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FoodSource Software Development Plan

4.1 - SDP Plan Introduction

This Software Development Plan provides the details of the planned development for FoodSource, which is an iOS app that acts as a marketplace for users to buy and sell food directly from its source. FoodSource is intended to make organic and raw food much more accessible to consumers, and also provide a convenient way for farmers, gardeners, hunters, fisherman, and anyone else to sell their food. Throughout the semester I will be creating not only the iOS app, but also documentation, presentations, and reports that detail the process of creating FoodSource.

4.1.1 - Project Deliverables

Deliverable	Due Date	Description
Project Proposal Document	Week Two	This document serves as an initial description of FoodSource and details the goals for the semester.
Requirements Specification Document [Initial]	Week Five	The requirements specification document is a detailed list of every part of the FoodSource app, with more nuanced goals.
Software Development Plan Document [Initial]	Week Seven	This document details the plans for the execution of making FoodSource throughout the semester.

Preliminary Demonstration Presentations	Weeks Thirteen — Fourteen	This presentation will show the functionality of the FoodSource app, and will display the process of buying and selling on the app.
Preliminary Version of Poster	Week Fourteen	The posterboard for FoodSource will be a high level overview of what the project is, the process of making FoodSource, and what the result is.
FINAL Project Presentation Final Report and Code	Week Sixteen	The final project presentation will be a slides presentation given to the class that details the process of making foodsource, and talks about what was achieved during its development. The final product delivery will include the finished FoodSource iOS app pushed to GitHub, and also the final project report which details the process of making the project and all of the deliverables.
Written Status Reports or Quad Charts in SDF	Every other Monday starting in Week Eight	Every other week there are status reports that detail was was achieved in the past week, what I will achieve this week, and what I will achieve next week regarding the development of FoodSource.

4.2 - Project Resources

This section details the resources that I will use to create FoodSource, including the hardware and software resources that I will use. Since I am working on FoodSource by myself, it is assumed that I will be the one working with all of the resources mentioned in this section.

4.2.1 - Hardware Resources
Since FoodSource is exclusively an iOS app for now, the only hardware resource I plan on using is my MacBook to develop the app. My macbook is capable of accessing all of the software resources I need in order to develop foodsource.

4.2.2 - Software Resources
While developing FoodSource I will be making an iOS app with Xcode as the IDE. Xcode runs on MacOS, and the app's target is iOS. I am writing the code for the app in the language Swift, and SwiftUI is the package that I will use to create the frontend of the app. I am also planning on using Google Firebase which includes Firebase Authentication for email authentication during sign ups or logins for FoodSource, and Firebase Firestore which will serve as the database for the backend of the app. I am going to use the Stripe Connect SDK for the payment processing and payouts in FoodSource, and Stripe will contain the financial data for the buyers and sellers. I am also going to use GitHub for version control.

4.3 - Project Organization

Authentication
        To start out the app's development, I'll implement the authentication for signing up and also logging into an existing account. This data will be stored with Firebase Authentication.

App Structure / Basic Views
        The creation of the app structure which will have the sign up page, respective tab views for either the buyer or seller, which then contain the page views such as account, orders, products, feed, etc. These will initially be as basic as possible for the sake of first making the app functional in the way it is intended.

Product Backend
        The backend functions that will handle creating products and uploading them on the seller side, and viewing the products in the feed view on the buyer side. The data for the products will be stored on Firebase Firestore.

Payment Processing
        This will be the handling of purchasing individual products on the buyer side, and then the money being attributed to the seller of the product. The Stripe Connect SDK will be used for the payment processing.

Order Tracking
        Order tracking will be a combination of displaying data from Firestore, Stripe, and an API to get shipping data. This will include the ability for the buyer and seller to message each other.

Payouts

        The Stripe Connect SDK will allow for the users to view their sales and payout to their bank however much money they made through the app.

Profile Backend

        This will be creating functions for the buyers and sellers to create more advanced profiles. Buyers will be able to input their location and preferences, sellers will be able to list details about themselves for the buyers to view. This data will be stored in Firebase Firestore.

Discoverability

        I will improve the feed and search capabilities allowing for buyers to better be able to find food that interests them on the app, and view it in a convenient way.
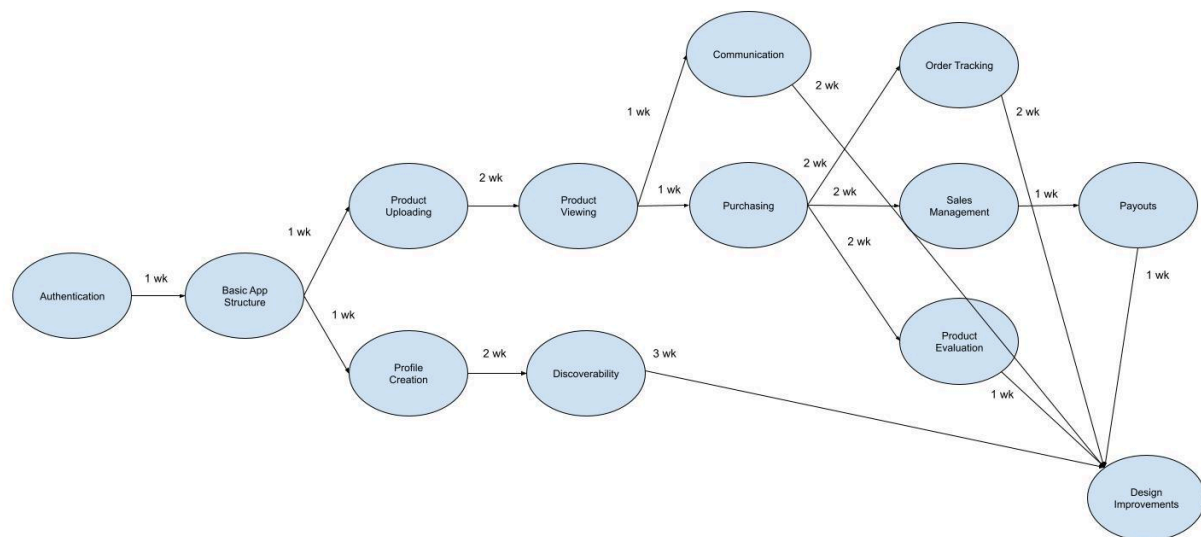
Design Improvement

        Once the overall functionality of the app is finished, I will spend a lot more time improving the UI design to make the app much more aesthetic.

4.4 - Schedule
This section provides schedule information for the FoodSource project.

4.4.1 - PERT Chart

4.4.2 - Resource Table

Resource	Task
MacBook	Everything

Firebase	Authentication, product backend, profile backend, order tracking, discoverability
SwiftUI	App structure, views, discoverability, design improvement
Stripe	Payment processing, payouts, order tracking

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