

Rapid Prototyping Web App

Software Project Management Plan

Version: First Revision

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1. Introduction

1.1 Project Overview

- The object of this project is to develop a project management website that will allow a company to keep its customers informed on the status of their Rapid Prototyping project. The product will allow the customers to start a project, upload a file, and write a description about their project. Once it is uploaded, customers will be able to track the status of their project. Project status updates will be provided by the website administrator.

1.2 Project Deliverables

- Requirements
- SPMP
Use Cases
- HLA
- Class/ Component Diagram
- Interface Diagram

1.3 Evolution of the SPMP

- As the project proceeds, this document will be changed. When it is changed, the date and time will be recorded.

1.4 Reference Materials

- Python by the Python Software Foundation
- Django (maintained by the Python Software Foundation)
- Bootstrap (licensed by MIT)
- GitHub (GitHub, inc)
- PyCharm (JetBrains)

1.5 Definitions and Acronyms

- CSS – Cascading Style Sheet
- HTML – Hypertext Markup Language

2. Project Organization

2.1 Process Model

- The project will be developed using an Object-oriented programming language called Python. It will incorporate a Python-based framework called Django. The design and responsiveness of the website will be developed using Bootstrap, a CSS and JavaScript based framework. There will be one person working on the project. The documentation of the project will be uploaded and managed under GitHub, a version control service.

2.2 Organizational Structure

Name	Organization	Line of Authority
Professor Broadwater	Towson University	Professor (In Charge of Project)
Jacob Adelstein	Towson University	Student

2.3 Organizational Interface

Company	Liaison	Contact Information
Potomac Photonics	Sherry Ford	sford@potomac-laser.com

2.4 Project Responsibilities

Responsibilities	Assigned Person
Software Development	Jacob Adelstein
Software Maintenance	Jacob Adelstein
Documentation of software	Jacob Adelstein
Software Security	Jacob Adelstein
Project Overseer	Professor Broadwater

3. Managerial Process

3.1 Management Objectives and Priorities

- Philosophy: This project should be developed in an organized manner. The project should be well documented, and all code should be methodically commented.
- Goals: The goal of this project is to create a functional and reliable website to keep customers updated on their rapid prototyping project status.
- Priorities: The security and the functionality of the website is first and foremost most important.

- Third party software: All third-party software used must be approved by the project overseer and be useable for commercial purposes (if open source). If the software is not open source, then a commercial license must be obtained (if offered). If the third-party software in question is not meant to be used commercially, then it must not be used.

3.2 Assumptions, Dependencies, and Constraint

Assumptions:

- All changes will be documented in the official project documentation located in the GitHub.
- There will be clear communication with the client.
- Clean, organized, well documented code will be written.
- Budget limitations will be taken into consideration before making any changes.

Dependencies:

- Use cases, Requirements, and this document must be completed.
- Proper planning must be conducted before beginning the development of the project.
- The successful development of the project.

Constraints:

- The project must be finished and submitted by July 21, 2021.
- Commercial licensing will be used where needed.
- Deliverables will be submitted by July 21, 2021.

3.3 Risk Management

- Communication with Potomac Photonics, Inc is essential to minimizing risk.
- Reviewing and testing all code will be essential to minimizing security risk.
- Make sure all 3rd party implementations are available for commercial use and fit within proposed budget.

3.4 Monitoring and Controlling Mechanisms

- Throughout project development, meetings will take places to review the status and the progress being made. Reporting should be made via voice chat to Professor Broadwater when expected. The progress of the project will also be reported to Potomac Photonics, inc. This will occur at least once a week.

3.5 Staffing Plan

- Jacob Adelstein will be the only person working on this project. He will handle all aspects of the project.

4. Technical Process

4.1 Tools and Techniques

- The OS used to develop the webapp will be Mac OS Catalina and the hardware used to develop will be a MacBook Pro.
- The IDE used in the development of the software will be PyCharm.
- The version control used in development will be GitHub.
- Techniques Used: Version Control will be conducted daily.

4.2 Software Documentation

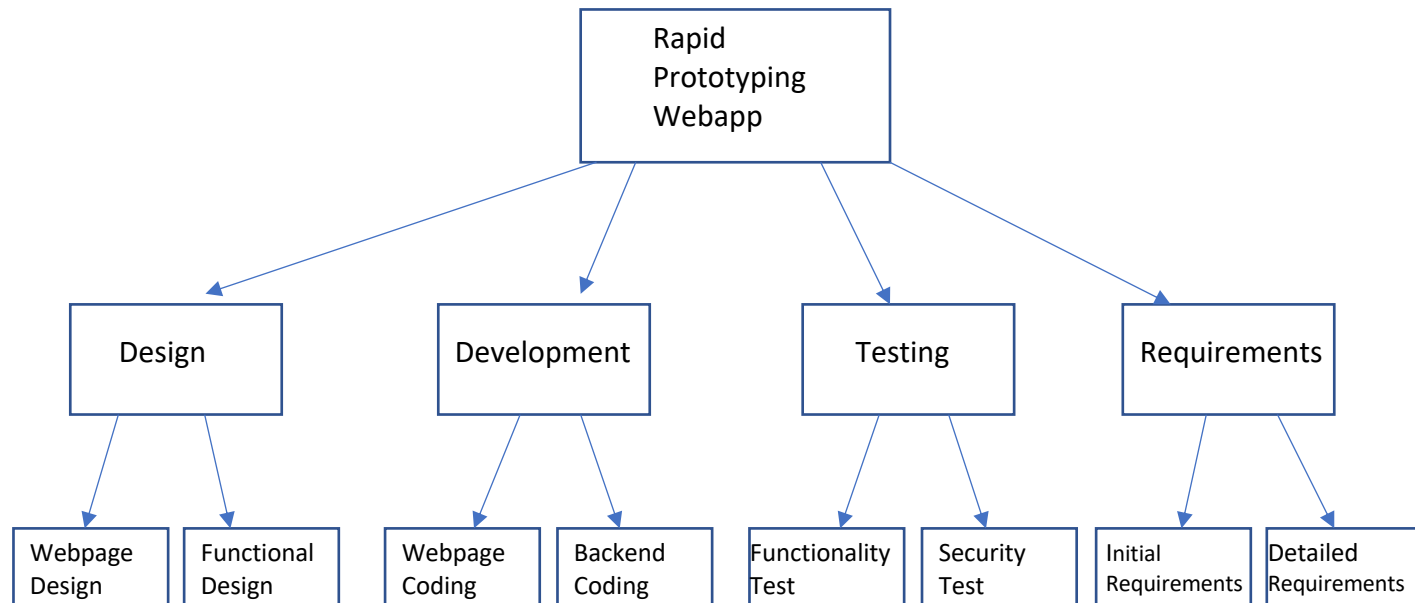
- GitHub will be utilized for the documentation of the project.

4.3 Project Support Functions

- Quality assurance checks will be taken frequently throughout the project. All checks will be recorded within the official project documentation. The official documentation will be in a .txt file in the project GitHub. Quality checks entail making sure all intended features work reliably and as intended.

5. Description of Work Packages

5.1 Work Breakdown Structures (WBS)



5.2 Gantt Chart

Independent Gantt Chart

