

# **Software Project Management Plan for MBP**

Version 2.0

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Department of Math and Computer Science  
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# Revisions Page

## Overview

The Software Project Management Plan provides the finalized plan of how the team has accomplished the objectives of our project. This document provides a detailed description of the original deliverables and corresponding delivery dates. It contains the updated roles and duties of each team member and describes the methods used to complete specific tasks and how they will be implemented. The project will follow a Water-Scrum-Fall Model in which each tool and technique used will be described in this document. Additionally, this document will describe each task along with the resources, dependencies and constraints, and risks and contingencies for each one.

## Target Audience

The target audience of this document is Computer Science students. This document serves to show the beginning process of our product and may serve as an example for others wanting to do the same.

## Project Team Members

Rachel Liu, Oscar Navarro, Miguel Oh, Jonathan Willey

## Version Control History

Document Owner: Rachel Liu

Version	Author	Description	Date Completed
1.0	Rachel Liu	Document Creation	1/19/2024
1.0	Miguel Oh	Project Deliverables Chart	1/19/2024

1.0	Rachel Liu	Roles and Responsibilities Chart	1/19/2024
1.0	Oscar, Miguel, Rachel	RACI Chart	1/19/2024
1.0	Miguel Oh	Timetable	1/19/2024
2.0	Rachel Liu	Finalized timetable of tasks, assignment, progress	4/18/24
2.0	Rachel Liu	Finalized Roles and Responsibilities	4/23/2024

# Table of Contents

<b>1 Introduction.....</b>	<b>5</b>
1.1 Project Overview.....	5
1.2 Project Deliverables.....	6
1.2.1 Additional Description of Deliverables.....	7
<b>2 Project Organization.....</b>	<b>7</b>
2.1 Software Process Model.....	7
2.2 Roles and Responsibilities.....	8
2.2.1 Project Responsibilities.....	8
2.3 Tools and Techniques.....	9
2.4 RACI Chart.....	9
<b>3 Project Management Plan.....</b>	<b>10</b>
3.1 Tasks and Assignments.....	10
3.1.1 Description.....	11
3.1.2 Resources Needed.....	12
3.1.3 Risks and Contingencies.....	12
3.2 Timetable.....	12
<b>4 Additional Material.....</b>	<b>13</b>
4.1 Definitions and Acronyms.....	13

# 1 Introduction

## 1.1 Project Overview

The project described within this document is an Apple Application designed with the specific goal of helping college students. With an abrupt change from dependence to independence, our application's goal is to ease the transition into adulthood. Consumed by a busy schedule, high stress levels and lack of funds, finding recipes that will fit within the budget can be difficult to prioritize and even become neglected. This application aims to reduce these burdens and make meal planning and grocery shopping. The application is designed to relieve the stress that comes with meals and enables users to focus on their priorities as a student without compromising their health and weight goals.

The project's objective is to serve the mission of prioritizing health and convenience for students. The application will allow users to create an account and select their budget preference. The application will provide four budget options for the user to select from. These options will include a minimal budget of \$75, average budget of \$100, high budget of \$125 and a maximum budget of \$150. The application will use this budget selection and retrieve meal options for the user to select 3 from each meal category. Additionally, it will compile a grocery list containing each ingredient in the recipe along with the price according to the database.

## 1.2 Project Deliverables

The following table displays the project deliverables and planned delivery date:

Major Deliverable	Planned Delivery Date	Description	Author
SPMP	01/19/24	Software Project Management Plan - Deliverable	Rachel
SRS	01/26/24	Software Requirements Specifications - Deliverable	Rachel
SDD	02/02/24	Software Design Description - Deliverable	Rachel
Scrum Product Backlog	02/29/24	List of all the features (e.g. user stories), including descriptions and functionality, that will be included in your Product - Artifact	Rachel
Sprint #1	02/23/24	Sprint Backlog, Burndown Charts, Risk Assessment	Rachel
Sprint #2	03/15/24	Sprint Backlog, Burndown Charts, Risk Assessment	Rachel
Sprint #3	04/05/24	Sprint Backlog, Burndown Charts, Risk Assessment	Rachel
SUSTD	04/12/24	Software Unit and System Test Documentation - Deliverable	Rachel
Presentation	04/23/24	Project Presentation - Artifact	Team
Team Contribution	04/26/24	Shows the tracking of your time worked throughout the project, recorded as hours worked each week listed by task	All

## 2 Project Organization

### 2.1 Software Process Model

The team will be using the Water-Scrum-Fall Model, a hybrid of the Software Engineering Waterfall Model and Agile Scrum Methodology to design and develop our software system through the software life cycle. Given the conception of the project idea, we will enter the Requirements and Specifications phase as defined by the Waterfall model and then enter the Scrum phase where we will iterate through 3 Sprint cycles as defined by the Agile (Scrum) Model. After three sprint cycles, we will enter the integration and testing phase and finish with the acceptance of the product.

### 2.2 Roles and Responsibilities

Role	Team Member
Scrum Product Owner	Rachel
Scrum Master/ Project Manager	Rachel
Configuration Manager	Oscar
Designers and Developer	
Database	Miguel, Oscar
Application	Rachel, Oscar, Johnathon
UI	Rachel
Testers	All
Lead Designer	Rachel

#### 2.2.1 RACI

	Jonathan	Oscar	Miguel	Rachel
<b>Phase 1: Initiation</b>				
<b>Define Scope, Objectives, Requirements</b>	R	R	R	R/A
<b>Set up Git (Version Control)</b>	I	R/A	I	I
<b>Phase 2: Planning</b>				
<b>Design System</b>	I	R	R	R/A
<b>Database Schema</b>	I/C	R/A	R	I/C
<b>Wireframe</b>	C	C	C	R/A
<b>Product Backlog</b>	I	C	C	R/A
<b>Sprint Plan</b>	C	C	C	R/A
<b>Phase 3: Execution</b>				
<b>Prototype</b>	I	R	I	R/A
<b>UI Design</b>	I	C	I	R/A
<b>Gather Recipe Data</b>	R	I	I	R/A
<b>User Database/Food Database</b>	I	R/A	R/C	I
<b>Sprint Backlog/ Burndown</b>	R	R	R	R/A
<b>Risk Assessment</b>	I	I	I	R/A
<b>Plan Modifications</b>	I	C	C	R/A
<b>Testing</b>	I	R	I	R/A
<b>Phase 3: Close</b>				
<b>Final Testing</b>	I	R	I	R/A
<b>Finalize Design</b>	C	R	C	R/A
<b>Finalize Features/Functionality</b>	C	R	C	R/A
<b>Final Presentation</b>	R	R	R	R/A

\*R- Responsible A- Accountable C- Consulted I- Informed



## 2.3 Tools and Techniques

XCode- IDE

Swift For application development and coding and UI design

Firebase Realtime Database: For backend Infrastructure

Figma - For design of wireframe, prototypes, schemas, and diagrams.

Lucidchart - Entity design for ER diagrams

Navicat Data Modeler - Database Modeler

Usability Engineer Life Cycle- For UI design, implementation and testing

Gantt Chart- Project Planning and Tracking

## 3 Project Management Plan

### 3.1 Tasks and Assignments

The schedule of tasks and assignments are given below:

Task	Timeframe	Dependencies	Assignment
Database Schema	Sprint #1 – 02/23/24		Miguel/Oscar
UI Wireframe	Sprint #1		Johnathon/Rachel
Collection of Data	Sprint #1		All

EER Diagram Database / Physical DB	Sprint #2 – 03/15/24	Database Schema	Miguel/Oscar
UI Prototype / Implementation	Sprint #2	UI Wireframe	Johnathon/Rachel
Software Coding Implementation	Sprint #2	ERR Diagram Database/ Physical DB  Prototype	All
Physical Database working	Sprint #3 – 04/05/24	ERR Diagram	Miguel/Oscar
UI Finish	Sprint #3	UI Prototype	Johnathon/Rachel
Software Coding Finish	Sprint #3		All
Presentation	04/12/24		All

### 3.1.1 Description

UI - Wireframe design must be completed before Sprint #2. The UI prototype and implementation must be completed before Sprint #3 in order to produce final UI product in Sprint #3

Software Coding - Calculations used in program and code must be implemented in sprint #2 in order to allow for testing and modification before final product in spring #3

Database - Must finish Database Schema in order to produce EER diagram and physical database in Sprint #3. Must have a physical database working for the final product.

### 3.1.2 Resources Needed

- Team consisting of four members

- Must be knowledgeable in UI, Swift, Databases
- Proficiency in coding
- Computer IDE for Swift
- MAMP server for MySQL
- Testers to test and provide feedback for product
- Communication tools, Discord

### 3.1.3 Risks and Contingencies

- Risk: Invalid Calculations
  - Contingency: Testing calculations and incorporate error message
- Risk: Insecure User Account
  - Contingency: Ensure security of personal information

## 3.2 Timetable

The schedule of Tasks and the member (s) responsible in addition to the estimated time period for each task and its status are below:

SPRINT	ASSIGNMENT	TASK NAME	START	END	DURATION (Working days)	PROGRESS	STATUS
1		Create an Account	2/9/24	4/5/24	30	100%	Complete
1	Rachel	1.1 UI- Screen/ User input form/buttons	2/9/24	2/22/24	10	100%	Complete
2	Rachel	1.2 A- Input Validation	2/9/24	3/15/24	11	100%	Complete
3	Oscar	1.3 DB- Store user info in Database	3/4/24	4/5/24	12	100%	Complete
1		Login	2/9/24	4/5/24	30	100%	Complete
1	Rachel	2.1 UI- Screen/ Input form/ Buttons	2/9/24	2/22/24	3	100%	Complete
3	Rachel	2.3 A- Input Validation	3/4/24	4/5/24	11	100%	Complete
3	Oscar	2.4 A- Authenticate user	3/4/24	4/5/24	11	100%	Complete
1		Select Budget Option	2/9/24	4/5/24	30	100%	Complete
1	Rachel	3.1 UI- Screen/ Selectable options	2/9/24	2/22/24	10	100%	Complete
1	Rachel	3.2 A-Error Checking: 1 selection	2/9/24	2/22/24	10	100%	Complete
3	Oscar	3.3 DB-Store Budget selection to Database	3/4/24	4/5/24	13	100%	Complete
1		Select Meals for Week	2/9/24	4/5/24	30	100%	Complete
1	Rachel	4.1 UI- Breakfast, lunch, dinner selection screens/ 5 selectable options each	2/9/24	2/22/24	5	100%	Complete
1	Rachel	4.2 A-Error checking: 3 selections	2/9/24	2/22/24	5	100%	Complete
3	Oscar	4.3 A- Retrieve meal options based on selected budget	3/25/24	4/5/24	10	100%	Complete
1		View Meals for the Day	2/9/24	4/5/24	30	100%	Complete
1	Rachel	5.1 UI- elements to display meals	2/9/24	2/22/24	5	100%	Complete
2	Rachel	5.2 UI/A- Tab Bar	2/9/24	3/15/24	19	100%	Complete
3	Oscar	5.3 A- Retrieve meal name from Users selections in database	3/25/24	4/5/24	10	100%	Complete
		View Recipes	3/4/24	4/5/24	20	100%	Complete
3	Rachel	6.1 UI- Screen elements/ display recipe/ingredients	3/4/24	4/5/24	10	100%	Complete
X	Rachel	6.3 A- Retrieve meal data from DB	4/8/24	4/19/24	30	100%	Complete
1		View Weekly Meal Plan	2/9/24	4/5/24	30	100.00%	Complete
1	Rachel	7.1 UI- Calendar View- display week	2/9/24	2/15/24	5	100%	Complete
X	Rachel	7.3 A- Retrieve meals from DB for selected day	4/8/24	4/19/24	10	100%	Complete
		Customer Database	2/9/24	4/5/24	20	66.67%	Complete
2	Oscar	8.1 DB- Create Users entity in DB	2/9/24	3/15/24	3	100%	Complete
2	Oscar	8.2 MBP- Connect firebase and app	2/9/24	3/15/24	3	100%	Complete
X	?	7.4 DB- Store meals for date in database	2/9/24	4/5/24	30	0%	Dropped
		View User Settings	3/4/24	4/5/24	20	100.00%	Complete
2	Rachel	9.1 UI- Screen elements	3/4/24	3/15/24	1	100%	Complete
3	Oscar	9.2 A- Retrieve user's name/email	3/4/24	4/5/24	2	100%	Complete
	Rachel	Logout	3/4/24	4/5/24	20	100%	Complete
3	Rachel	10.1 UI/A Logout User to Welcome Screen	3/4/24	4/5/24	20	100%	Complete
		Record Meal Selection	3/4/24	4/5/24	20	100%	Complete
3	Oscar	11.1 DB- Create MEALS entity & details in database	3/4/24	4/5/24	4	100%	Complete
3	Oscar	11.2 A- Store user selection in database	3/4/24	4/5/24	2	100%	Complete
X	Miguel	11.4 DB- Add mealID to meals in DB	4/8/24	4/19/24	10	100%	Complete
		Meal Selection Previews	3/4/24	4/19/24	20	100%	Complete
3	Rachel	12.1- UI- Expandable Meal Previews	3/4/24	4/5/24	19	100%	Complete
X	Rachel	12.2 A- Retrieve meal data for meal options	4/8/24	4/19/24	10	100%	Complete
		Gather Recipes	3/4/24	4/5/24	20	100%	Complete
3	Johnathon	13.1 Create meals, recipes, ingredients data for budget 1 and 2	3/4/24	4/5/24	20	100%	Complete
3	Rachel	13.2 Create meals, recipes, ingredients data for budget 3 and 4	3/25/24	4/5/24	20	100%	Complete
		View more meal options	3/4/24	4/5/24	20	50%	Incomplete
3	Rachel	14.1 UI- Explore page, category tabs	3/4/24	4/5/24	8	100%	Complete
	Rachel	14.2- Retrieve meals from DB	-----	-----		0%	
		Favorites	4/8/24	4/19/24	10	50%	Incomplete
X	Rachel	15.1 UI- Screen/ Add to favorites	4/8/24	4/12/24	6	100%	Complete
X	Rachel	15.2 A- Connect favorited meals to favorites page	4/8/24	4/19/24	6	0%	Incomplete
		Grocery List	2/9/24	4/5/24	30	26.67%	Incomplete
3	Rachel	16.1 UI- Form categories	2/9/24	2/22/24	10	80%	Incomplete
3	?	16.2 DB- Ingredients DB	2/9/24	4/5/24	30	0%	Not Started
3	Johnathon	16.3- A- Retrieve ingredients and cost	2/9/24	4/5/24	30	?	Incomplete



## 4 Additional Material

### 4.1 Definitions and Acronyms

- SPMP - Software Project Management Plan
- UI - User Interface
- EER - Extended Entity Relationship
- MBP - Meal Budget Plan, App Name
- SRS - Software Requirements Specification
- SDD - Software Design Description
- SUSTD - Software Test Documentation
- SQL - Structured Query Language
- BMR - Basic Metabolic Rate
- TDEE - Total Daily Energy Expenditure