Software Quality Assurance Plan

for Visual JSON Editor

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Signed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Austin Slaughter

Revision History

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| --- | --- | --- | --- |
| Date | Update(s) | Version | Author |
| 2024-10-04 | * Initial draft * Title page * Revision page * Table of Contents * Stubs | v0.1.0 | Austin Slaughter |
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# 1 – Purpose and Scope

## 1.1 – Scope

This Software Quality Assurance Plan (SQAP) applies to the Visual JSON Editor extension (the project) for Microsoft’s Visual Studio Code software (VS Code), which is in development by Austin Slaughter as the Senior Project of his Computer Science education at Brigham Young University-Idaho (BYU-Idaho). A Senior Project Proposal, serving as the project’s current Concept of Operations (CONOPS) and written contract, can be found as “Proposal.docx” in the Project Documents section of the CM Library this SQAP belongs to (see [section 3](#_3_–_Reference)).

This SQAP applies to all phases of the software lifecycle. Due to the 14-week timespan the project is to be developed under, its lifecycle involves simultaneous development and requirements definition. However, following the delivery of the project to BYU-Idaho at the end of those 14 weeks, Austin plans to continue its development as a personal project.

## 1.2 – Purpose

The purpose of this SQAP is to establish a set of policies and procedures Austin can use to ensure that Visual JSON Editor meets the functional and non-functional requirements defined for it and adheres to the quality standards expected for a VS Code extension.

# 2 – Definitions and Acronyms

**JSON:** JavaScript Object Notation – a text-based data storage format designed to be easily read and written by humans and software alike (<https://json.org>, ECMA-404).

**TypeScript:** Programming language that VS Code and Visual JSON Editor are primarily written in; a superset of the JavaScript language (<https://www.typescriptlang.org/>).

**Visual Studio Code (VS Code):** A Microsoft-developed software application that provides a text editor and other features to assist in software development (<https://code.visualstudio.com/docs>).

* **VS Code extension:** A plug-in for VS Code that enhances, modifies, and/or adds to its functionality (<https://code.visualstudio.com/api>).

# 3 – Reference Documents

* **Contract:** The contract between Austin Slaughter and the CSEE Department is implied by his enrollment in the Senior Project course (code CSE 499). The Senior Project Proposal most closely resembles a written contract.
* **Senior Project Proposal:** <https://github.com/slaugaus/2024-Fall-CSE474-CMLib-austin.slaughter/blob/module-01/Project%20Library/Project%20Documents/Proposal.docx>

# 4 – SQA Plan Overview

## 4.1 – Organization and Independence

## 4.2 – Software Product Risk

## 4.3 – Tools

## 4.4 – Standards, Practices, and Conventions

## 4.5 – Effort, Resources, and Schedule

# 5 – Activities, Outcomes, and Tasks

## 5.1 – Product Assurance

### 5.1.1 – Evaluate Plans for Conformance

### 5.1.2 – Evaluate Product for Conformance

### 5.1.3 – Evaluate Product for Acceptability

### 5.1.4 – Evaluate Product Life Cycle Support for Conformance

### 5.1.5 – Measure Products

## 5.2 – Process Assurance

### 5.2.1 – Evaluate Life Cycle Processes for Conformance

### 5.2.2 – Evaluate Environments for Conformance

### 5.2.3 – Evaluate Subcontractor Processes for Conformance

### 5.2.4 – Measure Processes

### 5.2.5 – Assess Staff Skill and Knowledge

# 6 – Additional Considerations

## 6.1 – Contract Review

## 6.2 – Quality Measurement

## 6.3 – Waivers and Deviations

## 6.4 – Task Repetition

## 6.5 – Risks to Performing SQA

## 6.6 – Communications Strategy

## 6.7 – Non-Conformance Process

# 7 – SQA Records

## 7.1 – Analyze, Identify, Collect, File, Maintain and Dispose

## 7.2 – Availability of Records