# Software Requirements Specification

## Introduction

This document is intended for the use of the development team, CITE managed services and ACME Entertainment Pty Ltd (the client) during the development process of the Movie Database project. It will be used to plan the iterative development process of the software product in three steps (sprints), and will include information pertaining to the functionality, scope, quality assurance, scheduling and deliverable goals for the project

## Overview

The client has approached CITE Managed services to develop a Movie Database with a range of functionality requirements. These requirements will develop over the course of sequential sprints and this document will be updated in accordance with additional requirements. CITE Managed Services have contracted an external development team (BKL Development) to engage the client and develop a robust product within a 5-week timeframe.

## Client

ACME Entertainment are a fictional company created for the purposes of delivering this assignment to the development team.

## Requirements

### Sprint One

* Movie database complete with GUI front end for enhanced user experience
* Database hosted on suitable cloud based or local server
* Application must be multi-platform

### Sprint Two

* Software Review Plan discussion with CITE representative.
* Performance Report (Research and determine the most appropriate code optimisers and performance tools).
* A membership page which can capture and validate a user’s Full name, Email Address which is then added to as a record to a membership database.
* An administrator page which an email address can be entered into for removal and has an option to view all members.

### Sprint Three

* Administration Login credentials added to database
* Top 10 movies web page function added to the site. Must update automatically to reflect new search data
* Implement code optimisation on appropriate code and document the process
* Write an Optimisation report detailing the changes made during the optimisation process

### Handover

* Source Control snapshot
* Software Review Report
* Updated Project Management Plan for Handover
* Updated Software Testing Plan which reflects the final handover stage
* The finished movie database application which uses WCAG

For a detailed breakdown of all requirements related to this project, see the Analysis Report contained within the Software Development Master Document

## Platform

This application will launch as a web browser-based application, with a MySQL backend for database management

## Goals and Scope

* Users should be able to search for movies based upon independent and multiple criteria.
* Users should be able to sign up for a Monthly newsletter.
* Users should be able to sign up with their email to a newsflash notification.
* Application must adhere to CITE Managed Services Quality Assurance standards.
* Application must be usable on a range of devices (PC, Tablet and Mobile)
* Application must have auto refreshing top 10 movies feature.
* Administration login credentials for security purposes.
* The finished movie database application which uses WCAG.

## End of Sprint Deliverables

### Sprint One

* Source Control Snapshot
* Project Management Plan
* Software Development Testing Plan
* Analysis Report (see analysis report in Software Development Master Document)
* Multi-Platform Report (see Multi-Platform report in Software Development Master Document)
* Front End Source Code
* Back End Source Code
* Database Source Code

### Sprint Two

* Source Control snapshot.
* Software Review Plan.
* Performance Report.
* Updated Project Management Plan for Sprint Two.
* Updated Software Testing Plan which reflects the sprint two development.
* Demonstrate the movie database application which uses the membership portal and administrative functions.

### Sprint Three

* Source Control snapshot.
* Optimisation Report.
* Updated Project Management Plan for Sprint Three.
* Updated Software Testing Plan which reflects the sprint three development
* Optimised code for performance
* Demonstration of the movie database with newly added top 10 feature

### Handover

* Source Control snapshot
* Software Review Report
* Updated Project Management Plan for Handover
* Updated Software Testing Plan which reflects the final handover stage
* The finished movie database application which uses WCAG

## Risk Management

### Associated Risks

* Changing Requirements due to functionality updates at the beginning of each sprint
* Deadline requirements not being met
* Code Injection based security vulnerabilities
* Database hosting issues

### Risk Mitigation

* Requirements will be logged and managed at the beginning of each sprint, the changing requirements will be documented in the Software Requirements Specification (SRS) document at the beginning of each sprint.
* Weekly meetings will be held by the team, and minutes will be collected and distributed to the team to ensure that all team members are kept on task to meet deadline requirements.
* CITE Managed Services QA procedures will be adhered to throughout the development process to mitigate any potential security risks.
* Database hosting will be determined early and will remain static throughout the development process.

## Scheduling and Deadline Management

Project related tasks will be divided and distributed amongst team members appropriately by role determined at the first meeting of each sprint. These tasks will be logged and measured by the Project Management Plan document (Agile Project Plan) for each successive sprint. This document can be found accompanying the Software Development Master Document available on BKL Developments GitHub repository.

## Technical Process

Luke Gough (BKL Development team member) has provided the base for the project of sprint one. This base application contains all architecture and source code necessary to implement further requirements requested from the client and CITE managed services and is of a high-quality standard.

### Front-end Development:

* HTML5
* CSS
* Bootstrap

These languages were chosen for front end development for their relative ease of use and broad user functionality. This enables end users to access the database complete with all search functionality from their chosen browser. Bootstrap has been utilised to manage the responsive design aspects (see Multi-Platform report) of the application

### Back-end Development

* MySQL
* PHP
* XAMPP

XAMPP was chosen as the backend hosting service due to its ease of setup and easy to manage GUI, it also integrates MySQL database management into its feature set allowing the development team to more effectively manage their resources. PHP was chosen as the back-end intermediary to pass information and queries to the MySQL database because of its synchronicity with HTML5 and SQL, and its broad range of open source plugins available for use as the requirements of the project change and grow.

## Quality Assurance

The development team will be utilising CITE Managed Services QA practices and coding standards to ensure that the deliverable product is of an acceptable quality at handover.

In accordance with CITE Managed Services QA practices, BKL Development will be following the “Comprehensive Approach to Quality” outlined by CITE

### Initiation and Planning

The development team will compile and produce comprehensive documentation concerning management of the development process, all design specifications and testing plans and procedures.

### Review

Ongoing testing in accordance with testing documentation (see Software Development Testing Plan) will be performed and completed with performance evaluation to be provided at the delivery of each sprint prototype.

### Iteration Audits

Each iteration prototype will be tested appropriately against a wide range of benchmarks (see Software Development Testing Plan)

### Final Verification and Validation

The development team will utilise all testing methods necessary to ensure that the product meets all QA standards required by CITE Managed Services. (See Analysis Report in the Software Development Master Document for more information)