CECS 491A - Sec 6 - Project Plan Document

Project Name: ArrowNav

Team Longhorn:

Brayan Fuentes

Christian Lucatero

Curtis Nishihira

Miguel Zavala

Spencer Gravel (Team Leader)

October 27, 2021

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1. Overview
   1. Project Overview

ArrowNav is a campus companion web application that provides useful information and assistance to both new and current students at California State University Long Beach. The application will display locations, provide foot traffic updates, integrate student schedules into their accounts for the application, and increase student productivity while on campus through a variety of features. The goal of our web application will be to make it easier for students to navigate campus and increase their productivity on campus while still making it an interactive and enjoyable application to use on a semi-regular basis through convenience, incentives, and usability.

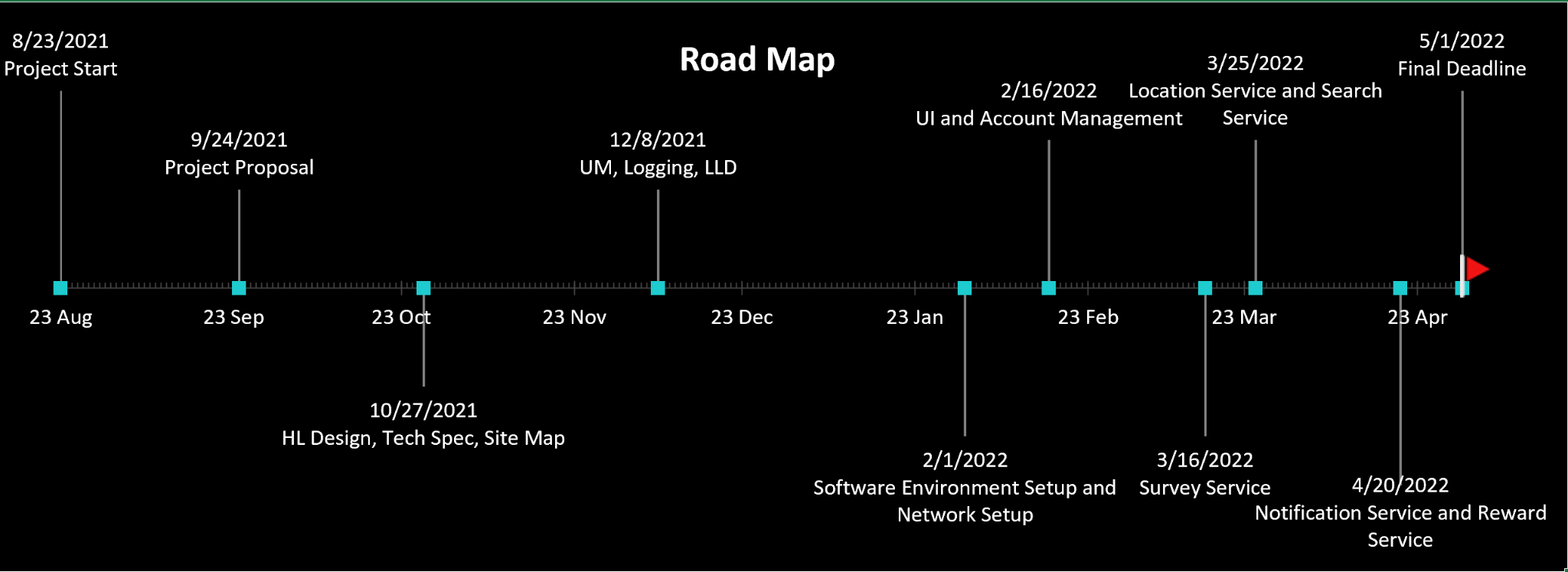
* 1. Project Plan Evolution

As this document defines the project’s scope and outlines the goals set in place for the project, it will be treated as a living document and will be updated periodically as the project progresses. These updates will come from changes that the client might have or from new information that has come to light.

1. Milestones
   1. Milestones

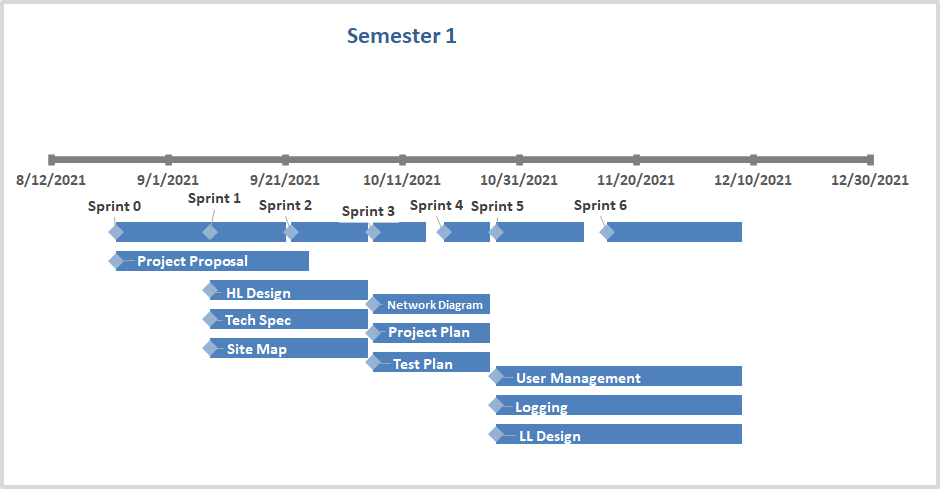
| **Milestones** | **Description** | **Deliverables** | **Planned Date** |
| --- | --- | --- | --- |
| Project Start | First date of Sprint 0 |  | 8/23/21 |
| Project Proposal | Initialize, edit, finalize and submit the project proposal | Proposal Document | 9/24/21 |
| Tech Spec | Initialize, edit, finalize and submit the tech spec | Tech Spec document | 10/06/21 |
| BRD | Initialize, edit, finalize and submit the tech spec | BRD document | 10/06/21 |
| Site Map | Initialize, edit, finalize and submit the site map | Site Map document | 10/06/21 |
| High Level Design | Initialize, edit, finalize and submit the high level design | High Level Design Document | 10/6/2021 |
| Project Plan | Initialize, edit, finalize and submit the project plan | Project Plan document | 10/27/21 |
| Test Plan | Initialize, edit, finalize and submit the test plan | Test Plan document | 10/27/21 |
| Network Diagram | Initialize, edit, finalize and submit the network diagram | Network Diagram document | 10/27/21 |
| User Management | Initialize, edit, finalize and submit the user management | User Management document | 12/08/21 |
| Logging | Initialize, edit, finalize and submit the Logging | Logging document | 12/08/21 |
| Low Level Design | Initialize, edit, finalize and submit the low level design | Low Level Design document | 12/08/21 |

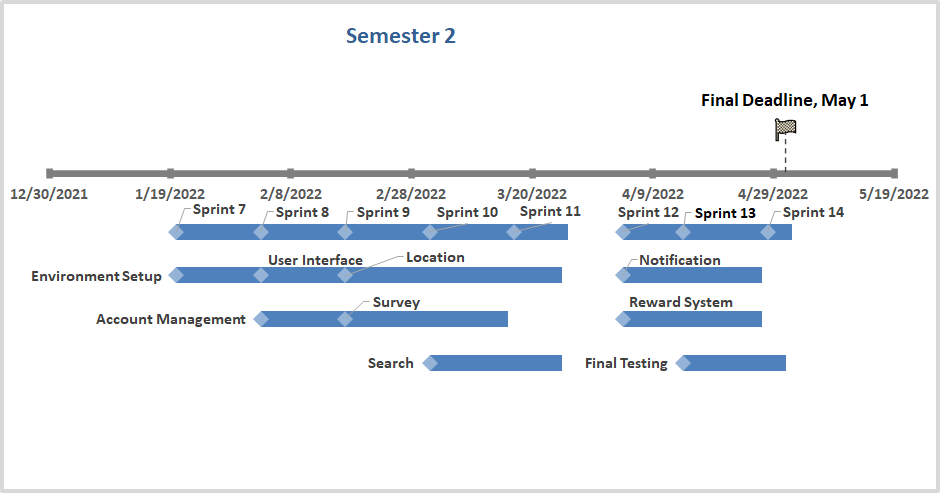
1. Road Map



1. Timeline

The following timelines display the sprints as well as the implementations that will be worked on during these sprints. The implementation of smaller sprints will help our team understand the project’s progression and be able to adjust accordingly to any setbacks that we might have moving forward. Using the agile framework





1. Sprint Breakdown

| Sprint 0  8/30/2021 - 9/6/2021 | | Hours  Total: |
| --- | --- | --- |
| Project Proposal | Writing |  |
| Editing |  |

| Sprint 1  9/7/2021 - 9/20/2021 | | Hours  Total: |
| --- | --- | --- |
| Project Proposal | Editing |  |
| High Level Design | Writing |  |
| Editing |  |
| BRD | Writing |  |
| Editing |  |
| Site Map | Writing |  |
| Editing |  |
| Tech Spec | Writing |  |
| Editing |  |

| Sprint 2  9/21/2021 - 10/4/2021 | | Hours  Total: |
| --- | --- | --- |
| Project Proposal | Editing |  |
| High Level Design | Editing |  |
| BRD | Editing |  |
| Site Map | Editing |  |
| Tech Spec | Editing |  |

| Sprint 3  10/5/2021 - 10/14/2021 | | Hours  Total: |
| --- | --- | --- |
| Project Plan | Writing |  |
| Editing |  |
| Test Plan | Writing |  |
| Editing |  |
| Network Diagram | Writing |  |
| Editing |  |

| Sprint 4  10/15/2021 - 10/25/2021 | | Hours  Total: |
| --- | --- | --- |
| Project Plan | Editing |  |
| Test Plan | Editing |  |
| Network Diagram | Editing |  |

| Sprint 5  10/26/2021 - 11/11/2021 | | Hours  Total: |
| --- | --- | --- |
| Low Level Design | Writing |  |
| Editing |  |
| Logging | Writing |  |
| Editing |  |
| User Management | Writing |  |
| Editing |  |

| Sprint 6  11/12/2021 - 12/7/2021 | | Hours  Total: |
| --- | --- | --- |
| Low Level Design | Editing |  |
| Logging | Editing |  |
| User Management | Editing |  |

| Sprint 7  1/20/2022 - 2/2/2022 | | Hours  Total: |
| --- | --- | --- |
| Software Environment Setup | IDE Configuration |  |
| Github Repository Configuration |  |
| Network Setup | Cloud Configuration |  |
| Web Server Configuration |  |
| Database Configuration |  |
| Database server configuration |  |

| Sprint 8  2/3/2022 - 2/16/2022 | | Hours  Total: |
| --- | --- | --- |
| User Interface | Research |  |
| Development |  |
| Error Handling |  |
| Testing |  |
| Logging |  |
| Account Management | Research |  |
| Development |  |
| Error handling |  |
| Testing |  |
| Logging |  |
| Input Validation |  |
| Security |  |

| Sprint 9  2/17/2022 - 3/2/2022 | | Hours  Total: |
| --- | --- | --- |
| Location Service | Research |  |
| Development |  |
| Survey Service | Research |  |
| Development |  |
| Error handling |  |
| Testing |  |

| Sprint 10  3/3/2022 - 3/16/2022 | | Hours  Total: |
| --- | --- | --- |
| Location Service | Development |  |
| Error Handling |  |
| Survey Service | Logging |  |
| Input Validation |  |
| Security |  |
| Search Service | Research |  |
| Development |  |
| Input validation |  |

| Sprint 11  3/17/2022 - 3/25/2022 | | Hours  Total: |
| --- | --- | --- |
| Location Service | Testing |  |
| Logging |  |
| Search Service | Error handling |  |
| Testing |  |
| Logging |  |

| Sprint 12  4/4/2022 - 4/13/2022 | | Hours  Total: |
| --- | --- | --- |
| Testing | Final System Tests |  |
| Final Users Tests |  |
| Final Code Checks |  |
| Rewards Service | Research |  |
| Development |  |
| Error handling |  |
| Notifications Service | Research |  |
| Development |  |
| Error handling |  |

| Sprint 13  4/14/2022 - 4/27/2022 | | Hours  Total: |
| --- | --- | --- |
| Testing | Final System Tests |  |
| Final Users Tests |  |
| Final Code Checks |  |
| Rewards Service | Logging |  |
| Testing |  |
| Notifications Service | Logging |  |
| Testing |  |

| Sprint 13  4/27/2022 - 5/4/2022 | | Hours  Total: |
| --- | --- | --- |
| Testing | Final System Tests |  |
| Final Users Tests |  |
| Final Code Checks |  |

1. Cost Estimation

| Personnel Cost | | | | |
| --- | --- | --- | --- | --- |
| Team Members | Title | Hourly | Days | Cost |
| Spencer Gravel | Project Manager\ Software Developer | 45$ | 180 | $24,300 |
| Brayan Fuentes | Software Developer | 42$ | 180 | $22,680 |
| Christian Lucatero | Software Developer | 42$ | 180 | $22,680 |
| Curtis Nishihira | Software Developer | 42$ | 180 | $22,680 |
| Miguel Zavala | Software Developer | 42$ | 180 | $22,680 |
| \*\*Hourly rates based on average salary for position and cost calculated assuming students are not full time\*\* | | | Total Cost: | $115,020 |

| Technology Cost | | | |
| --- | --- | --- | --- |
| Amount | Technology Type | Technology Name | Cost |
| 5 | Communication | Discord v10.0.19043 | 0$ |
| 5 | Documentation | Google Docs v1.21.382.02.30 | 0$ |
| 5 | Google Sheets  v1.21.402.01.35 | 0$ |
| 5 | Drawio  v15.3.8 | 0$ |
| 5 | Version Control | Github Desktop v2.9.3 | 0$ |
| 5 |  | Visual Studio 2019 - Community Edition v16.11 | 0$ |
| 5 | Project Management | Zenhub v2.0 | 0$ |
| 5 | SQL Server Management | SQL Server Express 2019 v15.0.2000.5 | 0$ |
| 5 | Web Server | IIS 10 | 0$ |
| 5 | Cloud Provider | Microsoft Azure | 0$ |
| 5 | Software Library | .NET Framework | 0$ |
| Total Cost: | | | 0$ |

1. Risk Estimation
   1. Scope Creep
      1. Changes to the project scope as a result of client change requests, technology limitations, or team limitation
      2. Migation strat: address changs viability and team capacity
   2. Team Availability
      1. Team restricted by outside commitments
      2. Mitigation strat: address capacity of team more in advance
   3. u