

Florida International University
School of Computing and Information Sciences

Software Engineering Focus

Final Deliverable

Project Title:

Snackability 3.0

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Abstract

This document presents the information necessary to gain a good understanding of Snackability 3.0. Several students on campus are consuming a variety of snacks daily without a clear understanding on the nutritional value of their snacks. Snackability is a mobile application for iOS and Android that aims to help people identify healthy snacks by providing them a numerical score for each snack they consume based on the chosen snack's nutritional information which follows USDA guidelines.

This document explains our motivation for developing this application and the solution we implemented for the third release of Snackability. Provided are the details of the new features that were implemented, and the improvements done to the previous version to provide a better and more efficient user experience. In this document we also describe the features that were completed, the ones that could not be completed for this version and the features that we believe will benefit future versions of this application. We conclude this document with instructions to install and run this project.

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INTRODUCTION

Current System

Purpose of New System

USER STORIES

The following section provides the detailed user stories that were implemented in this iteration of Snackability. These user stories served as the basis for the implementation of the project's features. This section also shows the user stories that are to be considered for future development.

Implemented User Stories

SNAK-12 - Search with bar code scanning

As a user, I want to have the option to scan the UPC bar code of a snack **so that** it is easier to search for snacks.

- Acceptance Criteria:
GIVEN a user wanting to log a snack
WHEN the user clicks the "scan barcode" button and scans the snack
THEN upon success, the user will be taken to the snack detail page with the result or return to the search form letting the user know no results were found.

SNAK-18 - Reminder notifications

As a User I want to be able to enable and disable daily reminder push notifications, **so that** I am reminded to use the app more often and I can earn points daily and keep up to speed with my healthy snacking.

- Acceptance Criteria:
GIVEN I am a user in the settings page
WHEN I tap on Enable Notifications or Disable Notifications in the settings page
THEN I receive a reminder notification every day, or stop receiving daily reminders if disabled

SNAK-40 - UI enhancement of consumed history for home page

As a user, I want a better UI of the homepage **so that** I can see my dietary performance in a more comprehensive manner.

- Acceptance Criteria
GIVEN a user logging in to Snackability
WHEN the previous snacks consumed are being loaded
THEN the daily averages of the snacks consumed will be plotted on a easy to read bar chart (which is color-coded according to the legend) and the user can pan the chart horizontally to see the averages of previous days.

SNAK-55 – Dietary Restrictions/Allergies

As a User I want to be able to specify any allergies or dietary restrictions I may have, **so that** I can earn points for not eating these items and stay on track with my diet.

- Acceptance Criteria:
GIVEN I am a user in the settings page
WHEN I set my dietary restrictions in the dietary restrictions settings
THEN I see a confirmation, my score is adjusted based on my restrictions, and I see either a message of encouragement or discouragement

SNAK-60 – Snack Achievements

As a User I want to have achievements for different milestones and accomplishments related to the snacks I consume **so that** I am encouraged to use the app more and eat healthier.

- Acceptance Criteria:
GIVEN I am a user consuming a snack
WHEN I consume a snack that meets the requirements for a given achievement
THEN I receive a pop-up dialog of my achievement

SNAK-67 - Welcome Screen

As a user, I want to see a welcome screen after I log in so **that** I experience a smoother transition to my dashboard

- Acceptance Criteria:
GIVEN a user logging in to Snackability
WHEN the user clicks on the log in button to attempt to sign in
THEN upon successful login, the user should see a welcome screen for 2 seconds before displaying the user's dashboard

SNAK-76 - Google/Facebook authentication

As a user, I want to have the option to sign in with a Facebook or Google account **so that** it is easier to log in / sign up

- Acceptance Criteria:
GIVEN a user opening the app for the first time
WHEN the user see the sign in screen, the user will have the option to sign in with Facebook or Google if they don't want to use email/password
THEN upon successful login through Facebook or Google, the user should have their own account registered with Snackability.

SNAK-87 - Add Environment Variables for merging to backend master branch

As a developer I'd like to have environment variables to separate different environments **so that** I can merge development branches with production branches and simply change code in one place, namely the .env file.

- Acceptance Criteria:
GIVEN I am a developer
WHEN I am merging development changes ready for production into the production branch
THEN I do not have to manually edit lines in multiple places, instead I simply edit the .env file

SNAK-94 - Script for UPC column

As a developer, I want to have the most of the UPC codes in the snackability database automatically filled so that I don't have to fill a UPC code for each snack one by one.

- Acceptance Criteria:
GIVEN the snackability database with an empty "UPC" column
WHEN the developer runs the python program with the proper database credentials
Then upon a successful connection, the program will make API calls to upcitemdb and fill a UPC code for each snack if the snack has a UPC code found.

SNAK-102 Achievements Dashboard

As a User I want to have a page for all my achievements so that I can easily keep track of my achievement progress.

- Acceptance Criteria:
GIVEN I am a user who has gained at least one achievement
WHEN I tap on the View Achievements button on the home page
THEN I see visual achievement cards with badges for each achievement I've gained, with my current count and level

SNAK-103 Trader Achievements

As a user, I want to be able to trade in red apples for golden apples so that I can earn some golden apples if I eat snacks that are healthy, but not perfect scores of 11.

- Acceptance Criteria:
GIVEN I am a user with at least 10 current Red Apples
WHEN I tap on the Trade Apples button on the Home page (HistoryPage.js), and confirm my selection by tapping yes on the Alert
THEN I see an Alert confirming the apples have been traded, and see the apple counts updated on the home page

SNAK-104 Double XP Warrior Achievement

As a product owner, **I want** users to gain an achievement for participating in double xp weekends **so that** they are encouraged to use the app more often and are rewarded for doing so.

- Acceptance Criteria:
GIVEN The has participated in one less than the number of weekends required for the achievement
WHEN The user consumes a snack for the first time during a new double XP weekend
THEN The user sees an Alert with the Double XP Warrior achievement

Pending User Stories

PROJECT PLAN

This section describes the planning that went into the realization of this project. This project incorporated the agile development techniques and as such required the sprints to be planned. These sprint plannings are detailed in the section. This section also describes the components, both software and hardware, chosen for this project.

Hardware and Software Resources

The following is a list of all hardware and software resources that were used in this project:

Sprints Plan

Sprint 1

Sprint 2

SYSTEM DESIGN

This section contains information on the design decisions that went into this project. The architecture patterns are outlined and explained. The entire system is shown in a package diagram and the subsystems are explained. Finally, the design patterns used in the project are discussed.

Architectural Patterns

System and Subsystem Decomposition

Deployment Diagram

Design Patterns

SYSTEM VALIDATION

GLOSSARY

APPENDIX

Appendix A - UML Diagrams

Appendix B - User Interface Design

Appendix C - Sprint Review Reports

Sprint 1

Attendees: Elias Garcia, Darien Morrison

Start time: 9:00 am

End time: 9:57 am

After a show and tell presentation, the implementation of the following user stories were accepted by the product owners:

- User Story SNAK-55 - Dietary Restrictions/Allergies
- User Story SNAK-67 - Welcome Screen
- User Story SNAK-76 - Google/Facebook authentication

The following ones were rejected and moved back to the product backlog to be assigned to a future sprint at a future Spring Planning meeting.

- User Story SNAK-68 - Develop UI for the Scoreboard
This user story could not be completed during this sprint and will be done in the next sprint.
- User Story SNAK-18 - Reminder notifications
This user story could not be completed during this sprint and will be done in the next sprint
- User Story SNAK-75 - Fix message on consume snack page **TO DO**
This user story has been moved to a future sprint.
- User Story SNAK-65 - User Account information **DONE**
This user story has been moved to the next sprint since we'll be working on enhancing the UI of the home page first.

Sprint 2

Attendees: Elias Garcia, Darien Morrison

Start time: 9:10 A.M.

End time: 10:00 A.M.

After a show and tell presentation, the implementation of the following user stories were accepted by the product owners:

- User Story SNAK-40 - UI enhancement of consumed history for home page

The following ones were rejected and moved back to the product backlog to be assigned to a future sprint at a future Spring Planning meeting.

- SNAK-60 - Create Snack Achievements
- SNAK-65 - User Account information
- SNAK-68 - Develop UI for the Scoreboard
- SNAK-18 - Reminder notifications
- SNAK-12 - Search with bar code scanning

Sprint 3

Attendees: Elias Garcia, Darien Morrison

Start time: 8:40 A.M

End time: 9:00 A.M.

After a show and tell presentation, the implementation of the following user stories were accepted by the product owners:

- SNAK-18 - Reminder notifications
- SNAK-12 - Search with bar code scanning

The following ones were rejected and moved back to the product backlog to be assigned to a future sprint at a future Spring Planning meeting.

- SNAK-60 - Create Snack Achievements
- SNAK-61 - Create badges for the achievements
- SNAK-68 - Develop UI for the Scoreboard

Sprint 4

Sprint 5

Sprint 6

Appendix D - User Manuals, Installation/Maintenance Document, Shortcomings/Wishlist Document and other documents

REFERENCES