## Software Development Test Plan

### Introduction

This Test Plan has been designed to ensure that the software meets the specified business requirements as well as the customers’ demands and expectations.

#### Scope

The scope of the testing undertaken will focus on ensuring that the project conforms to CITE published business rules and meets quality assurance standards.

At each stage of the project the delivered features will be checked against the client’s requirements to ensure that all requirements have been met.

All code developed will be checked to confirm that it complies with CITE published standards for code development.

The database of movie data will be accepted “as is” and will not be subject to any verification. While due consideration will be given to the efficiency of the application the specific performance on ACME systems will not be evaluated.

#### Quality Objective

The objective of the test plan is to ensure that the delivered application meets all the specified requirements and performs robustly.

There are two main objectives for the testing plan:

1. Compliance to specifications
   1. Compliance with CITE standards
   2. Compliance with client requirements
2. Correct functioning of the code base
   1. Does the code perform the required operation?
   2. Does the code run robustly?

#### Roles and Responsibilities

Because the application will be developed by a small team responsibility will be rotated across the members. The team member with the most relevant expertise will be allocated to each task. The other team members will be responsible for peer reviewing the product. It is expected that all team members will have significant input into the project.

### Test Methodology

#### Overview

The approach taken to development will be Rapid Application Development (RAD) using the Agile methodology. CITE have extensive experience with RAD and Agile having used them extensively over many years. CITEs approach has been demonstrated to develop high quality software faster, leading to improved business agility and a greater capacity to handle the pressures of competition.

#### Test Levels

Testing will be undertaken on two levels. There will be an ongoing process of verification to ensure that the product development complies both with CITE standards and the requirements of the customer.

* Code reviews will be undertaken on a regular basis to check on standards compliance.
* Comparisons will be made against the client’s requirements to ensure that all requirements are met.

The second level of testing will be the validation of each deliverable. This level focuses on testing that the application functions correctly.

* Does the code produce the correct output?
* Does the code function as required?

#### Bug Triage

When detected bugs and non-conforming code will be classified according to their impact on the project. Bugs that stop the execution of the code base or result in incorrect results will be accorded the highest priority. Other issues will be scheduled and addresses as appropriate.

#### Test Completeness

Testing will be considered complete when it can be demonstrated

* Testing has been completed for each functional requirement
* Testing has been completed for each non-functional requirement
* Identified issues have either been addressed of scheduled for action
* Testing documentation has been completed

### Test Deliverables

At the end of each RAD sprint the following reports will be created:

* completed testing tables
* code verification report

list of any outstanding issues.

### Resource and Environment Needs

During testing the database will be hosted using MySQL.

Apache will be used as the web server.

All reporting and development to be undertaken using standard Microsoft tools.

The PHP Code Sniffer tool will be used to validate all PHP scripts against the PEAR standard.

### Sprint Two Update

Following the same methodology of Sprint One’s Test plan, Sprint two testing will undergo the same amount of scrutiny. Testing will be performed on both new interfaces created;

* the Sign-Up page for new users to subscribe to free communications or unsubscribe if they are already subscribed
* the administrator portal with password access for an administrator user to unsubscribe users when requests are made by email
* the three associated PHP scripts which run these two interfaces

Testing will be completed on the two new interfaces separately and recorded in different documents as follows:

#### Please Refer To

The following table summarizes the documents referenced in this document.

|  |  |  |
| --- | --- | --- |
| **Document Name and Version** | **Description** | **Location** |
| *sprint02.user.subscribe.phpmail.design.testing.docx*  *Version 1* | *Testing and results for the Sign-Up page for new users to subscribe and the two associated scripts* | *Within the same folder this document is located.* |
| *sprint02.unsub.design.testing.docx* | *Testing and results for the administrator interface and the associated script* | *Within the same folder this document is located.* |

All of the new sprint’s web pages, interfaces and scripts have also been validated using PHP Code Sniffer against the PEAR standards.

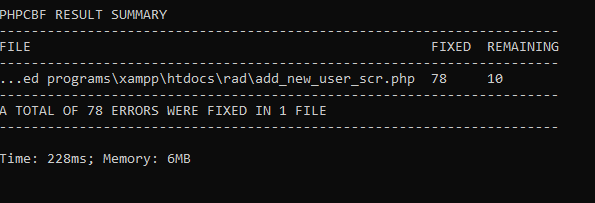


Figure 1: Example of validation for Sprint 2.

### Sprint Three Update

The testing for sprint three will follow the same standards as the previous sprints. The new requirements will have a test table to display results of all possible inputs. These results will be found in the Sprint Three Test report.

* The rating system will need to be checked to ensure the users rating correctly adds data the database.
* The chart must display the top ten movies with a correct average historic rating
* The chart must automatically refresh to display any change in data
* The website should function while logged in with an admin user and password
* Pages and functions will be tested for performance

In addition to the test table, the performance of the pages will be tested for the Optimization Report. This will analyse how quickly the page loads with a score out of 100. Also, the functions will be tested such as a search query from the movie database to record the time of execution.

|  |  |  |
| --- | --- | --- |
| **Document Name** | **Description** | **Location** |
| *Sprint03TestTable.docx* | *A series of tests carried out in a table relating the rating system.* | *Within the same folder this document is located.* |
| *Sprint03AdminLoginandUserGroups.docx* | *Some evidence and description relating to the admin and other user password access and user groups* | *Within the same folder this document is located.* |
| *Sprint03OptimizationReport.docx* | *The optimization report which carries out tests relating to loading speeds* | *Within the same folder this document is located.* |