Test Plan for Simple Email Client

Group 7

CSE 6214, Fall 2021

Ronald Unz, Katie Phillips, Sean Douglas

ChangeLog

Version	Change Date	By	Description
0.0.2	10/18/21	Sean Douglas	Initial draft

1 Introduction

The Test Plan is developed to describe the testing process of the Group 7 Simple Email Client project. This Plan identifies what items and features will be tested, what kinds of tests will be performed, who is responsible for the testing, what resources and schedule are needed for testing, and any risks associated with this Plan.

1.1 Scope

1.1.1 In-Scope

The functional features to be tested are: User Login, Inbox, Email Editor, Reply and Forward, User Logout. The non-functional features to be tested include those addressing performance, safety, and security requirements, as well as software quality attributes.

1.1.2 Out-of-Scope

The features not to be tested are: hardware and software interfaces; database logical; and communications interfaces.

1.2 Quality Objective

The overall objective of this testing is to confirm the functionality of the Group Simple Email Client, which should focus mainly on the functional features of the application, to ensure that they can operate in a production environment. This will be accomplished by verifying the Application Under Testing (AUT) conforms to functional and non-functional requirements; verifying the AUT meets the quality specifications defined by the client; and that bugs/issues are identified and fixed before go-live.

1.3 Roles and Responsibilities

The roles in the testing are:

- Testing/Configuration Manager (TCM) - manage the project, define project direction, secure resources, builds/ensures test environment, manages and maintains resources
- Developer/Installer/QA Analyst (DIQA)- Implement test cases, programs, etc.; handle quality assurance and verify that testing is meeting specifications.

Name	Net ID	GitHub username	Role
Ronald Unz	rju3	ronunz	Testing/Configuration Manager
Katie Phillips	klb528	klb528	Developer/Installer/QA Analyst
Sean Douglas	sgd122	sgdouglas	Developer/Installer/QA Analyst

2 Test Methodology

2.1 Overview

The members of this group followed the agile testing methodology. This allows for more rapid implementation of small features and improvements. Rapid implementation of new features also allows for rapid testing of these new components which reduces risk.

2.2 Test Levels

Three levels of testing will be performed:

- Integration testing - individual classes will be grouped and tested as those groups.
- System testing - the complete AUT will be reviewed for system compliance with SRS.
- API testing - all APIs created for the application will be tested.

2.3 Bug Triage

Each bug encountered will be reported to the TCM for assignment to DIQA, who will provide resolution. TCM will prioritize bugs and schedule all “To-be-fixed” bugs for resolution by the end of the appropriate scrum.

2.4 Suspension Criteria and Resumption Requirements

If the testing team reports that 40% of test cases fail, TCM will suspend testing until the development team fixes all failed cases.

2.5 Test Completeness

The benchmark for successful test completion will be 100% run rate/test coverage (less if acceptable reason is known), 100% of manual/automated test cases executed, and all open bugs fixed (or to be fixed for next release).

3 Test Deliverables

The test deliverables will be delivered throughout the various phases of the testing lifecycle:

- Pre-testing:
  - Test plan/strategy
  - Test cases
  - Test design specification/metrics

- During testing:
  - Test tool simulators
  - Test data
  - Traceability matrix (with error and execution logs)

- Post-testing:
  - Test results
  - Defect/bug report
  - Installation/test procedure guidelines
  - Release notes
  - Customer sign-off

4 Resource & Environment Needs

4.1 Testing Tools

The following tools will be required to implement this Test Plan:

- Web server
- Client workstations
- TCP/IP and Internet connections
- Requirements tracking tool
- Bug tracking tool
- Automation tools

4.2 Test Environment

It mentions the minimum **hardware** requirements that will be used to test the Application.

The following software is required in addition to client-specific software.

- Windows 10 and above for clients.
- Most recent version of PHP 8 runtime environment with IMAP extensions enabled and outbound email capabilities for web server.

5 Terms/Acronyms

TERM/ACRONYM	DEFINITION
API	Application Program Interface
AUT	Application Under Test
DIQA	Developer/Installer/QA Analyst
IMAP	Internet Message Access Protocol
PHP	PHP Hypertext Preprocessor
QA	Quality Assurance
SRS	Software Requirement Specification
TCM	Testing/Configuration Manager
TCP/IP	Transmission Control Protocol/Internet Protocol