**Management Plan**

This section outlines the proposed schedule, budget, and personnel necessary to complete this proposal. The proposed schedule will last approximately thirty weeks and is split into five stages. The proposed budget totals $301,260. The team working on the project consists of four university students with adequate experience to complete the task.

**Schedule**

The project is divided into five different stages: requirement gathering, design, development, testing, and deployment. Each stage will be accounted for by a certain number of one-week sprints. In computer science, a sprint is a time management technique which distributes tasks to individuals in order to better organize the tasks. The total amount of time estimated for the entire project is around 30 weeks or 7 months. See Figure 1 for a visual representation of the general outline for the schedule.

**Stage 1: Requirement gathering.** The initial stage of the project will last 3 weeks and will consist of studying and researching current university applications. Doing so provides an opportunity for the team to discuss plans for the project before the team members break into smaller, specialized sub-projects.

**Stage 2.1: High level design.** The high-level design stage will last 2 weeks. This stage will provide an opportunity for each individual to transition from group research to individual research. This stage will end with a peer review process where each individual’s design plan is approved by the rest of the group.

**Stage 2.2: Low level design.** The low-level design of the project, lasting 2 weeks, will be more separate. During this stage, each individual will be working alone, with support from the rest of the group, to fine tune the details of their sub-project.

**Stage 3.1: Development.** The development stage will take the longest of all the stages. Lasting 12 to 15 weeks, this stage will consist of each individual working on their own sub-project, with peer reviews at the end of each week-long sprint.

**Stage 3.2: Integration.** The integration stage will last 2 weeks. This stage will take each of the developed sub-projects and fit them together like pieces of a puzzle. Each individual will continue working on their own sub-project, but this stage will have a larger, team-based focus.

**Stage 4: Testing.** The testing stage will last 4 weeks. This stage will be for the team to test the integration and development of each of the other individual’s sub-projects. When issues are found in the application, they will be reported using a ticket reporting system. Those tickets will be distributed to the individual in whose sub-project the issue was found.

**Stage 5: Deployment.** The final stage of the project will last 2 weeks and will focus on moving the working application to its servers. The final portion of this stage will consist of more testing to verify that everything is working as it should.

**Figure \_\_:** Timetable of each stage relating to how many weeks it will take from the start date

**Budget**

This section contains all of the proposed costs for the entire project. The costs fit into two different categories: labor and tools. The majority of the costs will come from development compensation for the software engineers. Each engineer will be paid $2,500 per week or $62.50 per hour. This rate is fixed and applies to each engineer. The tools section includes software development tools which will facilitate collaboration between the engineers. See Table \_\_ for a visual break-down of costs.

**Table \_\_:** Break-down of total costs for the application

|  |  |  |
| --- | --- | --- |
| **Stage** | **Amount (hours)** | **Total Cost ($)** |
| Stage 1 | 480 | 30,000 |
| Stage 2 | 640 | 40,000 |
| Stage 3 | 2,720 | 170,000 |
| Stage 4 | 640 | 40,000 |
| Stage 5 | 320 | 20,000 |
| Subtotal | 4,800 | $300,000 |
|  |  |  |
| **Item** | **Amount** | **Total Cost ($)** |
| Visual Studio Professional |  | 1,260 |
| Subtotal |  | $1,260 |
|  |  |  |
| **TOTAL** |  | **$301,260** |

**Personnel**

The team that is building this application consists of four capable Computer Science majors currently attending Utah State University. Each team member has acquired experience, both academic and professional, which will aid to better the college experience for students on campus. See the Appendix for the resumes of each of the members of the team.

**Jason Boyd.** Jason is currently a junior working on his B.S. in Computer Science at Utah State University. Jason has worked on a variety of personal projects from iOS development to a dynamic personal website that has pushed his understanding of the web. His experience and devotion to mobile and web application development will greatly benefit the quality and usability of the university application project.

**Ryan Egbert.** Ryan is a junior in the Computer Science department at Utah State University. He plans to graduate with his B.S. in Computer Science in December 2020. Ryan has two years of professional development experience. His current position is with Space Dynamics Laboratory, a research center affiliated with Utah State University, working on developing web applications.

**Carter McGee.** Carter is a Computer Science major attending Utah State University. He is currently in his third year of his undergraduate degree and plans to graduate in May 2021. Carter is interested in working with computer vision and machine learning techniques. He hopes to move back to his hometown in Albuquerque, New Mexico, to work for Sandia National Laboratories after he graduates.

**Benji Stewart.** Benji will graduate with a bachelor’s degree in Computer Science from Utah State University. He has gained experience working on and troubleshooting issues with both hardware and software systems at Space Dynamics Laboratory at Utah State University. His coursework also provides a foundation for development of program and application systems pertinent to this project.