

# 4.0 Software Development Plan ---

## Outline of Software Development Plan

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## 4.1 Plan Introduction

This Software Development Plan provides the details of the projected development for Trailze, a community-based trail discovery and information sharing app that allows users to post real-time updates of their current hiking adventure.

This app offers live navigation so that users can track their progress as they continue to hike. Hikers can place markers on the trail to indicate hazards and features such as bears, fallen trees, bird-nests, mud, waterfalls, and ice. Hiker profiles will allow Trailze to personalize their experience by providing them with curated hikes and trails that relate to their interests. Users are able to unlock achievements based off of elevation, distance, or trails hiked which can lead to free gear and/or trips through partnerships and sponsored events.

### 4.1.1 Project Deliverables

4.1.1.1 Project Proposal Document: *Due January 22, 2018*

4.1.1.2 Requirements Specification Document: *Due February 5, 2018*

4.1.1.3 Software Development Plan: *Due March 5, 2018*

4.1.1.4 Poster: *Due April 30, 2018*

4.1.1.5 Final Presentation/Demonstration: *Due April 30, 2018*

## 4.2 Project Resources

Resources involved in project development are organized into hardware and software resources. Within those categories, involvement in the development process and/or application execution is indicated.

### 4.2.1 Hardware Resources

Resource	Development	Execution
Macbook Computer (2008 or newer)	✓	
3GB RAM	✓	✓
256 GB Storage	✓	✓
Wifi Connection	✓	✓
Ethernet Connection	✓	✓
iOS Smartphone		✓

### 4.2.2 Software Resources

Resource	Application	Development	Execution
Xcode	Development Environment	✓	
mySQL	Database	✓	✓
Node.js	Programming language	✓	✓
GitHub	Version control	✓	
macOS	Development operating system	✓	
iOS	End user operating system	✓	✓

## 4.3 Project Organization

This section will outline the Trailze project organization, including team member roles, team responsibilities, and coordination between teams.

### 4.3.1 Organization Structure

We have organized our project members into three teams: front-end, back-end, and database.

Name	Team	Role
Carleen Petrosian	Front-End	Front-End Designer
Edward Bachoura	Front-End	Front-End Designer
Mary Alverson	Back-End, Database	Back-End Development, Database Development
Haley Fletcher	Back-End, Database	Back-End Development, Database Development

### 4.3.2 Front-End Team

The Front-End team is responsible for developing the interfaces between end users and the Trailze back-end. They will design interface mockups, implement UI pages, interact with the back-end, and test across several platforms. Refer to 5.3.1 for detailed functional requirements for the front-end.

### 4.3.3 Back-End Team

The Back-End team is responsible for designing, developing, and testing software components on the server-side. Refer to 5.3.2 for detailed functional requirements for the back-end.

### 4.3.4 Database Team

The Database team is responsible for designing and implementing the mySQL database. Refer to 5.3.3 for detailed functional requirements for the database.

### 4.3.5 Roles and Responsibilities

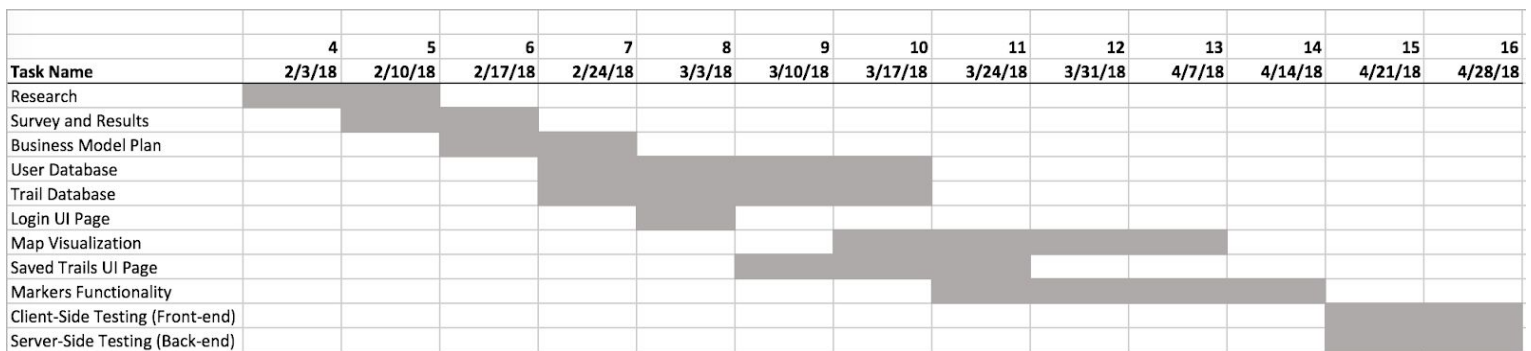
Weekly meetings are held on Wednesdays from 4:00 PM - 6:00 PM.

## 4.4 Project Schedule

This section will detail the Trailze project schedule, including the people and resources necessary for each step.

### 4.4.1 GANTT Chart

The following GANTT Chart visualizes the estimated duration of the subtasks for Trailze in relationship with each other.



### 4.4.2 Task / Resources

Task	People	Hardware	Software
Research	Carleen Petrosian Mary Alverson Edward Bachoura Haley Fletcher Jacob Wymetalek Bryan Wong	Macbook	N/A
Survey and Results	Carleen Petrosian Mary Alverson Edward Bachoura Haley Fletcher Jacob Wymetalek Bryan Wong	Macbook	N/A
Business Model Canvas	Carleen Petrosian Mary Alverson Edward Bachoura Haley Fletcher Jacob Wymetalek Bryan Wong	Macbook	N/A
User Database	Mary Alverson Haley Fletcher	Macbook	Node.js, mySQL, macOS

Saved Trail Database	Mary Alverson Haley Fletcher	Macbook	Node.js, mySQL, macOS
Login UI	Carleen Petrosian Edward Bachoura	Macbook	Node.js, Github, React Native
Map Visualization	Carleen Petrosian Edward Bachoura Mary Alverson Haley Fletcher	Macbook	Node.js, Github, React Native
Saved Trails UI Page	Carleen Petrosian Edward Bachoura	Macbook	Node.js, Github, React Native
Markers Functionality	Carleen Petrosian Edward Bachoura Mary Alverson Haley Fletcher	Macbook	Node.js, mySQL, Github, React Native
Client Side Testing (Front-end)	Carleen Petrosian Edward Bachoura	Macbook, iOS smartphone	Mocha, Node.js
Server Side Testing (Back-end)	Mary Alverson Haley Fletcher	Macbook, iOS smartphone	Node.js Assertion Module