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Online Research Optimizer

[Extension for Google Chrome Browser to manage collected web information]

Quality Assurance Plan

Version 1.0

Revision History

Date	Version	Description	Author
8/11/2013	1.0	Initial Quality Assurance Plan	Bandara H.M.V.N.

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Quality Assurance Plan

1. Introduction

1.1 Purpose

The purpose of the Quality Assurance Document is to introduce the Quality Assurance Plan for Online Research Optimizer (Extension for Google Chrome). The quality assurance plan will make sure that the final product meets the standards of the Google Chrome and the users as well as It will make sure that further enhancements and maintenances will be easy to carry out.

1.2 Scope

This document will focus on the quality assurance plan of above Online Research optimizer project. It will focus on coding quality and testing of the code and the usability of the extension.

1.3 Definitions, Acronyms, and Abbreviations

1. RUP-Rational Unified Process

2. VP-Visual Paradigm

3. ORO - Online Research Optimizer

4. GC - Google Chrome

1.4 References

- Online Research Optimizer -Project Development case
- Online Research Optimizer -Project Requirement Specification
- Online Research Optimizer -Project Schedule

[0] https://developers.google.com/chrome/

[1] https://plus.google.com/+GoogleChromeDevelopers/about

[2] https://developer.chrome.com/extensions/api_index.html

[3] http://qunitjs.com/

[4] http://validator.w3.org/

[5] http://jigsaw.w3.org/css-validator/

[6] http://developer.chrome.com/extensions/devguide.html

1.5 Overview

The document will cover quality objectives, their management and documentation, other standard guidelines, and evaluation and testing mechanisms that will be used to measure the quality of the product. In addition the document explains what coding standards are met by the product and how quality management will be applied in unit testing, user training and other deployment activities.

2. Quality Objectives

There are several Quality objectives for the project

- Software code quality (for maintainability and extendibility)
- Software functional quality (for proper functional behavior)
- Software usability

Meeting quality requirements will make sure the final product will be an optimized and maintainable product. Also they will guarantee the product can be reused in future with ease.

3. Management

3.1 Organization

Since there is only one member , which is myself ,the whole process will be carry out by me. There are several aspects to cover iteratively and more often.

- Project management (should be done by project manager)
- Development (carry out the implementation of the project)
- QA (testing and maintain the overall quality of the project)

3.2 Tasks and Responsibilities

Following activities are planned to be carried out to assure high quality final product.

- **Project review and audit**
  This reviewing and auditing will be carry out more often to make sure the project is developing according to the software specifications and according to the quality and organizational standards.
- **Software testing**
  To maintain the correctness and to develop a bug free project this is very important. this will be done using several testing tools and standard procedures.
- **Acceptance testing**
  This will be fully carry out at the final stage. But several acceptance test per iteration will also take place to make sure the project quality.

4. Documentation

- **Software Requirement Specification**
  This include description about the requirement, both functional and non-functional , specifications of the project.
- **User Documentation**
  A proper user guide will be provided for the users.
- **Test Plan**
  this will help to carry out the testing according to a standard manner.

5. Standards and Guidelines

- Documentation – RUP standards and best practices

- Coding and Google code guidelines[6] also followed.

6. Metrics

- Code of the project
- Components of the Project
- Reports of the project

7. Review and Audit Plan

The auditing and reviewing planned to enhance the quality of the product.

- **Requirement Review**
  The project requirements will be reviewed and analyzed after the requirement gathering. And the requirements will be change according to the feasibility and the time limits of this project.
- **Architectural Review**
  The system architecture will be reviewed more often and the sub system and components will be change and may include new components as well.
- **Overall project audits and reviews**
  The project will be audited by myself and the mentors. A weekly report will be submitted to the mentors of this project.

8. Evaluation and Test

Testing will be done in several phases and in iteration wise.

- Functional testing
- Code quality testing
- Structural testing
- usability testing
- Mid evaluation
- Iteration wise evaluation

9. Tools, Techniques, and Methodologies

For testing and debugging :

- Google Chrome element inspections tools.
- JavaScript testing tools.[3]
- CSS validation [5] and HTML validation [4] tools.
- Notepad ++

Techniques :

- User testing can be done real time browser testing. Manual user testing will be done after each iteration.
- Code functionality and the correctness will be done by Black-Box testing. (input output equality testing will be carry out)

10. Training

- Proper training on how to use the testing tools.
- Need to be aware of standards of testing and coding methods.

11. Risk Management

The risks associated with the project will be noted and handled in each iteration.