

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
THE UNIVERSITY OF TEXAS AT ARLINGTON**

**PROJECT CHARTER
CSE 4316: SENIOR DESIGN I
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**THE BREW CREW
BEVERAGE MANAGEMENT**

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REVISION HISTORY

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0.1	07.30.2020	BP	document creation
0.2	07.09.2020	BP	section 1 added
0.3	08.03.2020	LC	Section 2,3,6,7,8,9 (missing)
0.4	08.03.2020	LC	sections 4 and 5 added

CONTENTS

LIST OF FIGURES

1 PRODUCT CONCEPT

This section describes the purpose, use and intended user audience for the Beverage Management app. Beverage Management app is an android application that provides an efficient way to manage large collection of beverages using smartphone.

1.1 PURPOSE AND USE

Beverage Management is an android application that works as a virtual inventory and allows user to effectively manage and keep track of several beverages. Users can use this app to keep track of name, storage location, brewery, style, volume, manufactured date and best before date. It also allows user to search and sort the beverages according to the date, style etc.

1.2 INTENDED AUDIENCE

The intended audience for this application are those people who have large collection of beverages in their home and are looking for easy ways to manage them free of cost. It can also be used in local grocery stores, bars and restaurants to keep track of their beverage inventory. Our app is intended for general use but it can certainly be expanded into a more complex inventory management system with additional features.

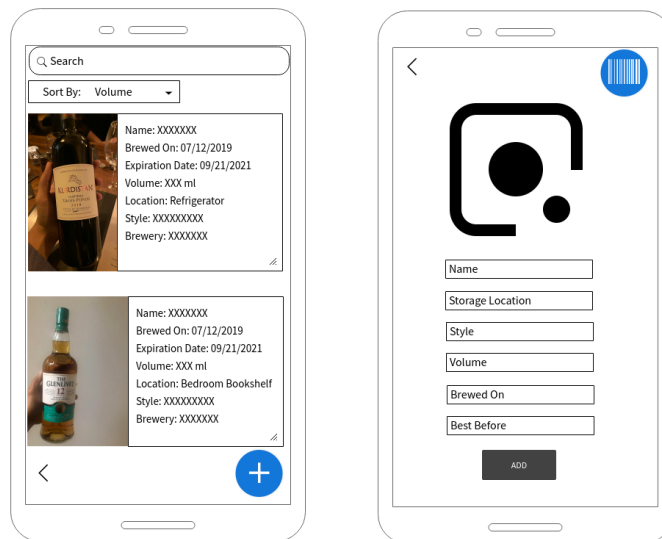


Figure 1: conceptual drawing of Beverage Management App (Home screen and Add screen)

2 PRODUCT DESCRIPTION

This section provides the reader with an overview of Beverage Management. Beverage Management is an Android application that manages the beverages which a user has stored in their storage space. the application will have access to a dataset of various drinks (beers in the initial release) and have will be able to populate the virtual storage space as to simulate the actual storage of the user's drinks. The application will have a login functionality to allow users to personalize their experience. The application will also send notifications to alert the user of soon-to-expire drinks.

2.1 FEATURES & FUNCTIONS

This product will help users manage and optimize their storage space and reduce wastage. The app will connect to a database, primarily we will use firebase, which will store user information and beverage information. The beverage data will be extracted using the barcode which the app can scan using the phone's camera.

2.2 EXTERNAL INPUTS & OUTPUTS

The users will scan the barcode of the drink, which will then access the dataset and output the details of the drink within the required storage area on the app. Our app will extract the information as well, such as expiry date, and use it to send push notifications to the user.

2.3 PRODUCT INTERFACES

We will have a default home screen which will display be modeled to copy Dr. Conly's storage area, in the initial release. There will be a button to access the camera and a settings page and an editing page as well.

3 CUSTOMER REQUIREMENTS

Include a header paragraph specific to your product here. Customer requirements are those required features and functions specified for and by the intended audience for this product. This section establishes, clearly and concisely, the "look and feel" of the product, what each potential end-user should expect the product do and/or not do. Each requirement specified in this section is associated with a specific customer need that will be satisfied. In general Customer Requirements are the directly observable features and functions of the product that will be encountered by its users. Requirements specified in this section are created with, and must not be changed without, specific agreement of the intended customer/user/sponsor.

3.1 REQUIREMENT NAME

3.1.1 DESCRIPTION

A detailed description of the feature/function that satisfies the requirement. For example: *The box will be slate blue. This specific color is required in order to ensure that the box matches other similar boxes in the Box Systems Premium line of products. Slate blue is specified as #007FFF, using six-digit hexadecimal color specification.* It is acceptable and advisable to include drawings/graphics in the description if it aids understanding of the requirement.

3.1.2 SOURCE

The source of the requirement (e.g. customer, sponsor, specified team member (by name), federal regulation, local laws, CSE Senior Design project specifications, etc.)

3.1.3 CONSTRAINTS

A detailed description of constraints on satisfying the requirement (e.g. one such constraint might be: *The specified color must be commercially available in paint capable of adhering to the material of which the box is manufactured. (See customer requirement 3.x for production material specification.)*

3.1.4 STANDARDS

A detailed description of any specific standards that apply to this requirement (e.g. *NSTM standard xx.xxx.x. color specifications [?].*)

3.1.5 PRIORITY

The priority of this requirement relative to other specified requirements. Use the following priorities:

- Critical (must have or product is a failure)
- High (very important to customer acceptance, desirability)
- Moderate (should have for proper product functionality);
- Low (nice to have, will include if time/resource permits)
- Future (not feasible in this version of the product, but should be considered for a future release).

3.2 REQUIREMENT NAME

3.2.1 DESCRIPTION

Detailed requirement description...

3.2.2 SOURCE

Source

3.2.3 CONSTRAINTS

Detailed description of applicable constraints...

3.2.4 STANDARDS

List of applicable standards

3.2.5 PRIORITY

Priority

4 PACKAGING REQUIREMENTS

The application software shall be loaded to our client's (Dr. Conly) mobile device. The client's preferred platform shall be android OS. Client/User can also download via google play store for free. Additionally, the application software shall be stored on team lead's external hard drive and GitHub repository.

4.1 INSTALLING APPLICATION

4.1.1 DESCRIPTION

The application will be installed in the client's device by private downloadable link provided by the team, the initial setup or installation must be required by the user.

4.1.2 SOURCE

Team

4.1.3 CONSTRAINTS

User must have access to internet connectivity.

4.1.4 STANDARDS

N/A

4.1.5 PRIORITY

High

5 PERFORMANCE REQUIREMENTS

The application should be able to precisely scan the bar code and establish the connection with the saved beverages or add new beverage to the database. Adding a new self with required number of rows and columns for initial setup for the beverages should not take more than 1-2 minutes.

5.1 ACCURATE BARCODE SCANNING

5.1.1 DESCRIPTION

The system should accurately scan the bar code with minimal number of errors.

5.1.2 SOURCE

Team member

5.1.3 CONSTRAINTS

Internet connectivity is important to make the connection with the database to match the scanned bar code.

5.1.4 STANDARDS

All information should be stored in the database.

5.1.5 PRIORITY

High

5.2 ADDING THE CUSTOM ROWS AND COLUMNS

5.2.1 DESCRIPTION

The system should allow the user to customize the desired rows and columns for their beverages.

5.2.2 SOURCE

Team member

5.2.3 CONSTRAINTS

System should properly function to meet the requirement.

5.2.4 STANDARDS

N/A

5.2.5 PRIORITY

Medium

6 SAFETY REQUIREMENTS

Include a header paragraph specific to your product here. Safety requirements might address items specific to your product such as: no exposure to toxic chemicals; lack of sharp edges that could harm a user; no breakable glass in the enclosure; no direct eye exposure to infrared/laser beams; packaging/grounding of electrical connections to avoid shock; etc.

6.1 REQUIREMENT NAME

6.1.1 DESCRIPTION

Detailed requirement description...

6.1.2 SOURCE

Source

6.1.3 CONSTRAINTS

Detailed description of applicable constraints...

6.1.4 STANDARDS

List of applicable standards

6.1.5 PRIORITY

Priority

7 MAINTENANCE & SUPPORT REQUIREMENTS

Include a header paragraph specific to your product here. Maintenance and support requirements address items specific to the ongoing maintenance and support of your product after delivery. Think of these requirements as if you were the ones who would be responsible for caring for customers/end user after the product is delivered in its final form and in use "in the field". What would you require to do this job? Specify items such as: where, how and who must be able to maintain the product to correct errors, hardware failures, etc.; required support/troubleshooting manuals/guides; availability/documentation of source code; related technical documentation that must be available for maintainers; specific/unique tools required for maintenance; specific software/environment required for maintenance; etc.

7.1 REQUIREMENT NAME

7.1.1 DESCRIPTION

Detailed requirement description...

7.1.2 SOURCE

Source

7.1.3 CONSTRAINTS

Detailed description of applicable constraints...

7.1.4 STANDARDS

List of applicable standards

7.1.5 PRIORITY

Priority

8 OTHER REQUIREMENTS

Include a header paragraph specific to your product here. In this section specify anything else that is required for the product to be deemed complete. Include requirements related to customer setup and configuration if not specified in a previous requirement. Add any known requirements related to product architecture/design, such as modularity, extensibility (for future enhancements), or adaptation for a specific programming language. Consider requirements such as portability of your source code to various platforms (Windows, Linux, Unix Mac OS, etc.).

8.1 REQUIREMENT NAME

8.1.1 DESCRIPTION

Detailed requirement description...

8.1.2 SOURCE

Source

8.1.3 CONSTRAINTS

Detailed description of applicable constraints...

8.1.4 STANDARDS

List of applicable standards

8.1.5 PRIORITY

Priority

9 FUTURE ITEMS

In this last section, you will reiterate all requirements that are listed as priority 5. This is repetitive, but necessary as a concise statement of features/functions that were considered/discussed and documented herein, but will NOT be addressed in the prototype version of the product due to constraints of budget, time, skills, technology, feasibility analysis, etc. Use the following format for this section.

9.1 REQUIREMENT NAME

9.1.1 DESCRIPTION

Detailed requirement description...

9.1.2 SOURCE

Source

9.1.3 CONSTRAINTS

Detailed description of applicable constraints...

9.1.4 STANDARDS

List of applicable standards

9.1.5 PRIORITY

Priority