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| **Brewers Buddy** |
| Software Requirements Specification |
| SWENG 500 Team 3 |
|  |
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| **[Pick the date]** |

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# Introduction

The introduction to the Software Requirement Specification (SRS) document should provide an overview of the complete SRS document. While writing this document please remember that this document should contain all of the information needed by a software engineer to adequately design and implement the software product described by the requirements listed in this document. (Note: the following subsection annotates are largely taken from the IEEE Guide to SRS).

## Purpose: Mission Statement

BrewerBuddywill be an Internet-based system that allows home brewers to enter and track recipes, batch information, and inventories for beer, mead, and wine.

## Scope

*This subsection should:*

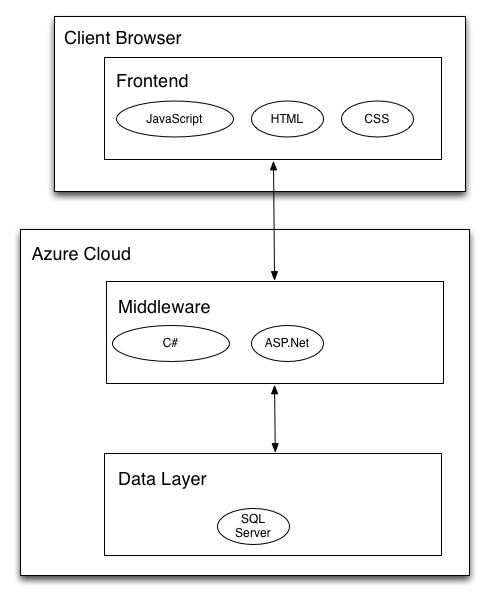
*(1) Identify the software product(s) to be produced by name; for example, Host DBMS, Report Generator, etc*

*(2) Explain what the software product(s) will, and, if necessary, will not do*

*(3) Describe the application of the software being specified. As a portion of this, it should:*

*(a) Describe all relevant benefits, objectives, and goals as precisely as possible. For example, to say that one goal is to provide effective reporting capabilities is not as good as saying parameter-driven, user-definable reports with a 2 h turnaround and on-line entry of user parameters.*

*(b) Be consistent with similar statements in higher-level specifications (for example, the System Requirement Specification) , if they exist.What is the scope of this software product.*



**Figure 1: High level System Diagram**

## List of Stakeholders

| **No.** | **Stakeholder** | **Ranking** | **Interests** | **Constraints** |
| --- | --- | --- | --- | --- |
| SH1 | Home beer brewers | Highest | Learning to use the application | None |
| SH2 | Home mead brewers | Highest | Learning to use the application | None |
| SH3 | Home wine brewers | Highest | Learning to use the application | None |
| SH4 | System administrators | Medium | Install, configure, and ensure the availability of the system | None |
| SH5 | Support staff/help desk | Medium | Assist users having trouble | None |
| SH6 | Software and hardware developers responsible for building the system | Low | Responsible for the development of the application | None |
| SH7 | Internet Service Providers and DNS Service | Lowest | Need to provide adequate resources and security | None |
| SH8 | Software hackers, criminal organizations, foreign services or governments | Lowest | They have malicious intent against the application | None |
| SH9 | Others associated with home brewing paper and computer based systems | Lowest | They are the most likely to be negatively affected | None |

# General Description

*This section of the SRS should describe the general factors that affect 'the product and its requirements. It should be made clear that this section does not state specific requirements; it only makes those requirements easier to understand.*

## Product Perspective

*This subsection of the SRS puts the product into perspective with other related products or*

*projects. (See the IEEE Guide to SRS for more details).*

## Product Functions

The major functions of Brewer Buddy are:

1. Provides beer and wine Home Brewers with an online tracking system accessible from any Internet-connected computer running modern operating systems and an Internet browser
2. Provides the user with an interface to register with the system
3. Records and displays a user’s home brew recipes
4. Records and displays a user’s Batch information
5. Records and displays Notes, Actions, Measurements, Comments, Ingredients, and Ratings for a user’s saved Batches
6. Provides a platform for brewers to share their Batch information with other registered users
7. Provides calculators for home brew functions
8. Records and displays a user’s inventory of competed home brews
9. Records and displays a user’s inventory of home brew Ingredients

## User Characteristics

This subsection of the SRS should describe those general characteristics of the eventual users of the product that will affect the specific requirements. (See the IEEE Guide to SRS for more details).

## General Constraints

*This subsection of the SRS should provide a general description of any other items that will*

*limit the developer’s options for designing the system. (See the IEEE Guide to SRS for a partial list of possible general constraints).*

## Assumptions and Dependencies

This subsection of the SRS should list each of the factors that affect the requirements stated in the SRS. These factors are not design constraints on the software but are, rather, any changes to them that can affect the requirements in the SRS. For example, an assumption might be that a specific operating system will be available on the hardware designated for the software product. If, in fact, the operating system is not available, the SRS would then have to change accordingly.

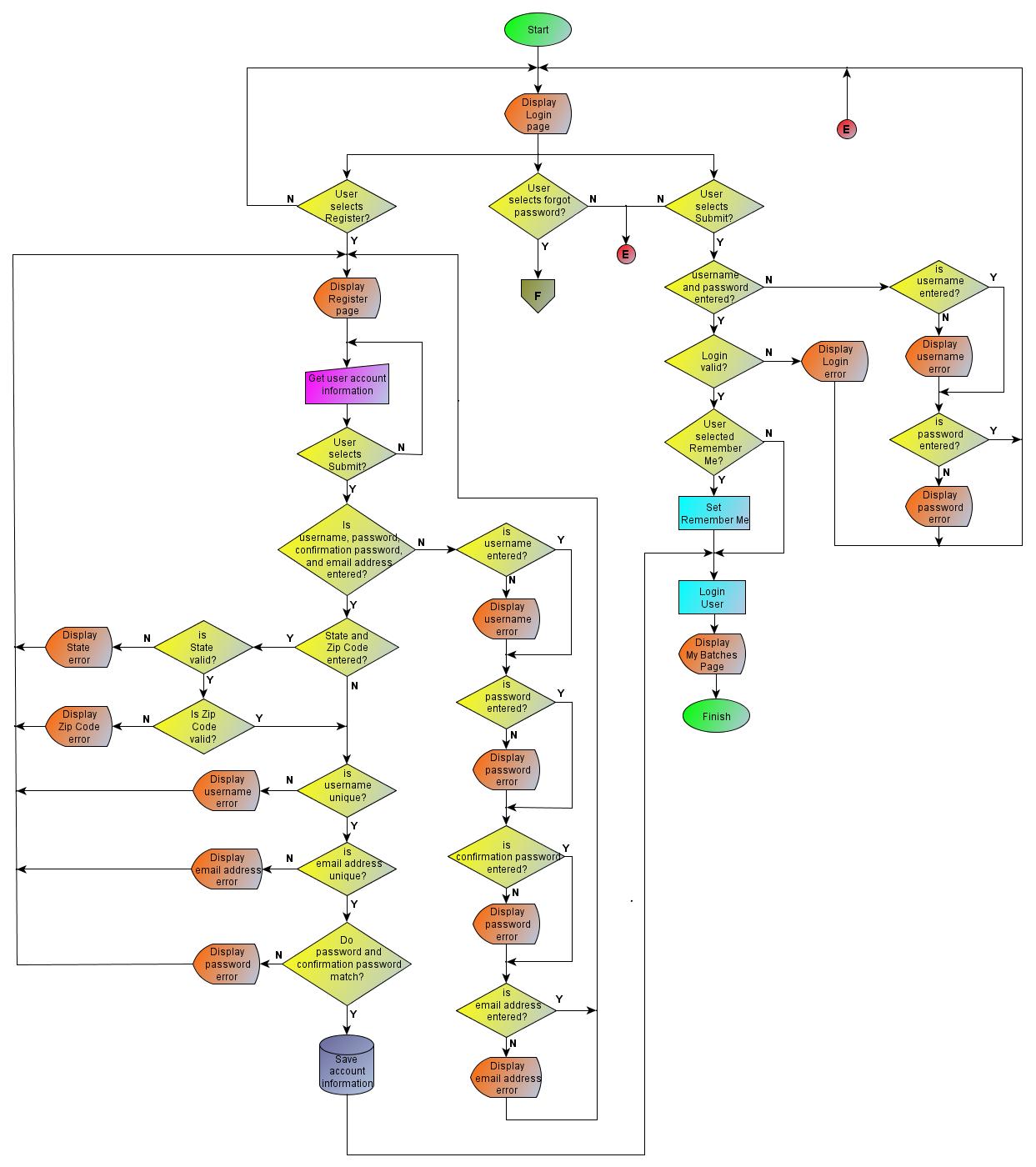
# Specific Requirements

This will be the largest and most important section of the SRS. The customer requirements will be embodied within Section 2, but this section will give the D-requirements that are used to guide the project’s software design, implementation, and testing.

Each requirement in this section should be:

* Correct
* Traceable (both forward and backward to prior/future artifacts)
* Unambiguous
* Verifiable (i.e., testable)
* Prioritized (with respect to importance and/or stability)
* Complete
* Consistent
* Uniquely identifiable (usually via numbering like 3.4.5.6)

Attention should be paid to the carefuly organize the requirements presented in this section so that they may easily accessed and understood. Furthermore, this SRS is not the software design document, therefore one should avoid the tendency to over-constrain (and therefore design) the software project within this SRS.



**Figure ?? Login and Register Pages**

### Accounts

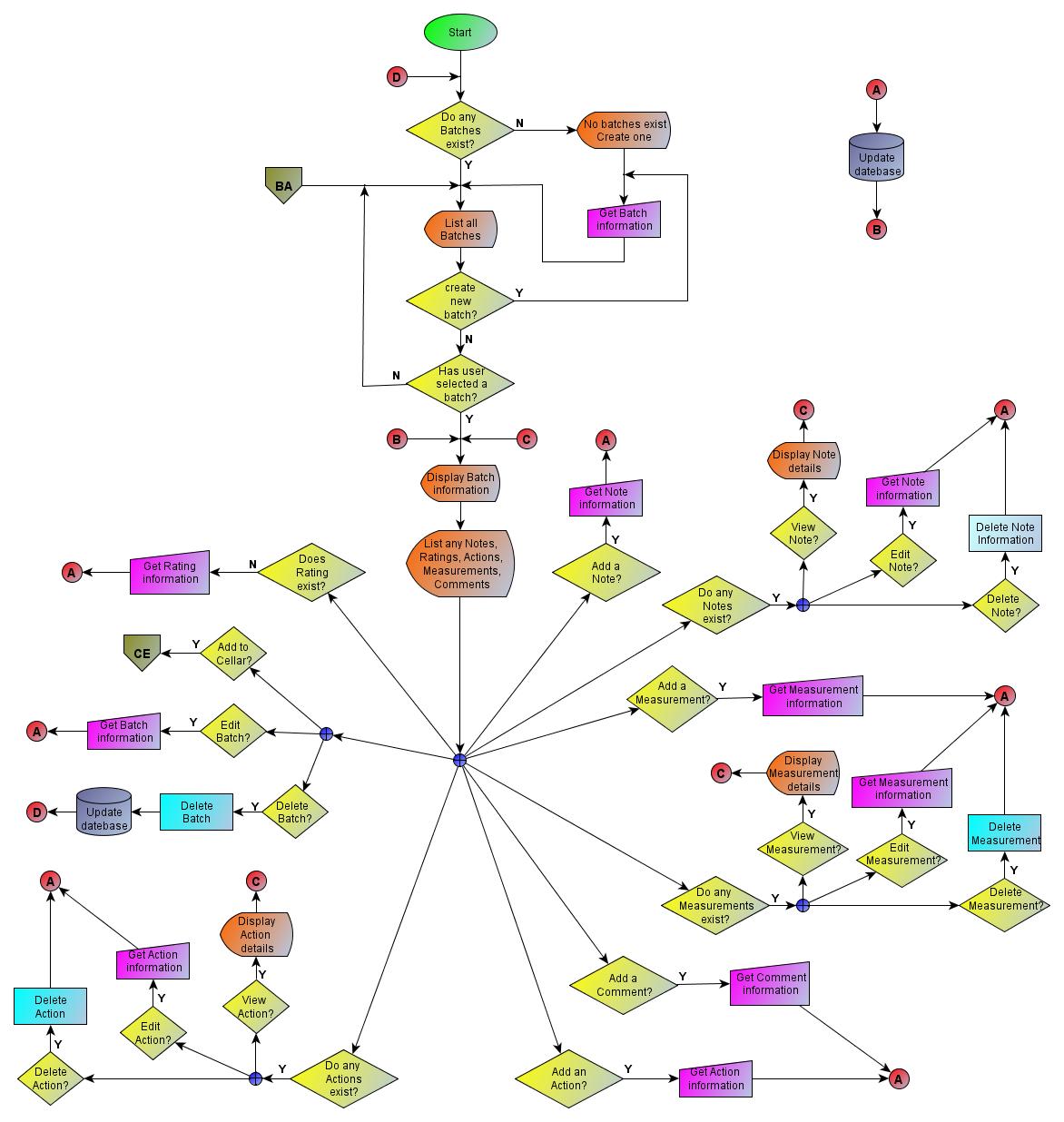
**Priority = Highest**

1. The system shall allow a new user to create an account (register). UC #1
2. The system shall require the user to enter their Username, Email Address, and Password for the account. UC #1
3. The system shall allow the user to optionally enter any of the following for the account: their First Name, Last Name, City, State, and Zip Code. UC #1
4. When creating a Username, the system shall verify that the Username does not match the Username of any other registered user. UC #1
5. When entering or changing an Email Address, the system shall verify that the Email Address does not match the Email Address of any other registered user. UC #1 - #2
6. When entering or changing a Zip Code, the system shall verify that the Zip Code is blank or has exactly five characters. UC #1 - #2
7. When entering or changing the State, the system shall verify that the State is blank or has exactly two characters. UC #1 - #2
8. When creating or changing a Password, the system shall require the user to reenter the new Password a second time, and the system shall verify the two entered Passwords match. UC #1 - #2
9. The system shall not display the user-entered Password (s) on the screen in a readable format. UC #1, UC #5
10. The system shall require the user Password to be not less than 6 characters. Valid characters are A-Z, a-z, 0-9, and the 32 special characters: ` ~ ! @ # $ % ^ & \* ( ) - \_ = + [ ] { } \ | ; : ‘ “ , . <> / ? UC #1, #2, #7
11. After a valid registration, the system shall automatically login the user. UC #1
12. The system shall allow the user to view their saved account information. The information that can be viewed is Username, Email Address, First Name, Last Name, City, State, and Zip Code. UC #3
13. The system shall display the Username for the current user on each web page. UC #3
14. The system shall allow the user to change their saved account information. The information that can be changed is Password, Email Address, First Name, Last Name, City, State, and Zip Code. UC #2
15. When changing the user Password, the system shall require the user to enter the current Password, and then the new Password. UC #2
16. The system shall allow a user to delete their account. UC #4
17. The system shall prompt the user to verify they want the account deleted. UC #4
18. After a user verifies they want to delete their account, the system shall log the user out and delete their stored account information. UC #4
19. The system shall also delete any other information entered by that Username, such as Batches, Notes, Actions, Measurements, Ratings, Recipes, etc... UC #4

### Log In/Out

**Priority = Highest**

1. The system shall verify that a user enters a valid Username/Password combination to login. UC #5
2. If the user enters an invalid Username/Password combination, the system shall prompt the user to reenter a valid Username/Password combination. UC #5
3. The system shall not allow a user to access any web pages other than the login, registration, recover password, User’s Manual, and FAQ pages until they have successfully logged in. UC #5
4. If the user selects to logout, the system shall log them out and display the login screen. UC #6
5. If the user forgets their Password, the system shall allow the user to request a new recover Password. UC #7
6. The system shall require the user to enter a valid Username when requesting a recover Password. UC #7
7. The system shall generate a new random 8-digit recover Password. UC #7
8. The system shall send the new Recover Password to the Email Address listed in the user’s account information. UC #7
9. The system shall automatically log in a “Remembered” user when they connect to the system. UC #8
10. The system shall make a user “Remembered” if the user selects “Remember Me” during their login. UC #8
11. The system shall continue to “Remember” a user until the user selects logout. UC #8



**Figure ?? My Batches Page**

### Batches

**Priority = High**

1. The system shall allow the user to create a new Batch. UC #9
2. The system shall require the user to enter a Name and Type for the new Batch. UC #9, UC #10
3. The system shall record the Date and Time the Batch was created. UC #9
4. The system shall allow the user to optionally enter a Description for the new Batch. UC #9, UC #10
5. The system shall allow the user to display a list of all their saved Batches. UC #11
6. The list shall include the Name, Date entered, Type, and Description for each Batch. UC #11
7. The list shall be displayed in chronological order. UC #11
8. The system shall allow the user to display the details of a saved Batch. UC #11
9. The details shall include the Name, Date and Time entered, Type, and Description for the Batch. UC #11
10. The system shall allow a user to edit the Name, Type, and Description, of any of their saved Batches. UC #10
11. The system shall allow a user to delete a saved Batch. UC #12
12. The system shall prompt the user to verify they want the Batch deleted. UC #12
13. The system shall also delete any other data associated with the Batch, such as Notes, Measurements, Ratings, etc. UC #12

### Notes

**Priority = High**

1. The system shall allow a user to add a Note about a Batch they created. UC #13
2. The system shall record the Date and Time the Note was created. UC #13
3. The system shall allow the user to optionally enter a Name and Description for the Note. UC #13, UC #16
4. The system shall allow a user to display a list of all their saved Notes about a Batch. UC #17
5. The list shall include the Name and Description, for each Note. UC #17
6. The list shall be displayed in chronological order. UC #17
7. The system shall allow a user to display the details of a saved Note. UC #14
8. The details shall include the Name, Date and Time entered, and Description for the Note. UC #14
9. The system shall allow a user to edit the Name and Description of any of their saved Batch Notes. UC #16
10. The system shall allow a user to delete a saved Batch Note they created. UC #15
11. The system shall prompt the user to verify they want the Note deleted. UC #15

### Actions

**Priority = High**

1. The system shall allow the user to add an Action to a Batch they created. UC #18
2. The system shall require the user to enter a Name, Type, and Description for the Action. UC #18, UC #21
3. The system shall record the Date and Time the Action was created. UC #18
4. The system shall allow the user to display a list of all their saved Action for a Batch. UC #22
5. The list shall include the Name and Description for each Action. UC #22
6. The list shall be displayed in chronological order. UC #22
7. The system shall allow the user to display the details of a saved Action. UC #19
8. The details shall include the Name, Date and Time entered, and Description for the Action. UC #19
9. The system shall allow a user to edit the Name, Type, Date and Time entered, and Description, of any of their saved Actions. UC #21
10. The system shall allow a user to delete a saved Action. UC #20
11. The system shall prompt the user to verify they want the Action deleted. UC #20

### Recipes

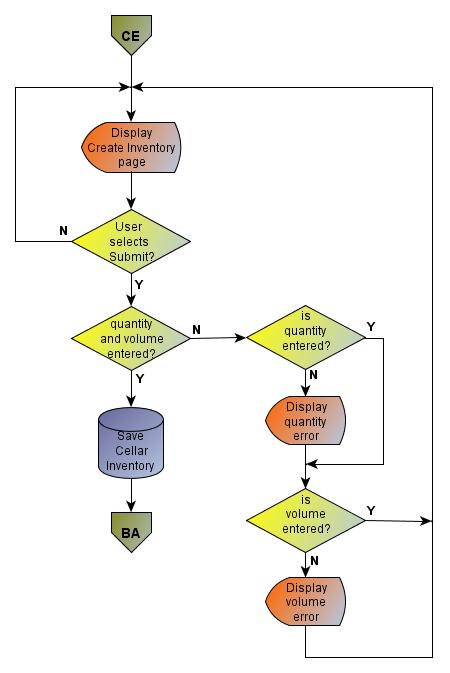
**Priority = High**

1. The system shall allow the user to create a new Recipe. UC #23
2. The system shall record the Date and Time the Recipe was created. UC #23
3. The system shall allow the user to optionally enter any of the following: Name, Description, Preparation information, Process information, Finishing information, and Costs for the Recipe. UC #23, UC #26
4. The system shall allow the user to display a list of all their saved Recipes. UC #24
5. The list shall include the Name and the Date and Time each Recipe was created. UC #24
6. The system shall allow the user to display the details of any of their saved Recipes. UC #27
7. The details shall include the Name, Date and Time entered, Description, Preparation information, Process information, Finishing information, and Costs for the Recipe. UC #27
8. The system shall allow a user to edit the Name, Description, Preparation information, Process information, Finishing information, and Costs, for any of their saved Recipes. UC #26
9. The system shall allow a user to delete a saved Recipe. UC #25
10. The system shall prompt the user to verify they want the Recipe deleted. UC #25
11. The system shall allow a user to associate a Recipe with a new Batch. UC #28
12. The Batch details will show what, if any, saved Recipe was used when creating the Batch. UC #28

### Measurement

**Priority = Medium**

1. The system shall allow a user to record a Batch Measurement. UC #29
2. The system shall require the user to enter a Measurement Value. UC #29, UC #30
3. The system shall require the Measurement Value to be numeric. UC #29, UC #30
4. The system shall record the Date and Time the Measurement was created. UC #29
5. The system shall allow the user to optionally enter a Name, Description, and what was measured for the Measurement. UC #29, UC #30
6. The system shall allow the user to display a list of all their saved Measurements for a batch. UC #31
7. The list shall include the Name, Description, what was measured, and the Value. UC #31
8. The system shall allow the user to display the details of any of their saved Measurements. UC #32
9. The details shall include the Name, Date and Time entered, Description, what was measured, and the Value for the Measurement. UC #32
10. The system shall allow a user to edit the Name, Date and Time entered, Description, what was measured, and the Value for the Measurement. UC #30
11. The system shall allow a user to delete any of their saved Batch Measurements. UC #33
12. The system shall prompt the user to verify they want the Measurement deleted. UC #33



**Figure ?? Create Cellar Inventory Page**

### Cellar

**Priority = Medium**

1. The system shall allow a user to add a Batch to their Cellar Inventory. UC #34
2. The system shall require the user to enter the container Type and Volume, and the Quantity of Container(s). UC #34, UC #35
3. The system shall require the Volume value to be numeric. UC #34, UC #35, UC #39
4. The system shall require the Quantity value to be numeric. UC #34, UC #35, UC #39
5. The system shall allow the user to optionally enter a Name for the Inventory. UC #34, UC #35
6. The system shall allow the user to display a list of their entire Cellar Inventory. UC #37
7. The list shall include the Name, Quantity, Type and Volume of the Container(s). UC #37
8. The system shall allow the user to display the details of any of their saved Inventories. UC #38
9. The details shall include the Name, Quantity, Type and Volume of the Container(s), and the Batch from which the Inventory was created. UC #38
10. The system shall allow a user to edit the Name, Quantity, Type and Volume of the Container(s). UC #35
11. The system shall allow a user to delete any of their saved Cellar Inventories. UC #36
12. The system shall prompt the user to verify they want the Inventory deleted. UC #36
13. The system shall allow a user to search for Inventory in their Cellar. UC #39
14. The system shall allow a user to enter one or more of the following search criteria: the Name of the Batch from which the Inventory was created, Name of the inventory, Quantity available, and Volume available. UC #39
15. The system shall list Inventory that matches any of the entered criteria. UC #39
16. The list shall include the Name of the Batch from which the Inventory was created, the Name of the Inventory, Quantity, Type and Volume of the Container(s). UC #39

### Rating

**Priority = Medium**

1. The system shall allow a user to Rate their saved Batch. UC #40
2. The system shall require the Rating to be numeric. UC #40
3. The system shall require the Rating to be from 0 to 100. UC #40
4. The system shall allow the user to optionally enter a Rating Comment. UC #40
5. The system shall display the Owner’s Rating for the Batch. UC #40
6. The system shall display a Rating of “N/A” if the owner has not entered a Rating for the Batch. UC #40
7. The system shall allow a Friend, to Rate a Shared Batch. UC #40
8. The system shall require the Friend to enter a numeric Rating. UC #40
9. The system shall require the Rating to be from 0 to 100. UC #40
10. The system shall allow the Friend to optionally enter a Rating Comment. UC #40
11. The system shall display the Average Rating for the Batch. UC #40
12. The Average Rating shall be the average of all Ratings for the Batch, including the owner’s Rating. UC #40
13. The system shall display an Average Rating of “N/A” if there are no Ratings for the Batch. UC #40
14. The system shall allow the Owner, and Friends of a Shared Batch, to display a listing of all the Ratings for a Batch. UC #40
15. The listing shall include all the Username, Rating, and Rating Comment for the Batch. UC #40

### Search

**Priority = Low**

1. The system shall allow a user to Search for other users registered in the system. UC #41
2. The system shall allow a user to enter one or more of the following Search criteria: Username, First Name, Last Name, and Zip Code. UC #41
3. The system shall list users that match all of the entered criteria. UC #41
4. The list shall include the Username, First Name, Last Name, and Email Address. UC #41
5. The list shall not include the user performing the Search. UC #41
6. The list shall not include “Friends” of the user performing the Search. UC #41

### Friend

**Priority = Low**

1. The system shall allow a user to add another user registered in the system as a “Friend”. UC #42
2. The system shall email the Friend request to the other user. UC #42
3. The system shall email the request to the Email Address of record. UC #42
4. The system shall allow the other user to accept the Friend request. UC #42
5. The other user shall not be added as a Friend until the user accepts the request. UC #42
6. The system shall allow a user to remove a Friend. UC #43
7. The system shall allow the user to display a list of all their Friends. UC #44
8. The list shall include the Username, First Name, Last Name, and Email Address for all Friends. UC #44
9. The system shall allow the Owner of a Batch to Share the Batch with a Friend. UC #45
10. The system shall require the Owner to enter the Username of the Friend. UC #45
11. The system shall email the Friend to inform them a Batch has been shared with them. UC #45
12. The email shall be sent to the Email Address saved in the Friend’s account data. UC #45
13. The system shall allow the Friend to view the Shared Batch the next time they log in. UC #45

### Comment

**Priority = Low**

1. The system shall allow a user to enter a Comment on their saved Batch. UC #46
2. The system shall require the Comment to be from 1 to 256 characters. UC #46
3. The system shall allow a Friend, to Comment on a Shared Batch. UC #46
4. The system shall require the Comment to be from 1 to 256 characters. UC #46
5. The system shall display a list of all Comments for a Batch. UC #46
6. The list shall include the Comment and the Username of the user that entered the comment. UC #46

### Ingredients

**Priority = Lowest**

1. The system shall allow the user to enter their brewing Ingredients into an Inventory. UC #47
2. The system shall require the user to enter the Ingredient Name. UC #47, UC #49
3. The system shall allow the user to optionally enter any of the following for the Ingredient: Description, Cost, and Quantity. UC #47, UC #49
4. The system shall require the Cost value to be numeric. UC #47, UC #49, UC #51
5. The system shall require the Quantity value to be numeric. UC #47 UC #49, UC #51
6. The system shall allow the user to display a list of all their saved Ingredients. UC #48
7. The list shall include the Name, Description, Cost, and Quantity for each Ingredient. UC #48
8. The system shall allow a user to edit the Name, Description, Cost, and Quantity for any of their saved Ingredients. UC #49
9. The system shall allow a user to delete a saved Ingredient. UC #50
10. The system shall prompt the user to verify they want the Ingredient deleted. UC #50
11. The system shall allow a user to search for Ingredients in their Inventory. UC #51
12. The system shall allow a user to enter one or more of the following search criteria: Name, Description, Cost, and Quantity. UC #51
13. The system shall list Inventory that matches any of the entered criteria. UC #51
14. The list shall include the Name, Description, Cost, and Quantity for each Ingredient. UC #51
15. The system shall allow the user to enter the Ingredients used for a Batch. UC #52
16. The system shall require the user to enter the Ingredient Name, Cost, and Quantity used. UC #52
17. The system shall allow the user to remove any Ingredients used for a Batch. UC #53
18. The system shall prompt the user to verify they want the Ingredient deleted. UC #53

### Calculate

**Priority = Lowest**

1. The system shall allow the user to calculate the percent ABV for each Batch. UC #54
2. The system shall require the user to enter the FG and the Temperature. UC #54
3. The system shall calculate the ABV. UC #54
4. The system shall record the FG, Temperature, ABV, and Date and Time for the calculation. UC #54
5. The system shall allow a user to display all ABV percentages calculated for a Batch. UC #54
6. The system shall allow the user to calculate the amount of sulfite to add to a Batch. UC #55
7. The system shall require the user to enter the SO₂ and pH levels and the desired SO₂ level. UC #55
8. The system shall calculate the amount of sulfite to add. UC #55
9. The system shall record the SO₂ and pH levels, the desired SO₂ level, and the calculated amount of sulfite. UC #55
10. The system shall allow a user to display all sulfite calculations for a Batch. UC #55

### Reminder

**Priority = Lowest**

1. The system shall allow the user to enter a Reminder. UC #56
2. The system shall require the user to enter the Date and Time and Description. UC #56
3. The system shall require the Date and Time to be in the format MM/DD/YY HH:MM. UC #56
4. The system shall allow the user to optionally enter an associated Batch. UC #56
5. The system shall require the associated Batch value to be numeric. UC #56

### Traceability Matrix

# Appendices

Appendices may be used to provide additional (and hopefully helpful) information. If present, the SRS should explicitly state whether the information contained within an appendix is to be considered as a part of the SRS’s overall set of requirements.

*Example Appendices could include (initial) conceptual documents for the software project, marketing materials, minutes of meetings with the customer(s), etc.*

## Applicable Standards, Regulations, Laws, etc.

## Definitions, Acronyms, and Abbreviations

*This subsection should provide the definitions of all terms, acronyms, and abbreviations required to properly interpret the SRS. This information may be provided by reference to one or more appendixes in the SRS or by reference to other documents.*

OG – Original Gravity

FG – Final Gravity

SP – Specific Gravity

ABV – Alcohol by Volume

FAQ – Frequently Asked Questions

SO₂ – Sulfur dioxide

pH – (Potential of Hydrogen) Acidity

## References

*This subsection should:*

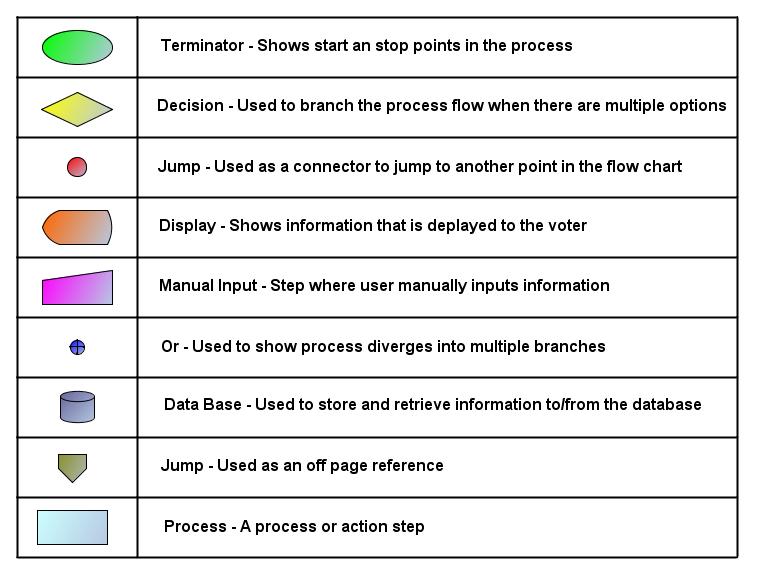
*(1) Provide a complete list of all documents referenced elsewhere in the SRS, or in a separate, specified document.*

*(2) Identify each document by title, report number - if applicable - date, and publishing organization.*

*(3) Specify the sources from which the references can be obtained.*

*This information may be provided by reference to an appendix or to another document.*

## Any Other Ancillary Materials



**Table ?? Flowchart Key**

# Index