Bitwise & Otherwise Software Project Management Plan 6

1. Introduction

This document is the Software Project Management Plan (SPMP) for the development of

Bitwise & Otherwise's (B&O) Circuit Building Learning Application. The SPMP is based on the

OCD for the Circuit Building Learning Application. This plan provides information regarding

the project pertaining to the project organization, managerial process, technical process,

scheduling and budget. The SPMP is the controlling document for managing this project and will

be maintained and referenced in order to satisfy project requirements.

1.1 Product Overview

The Circuit Building application will be an inexpensive and easily accessible way to

introduce people interested in electronics to electrical circuits. The application will be designed

to work on multiple platforms, have game elements to keep users interested, and introduce

concepts fundamental to the building of electrical circuits. The application will also make use of

the SQL database to store user generated circuits in the cloud. This will allow for the creation of

a community built circuits.

The Objectives of the project are to

● Create an application that correctly simulates the operation of electrical components.

● Allow users to build circuits using a virtual breadboard.

● Allow users to save circuits to the cloud.

● Allow users to load circuits from the cloud.

● Introduce users to the basic concepts of electrical engineering.

The intended audience for this document consists of:

● The B&O development team.

● The customer (as listed above on the document).

● Any interested parties requesting to review this document.

● Those individuals responsible for updating the software.

1.2 Project Deliverables

B&O will deliver to the customer at the completion of the project all the following

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documents in electronic format:

● Operational Concept Description (OCD)

● Software Project Management Plan (SPMP)

● Software Requirements Specification (SRS)

● Software Design Description (SDD)

● Software Test Plan (STP)

● Software User Manual (SUM)

● Weekly Status Reports

● Prototype

B&O will also deliver a presentation to University faculty. The client is invited to attend

this presentation. The presentation will cover:

● Software Overview

● Software Design

● A demonstration of the delivered Prototype

1.3 Evolution of the SPMP

This section covers how the SPMP may be changed and revised to meet the future

requirements of the project. A list of personnel assigned to titled positions referenced in this

section can be seen in the Approvals Table located at the beginning of this document and in

Appendix A. If personnel get reassigned then the Approvals Table will be updated to reflect new

assignments. The Project Manager is responsible for ensuring that personnel are accurately

updated.

All members of B&O will have the responsibility of identifying possible revisions and

corrections to the SPMP. At any time during the development of the documents any member

may elevate the suggested change to the Project Manager for review. The Project Manager will

have the responsibility of reviewing the suggested changes before allowing the member make the

suggested changes to the master document.

**1. Introduction**

This document is the management plan for the development of Respiratory Diseases: Smoking vs. Air Pollution in the United States. The plan is based on sending, retrieving, and analysis of data. This plan provides information regarding the project pertaining to the product overview and technical process. We will use **D3** in the data visualization aspect, **leaflet** to show mapping, and **html** to create the webpage, **Python Flask** for the web framework, and **JavaScript** to show and store the information records.

**1.1 Product Overview**

The Respiratory Diseases: Smoking vs. Air Pollution in the United States project will be an inexpensive and easily accessible way to show the data of air pollution and data of smoking/lung cancer in the United States. The application will be designed to work on html. The application will also make use of the leaflet database to show areas that have the largest amount of air pollution. This will allow for the correlation to be created on whether or not areas with larger air pollution have a population with more lung cancer.

The Objectives of the project are to:

● Create a html website that has many layers and graphs to portray information and tell a story.

● Provide users an interactive means to explore data themselves and generate conclusions

● Use data from <https://data.cdc.gov/Smoking-Tobacco-Use/BRFSS-Prevalence-and-Trends-Data-Tobacco-Use-Four-/ya9m-pyut/data> to show how lung cancer and smoking are correlated in the United States.

● Use data from <https://aqicn.org/api/> to show the air pollution

● Use **Python Flask**, **leaflet, HTML/CSS**, and **JavaScript**

● Demo the website

● Create a PowerPoint summarizing the steps and project.

**1.2 Project Deliverables**

Respiratory Associated Diseases: Smoking vs. Air Pollution in the United States will deliver to the end-user at the completion of the project all the following aspects in electronic format:

● Integrated drop down menu showing: Pollution Rate, Smoking Data, Respiratory Associated Diseases, Altogether

● Website

Project/Presentation Roles:

Wilson/Krithika- Leaflet/Heatmap, Plotly

Raphael- Web Framework

Wissemeddine- Data Wrangling

Rishi- JavaScript/MongoDB