user’s profile with favorites |

SearchBand.png

|  |  |
| --- | --- |
| Use Case Name | Search by Band |
| Summary | Users can search for their favorite band and see if they are performing nearby. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | 1. User hears band and would like to know more about them. 2. User wants to know if band is performing in area. |
| Assumptions | 1. Band has profile created. 2. Band has performances booked. 3. Band’s profile is up-to-date. |
| Basic Course of Events | 1. User navigates to search bar and searches for band. 2. System searches for the band’s profile and displays it to the user. 3. User can add band to favorites. 4. System checks user’s profile to see if user has already favorited band previously. Displays on band’s profile with the star button in corner. |
| Exceptions Paths | 1. If band does not exist in directory, prompt user to enter another band. 2. If band does not have performances in area, ask if user would like to view locations where the band is booked. |
| Postconditions | User will be able to view bands selected in the area given by User’s GPS location. |

SearchVenue.png

|  |  |
| --- | --- |
| Use Case Name | Search for Venue |
| Summary | Users can search for venues in a certain location or use their current location to see what venues are currently near them. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | 1. User wants to know if a location they will be at, has bands booked. 2. User wants to see locations around them. |
| Assumptions | 1. Venue has profile created. 2. Venue keeps booked performances up to date. 3. Venue keeps menu and location up to date. |
| Basic Course of Events | 1. User navigates to search bar and searches for a venue. 2. System searches for the venue’s profile and displays it to the user. 3. User can add venue to favorites. 4. System checks user’s profile to see if user has already favorited venue previously. Displays on venue’s profile with the star button in corner. 5. A list will populate with booked bands for selected venue. |
| Exceptions Paths | If venue does not exist in directory, prompt user to enter another venue. |
| Postconditions | User will be able to see the bands booked for the venue selected, as well as menu items and pictures of the venue. |

Favorites.png

|  |  |
| --- | --- |
| Use Case Name | Save Favorites |
| Summary | Users can “favorite” bands and venues which will be saved to their user profile that they can go back and access them quicker. This feature will also send pop-up notifications and/or emails to the user when a venue is having a special or when a band has an event coming up. |
| Actors | * Individual User |
| Triggers | A user wants to favorite a band/venue that they have just seen/been to in order to find them easier in the future. |
| Assumptions | 1. The Individual User must have a profile. 2. The desired Band must have a profile. 3. The desired venue must have a profile. |
| Basic Course of Events | 1. User clicks the “star” button in the top corner of a venue or band’s profile. 2. System adds venue or band to user’s profile. 3. If the profile is a band, the system shows suggestions based on properties of the band. |
| Exceptions Paths | If click was accidental, or the user wishes to unfavorite the band/venue, they can click the star a second time. |
| Postconditions | The Individual User can find their favorites through their profile. |

Favorites.png

|  |  |
| --- | --- |
| Use Case Name | Suggest Similar Bands |
| Summary | The app will suggest bands that the user may like based on the same genre and high ratings |
| Actors | * Individual User |
| Triggers | When an Individual User has favorited a band, the suggestions appear. |
| Assumptions | There are bands in the system that are not in the user’s favorites that shares similar properties to the recently favorited band. |
| Basic Course of Events | 1. Users have favorited a band profile. 2. System fetches band’s profile and checks for genre, location, and star rating. 3. System displays top three similar bands to the user. 4. User can click on the new bands and view their profiles. |
| Exceptions Paths | None of the suggested bands are interesting to the User and they navigate away. |
| Postconditions | User can discover bands they may like, bands can get new followers they may have not previously. |

CreateProfile.png

|  |  |
| --- | --- |
| Use Case Name | Create Profile |
| Summary | Venues can create their profiles by adding menus, pictures, etc.  Bands can create their profiles by including their establishment date, who is in the band, genre, pictures, albums, current booked performances and future performances booked.  Users can create their profiles by adding their DOB, gender, e-mail, music genre preferences, favorite venues/bands. |
| Actors | * Venues * Individual Users * Bands * Administrator |
| Triggers | A Venue, band, or user wants to create a profile. |
| Assumptions | Venue, band or user wants to create a profile. |
| Basic Course of Events | 1. Venue or band chooses “Venue/Band account” button to create an account for the venue. Venue or band then selects “venue” or “band” button to continue the account creation. User chooses “User account” 2. Venue, band or user sets up email, password and general information. 3. System checks to make sure that the email is valid/hasn’t been used before. 4. System creates profile with information from venue, band or user. |
| Exceptions Paths | 1. Venue, band or user decides that they are not ready to create account and exits the creation process. 2. If the email has been previously used, an error pops up and offers to help with account recovery options. |
| Postconditions | 1. System creates a venue, band or user profile. 2. System updates venue, band or user profile with entered information. |

ViewUserProfile.png

|  |  |
| --- | --- |
| Use Case Name | View User Profile |
| Summary | The user can view their profile which shows the user’s favorites as well as personal details. |
| Actors | * Individual Users * Administrator |
| Triggers | A user wants to view their favorites or personal information. |
| Assumptions | 1. Individual user has a profile. 2. Individual user is logged into their account. 3. Administrator is logged in. |
| Basic Course of Events | 1. User clicks the profile icon. 2. User is redirected to their profile page. 3. System displayed latest saved information and displays it on profile. |
| Exceptions Paths | None |
| Postconditions | User can see all of their account information. |

ViewBandProfile.png

|  |  |
| --- | --- |
| Use Case Name | View Band Profile |
| Summary | Everyone can view the band profile page. View band name, photos, biography, songs, etc. |
| Actors | * Individual Users * Bands * Venues * Administrators |
| Triggers | 1. Venue would like to view details of a band before accepting a booking. 2. Individual user would like to see more information about a band. |
| Assumptions | 1. Band has a profile created. 2. Band’s profile is up-to-date. |
| Basic Course of Events | 1. Individual searches for band, profile is pulled up onto the phone. 2. User can view all photos and text that the Band has put up on their profile. 3. User can see all upcoming bookings the band will have. |
| Exceptions Paths | User doesn’t want this band’s profile and hits the back button to return to the search screen. |
| Postconditions | Users and venue profiles can view all information about the band such as band performance dates and times, as well as photos uploaded by the band. |

ViewVenueProfile.png

|  |  |
| --- | --- |
| Use Case Name | View Venue Profile |
| Summary | Every user can view the venues page and see menus, specials, bands playing, future performances, etc. |
| Actors | * Individual Users * Bands * Venues * Administrators |
| Triggers | 1. User searches for a venue. 2. User searches for band and view venue that band is performing at. 3. User uses “NearMe” and views profile of a nearby venue. |
| Assumptions | 1. Venue has their profile created. 2. Venue’s profile is up-to-date. |
| Basic Course of Events | 1. User searches for venue and the profile pops up. 2. User can view all photos and text that the Venue has put up on their profile. |
| Exceptions Paths | The Individual user can hit the back button if they wish to no longer be viewing the venue. |
| Postconditions | The Individual user or band can view information about the selected Venue. |

UpdateVenueProfile.png

|  |  |
| --- | --- |
| Use Case Name | Update Venue Profile |
| Summary | Venues can upkeep their profiles by adding menus, pictures, etc. |
| Actors | * Venues |
| Triggers | 1. A Venue wants to create a profile. 2. A venue wants to update images, text and band bookings on their profile. |
| Assumptions | Venue is logged into an account. |
| Basic Course of Events | 1. Venue chooses “Venue/Band account” button to create an account for the venue. Venue then selects “venue” button to continue the account creation. 2. Venue sets up email, password, venue name, venue info (genre, location, etc.) 3. System checks to make sure that the email is valid/hasn’t been used before. 4. System creates profile with information from venue. 5. When logged on venue can update their profile by navigating to their profile and clicking on the edit profile in the top left hand corner. 6. Venue can update all information on the profile and then save any new changes. |
| Exceptions Paths | 1. If the email has been previously used, an error pops up and offers to help with account recovery options. 2. Venue decides that they want to discard changes and hits back. The system uses the last saved edition of the profile for displaying purposes. |
| Postconditions | System updates venue profile with entered information. |

UpdateBandProfile.png

|  |  |
| --- | --- |
| Use Case Name | Update Band Profile |
| Summary | Update information about the band including their establishment date, who is in the band, genre, add pictures, albums, current booked performances and future performances booked. |
| Actors | * Bands |
| Triggers | Bands want to update their profile with new playlist, biography, pictures, and future performances. |
| Assumptions | Band has a profile already created. |
| Basic Course of Events | 1. Band is brought to their profile screen with data populated from our database that the user has previously entered, if any. 2. The band can edit in forms information such as DOB, email, and password. 3. The band can then commit any changes they make with the ‘save’ button, or the user can hit the ‘cancel’ button and be redirected to the homepage. |
| Exceptions Paths | Band decides that they want to discard changes and hits back. The system uses the last saved edition of the profile for displaying purposes. |
| Postconditions | System updates band’s profile |

UpdateUserProfile.png

|  |  |
| --- | --- |
| Use Case Name | Update User Profile |
| Summary | Save information about the user, such as their DOB, gender, e-mail, music genre preferences, favorite venues/bands. The user can login to the mobile app or web app to modify this information at any point. |
| Actors | * Individual User |
| Triggers | 1. User wants to change login information. 2. User wants to unfavorite a band or venue. |
| Assumptions | User has a profile created. |
| Basic Course of Events | 1. User is brought to their profile screen with data populated from our database that the user has previously entered, if any. 2. The user can edit in forms information such as DOB, email, and password. 3. The user can then commit any changes they make with the ‘save’ button, or the user can hit the ‘cancel’ button and be redirected to the homepage. |
| Exceptions Paths | User changes mind about editing profile, so they hit the ‘cancel’ button and none of the changes are committed to our database. |
| Postconditions | User’s profile is updated. |

Review.png

|  |  |
| --- | --- |
| Use Case Name | Review |
| Summary | User read a review of a band or a venue or review an experience of attending a band or a venue. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | User wants to read review or review a band or a venue |
| Assumptions | 1. User has the app. 2. User has a profile created. 3. User attended where a band performed in a venue. |
| Basic Course of Events | 1. User search a band or a venue. 2. User select the band or a venue that found after the search. 3. User choose the way to review by choosing starts from 1(bad) to 5(excellent) or/and writing reviews. |
| Exceptions Paths | User has reviewed a band or a venue already. |
| Postconditions | A band or venue get reviews under their profile page. |

CreateShow.png

|  |  |
| --- | --- |
| Use Case Name | Create Show at Location |
| Summary | Venues and bands can update the time and date a band is performing at a selected location from a drop down/search menu. |
| Actors | * Bands * Venues |
| Triggers | 1. A band wants to create a booking for Individual Users to see. 2. A venue would like to create a booking of a band that will be displayed on their profile. |
| Assumptions | 1. Band/Venue has account already created. 2. Band/Venue is logged into account. |
| Basic Course of Events | 1. Band goes to venue’s profile and clicks on the “create show”. 2. Band chooses date and time they would like to perform. 3. System send a notification to the venue via email or pop up. 4. Venue of interest reviews the band and specification and either chooses “accept” or “reject”. 5. Venue goes to its own profile and clicks the “create show” option. 6. System prompts the venue to search for a band. 7. Venue then selects the band that they would like and selects a date and time for the performance. 8. The system sends the band a notification via email or pop-up. 9. The band of interest reviews the venue and specification and either chooses “accept” or “reject”. |
| Exceptions Paths | 1. Venue does not have a profile created.  2. Band does not have a band and the search fails. |
| Postconditions | 1. System updates venue’s profile with current band booked. 2. System updates band’s profile |

BulkDataInput.png

|  |  |
| --- | --- |
| Use Case Name | Bulk Data Import |
| Summary | A Band/Venue/Administrator User can choose to bulk import shows into the database instead of creating shows individually. |
| Actors | * Band * Venue * Administrator |
| Triggers | User has a list of more than one show to input and wishes to save time. |
| Assumptions | 1. User is logged in on the BandsNearMe web page. 2. User has created a .txt file in the specified format |
| Basic Course of Events | 1. Band/Venue uploads a .txt file that will be parsed to create multiple shows at a location or various locations. 2. Band/Venue fills out the form based web page that will create multiple shows at a location. 3. System sends SQL code to the database to book the performances. |
| Exceptions Paths | Server cannot be reached and an error message pops up. |
| Postconditions | 1. Venue’s profile is updated with new booked performances. 2. Band’s profile is updated with performance date and venue link. |

Administrator.png

|  |  |
| --- | --- |
| Use Case Name | Get User Statistics |
| Summary | Administrators can view various user statistics in the form of graphs. |
| Actors | * Administrators |
| Triggers | Administrator wishes to view an available statistic. |
| Assumptions | 1. User has administrator access. 2. User is currently logged in to their account |
| Basic Course of Events | 1. Administrator selects the Statistics option from the menu 2. User then selects the stats they wish to view from the list: Sign-Up Rate, Traffic, and Types of Users |
| Exceptions Paths | If the logout was accidental, the user must log back in. |
| Postconditions | 1. User is signed out of the system and their account is more secure. |

SignUpRate.png

|  |  |
| --- | --- |
| Use Case Name | Get User Statistics: Sign Up Rate |
| Summary | A report that will display the rate of sign up of users in a line graph for a certain timeline. |
| Actors | * Administrator |
| Triggers | 1. Administrator wants to know how many users are signed up in a given date range. |
| Assumptions | 1. Administrator has created an administrator account type. |
| Basic Course of Events | 1. Administrator selects the Sign-up Rate option in the Statistics menu. 2. Administrator enters the date range they wish to inquire about. 3. Server retrieves the sign-up information from the database that correlates to those dates. 4. Requested information is displayed on the screen in a printable format. |
| Exceptions Paths | 1. Database is unable to retrieve data - error message is displayed. |
| Postconditions | 1. Administrator can print data 2. Administrator can select another report |

Traffic.png

|  |  |
| --- | --- |
| Use Case Name | Get User Statistics: Traffic |
| Summary | A report that will display the traffic for the day in a bar graph. |
| Actors | * Administrator |
| Triggers | Administrator would like to know the traffic for the date. |
| Assumptions | Administrator has created an administrator account type. |
| Basic Course of Events | 1. Administrator selects the Traffic option in the Statistics menu. 2. Administrator enters the date and time range they wish to inquire about. 3. Server retrieves the traffic information from the database that correlates to those dates. 4. Requested information is displayed on the screen in a printable format. |
| Exceptions Paths | Database is unable to retrieve data - error message is displayed. |
| Postconditions | 1. Administrator can print data 2. Administrator can select another report |

TypesOfUsers.png

|  |  |
| --- | --- |
| Use Case Name | Get User Statistics: Types of Users |
| Summary | A report that will display the different types of users using the app in a pie graph. |
| Actors | * Administrator |
| Triggers | Administrator would like to know the ratio of individual users, bands, and venues accounts. |
| Assumptions | Administrator has created an administrator account type. |
| Basic Course of Events | 1. Administrator selects the Types of User option in the Statistics menu. 2. Server retrieves the sign-up information from the database that correlates to those dates. 3. Requested information is displayed on the screen in a printable format. |
| Exceptions Paths | Database is unable to retrieve data - error message is displayed. |
| Postconditions | 1. Administrator can print data 2. Administrator can select another report |

Notifications.png

|  |  |
| --- | --- |
| Use Case Name | Notifications |
| Summary | User get notify for a band who’s performing at a specific location, date and time by phone alert, text message and/or email. |
| Actors | * Individual User * Band * Venue * Administrator |
| Triggers | Selected date and time by user |
| Assumptions | 1. User has the app. 2. User has a profile already created. 3. There is a band playing. 4. User wants to be reminded by phone alert, text message and/or email. |
| Basic Course of Events | 1. User search a band who’s performing at specific location, date and time. 2. User select the band that found after the search at specific location, date and time. 3. User choose the way to be reminded which could be by phone alert, text message and/or email. |
| Exceptions Paths | 1. If the user try to select a notification for a band or a venue who is already selected to be notified about it at a specific location, date and time, pop a message will pop saying this band or venue is already selected to be notified a specific location, date and time. 2. If the band has selected the place and the date but not schedule the time yet (so the band is not sure about the time yet) |
| Postconditions | User receive the notification by phone alert, text message, and/or email |

# Non-functional requirements

A section that describes the Non-functional requirements in list form

Address hidden areas that are not obvious (Examples: Performance, Scalability, Usability, Supportability, Reliability, Security, backup/recovery)

* Android Accessibility
  + Application must be able to run on Android Marshmallow and later versions
* Performance
  + Application needs to run smoothly with Google Maps API
* Scalability
  + Ability to handle a minimum of 5 simultaneous users
  + Support a minimum of 10 user accounts and 3 admin accounts
* Usability
  + App functionality
    - Map
    - Simple search by location/ band
  + Web application
    - All functions available except the Mass Data Import feature
  + Authorization
    - Application must properly authorize access to individual users, bands, and venues by username and password and account type
* Reliability
  + Application should not commonly crash
* Authorization
  + Application must properly authorize access to individual users, bands, and venues by username and password and account type
* Reliability
  + Application should not commonly crash
* Privacy
* Maintainability