# Analysis Report

## Introduction

This document is to be used in conjunction with the Software Requirements Specification (SRS) document and the Software Development Master (SDM) document for the purposes of developing the Movie Database application tendered by CITE Managed Services at the request of ACME Entertainment Pty Ltd. This document serves to outline the operational aspect of application development under CITE Managed Services and provide a specification outline for the Movie Database application. This Report will be made available for all parties involved in the development of the Movie Database Application and may be updated with requested features and functionality as development progresses.

## CITE Managed Services Software Development Rules and Procedures

CITE Managed Services have provided BKL Development with development rules, guidelines and procedures to be followed during all steps of the development life-cycle. This is to ensure that the design process is adequately documented throughout each phase of development and that the delivered product meets a high-quality standard.

### Methodology

Agile based Software Development Life Cycle methodology will be implemented throughout development of this project. Due to the small scale of the application, and the need for iterative prototypes for the client (ACME Entertainment) BKL Development have determined that the Rapid Application Development (RAD) methodology will be the most suitable for this project.

RAD methodology belongs to the AGILE methodology framework and adheres to the requirements of CITE Managed Services

### Intellectual Property and Security

CITE Managed Services utilise several intellectual property protection policies to ensure client business security across all aspects of development. These are as follows:

* Non-Disclosure of Information – BKL Development and all team members contracted to work on the development of the Movie Database have signed a non-disclosure agreement to ensure that no sensitive information is distributed beyond the scope and requirements of the project. A confidentiality agreement has also been distributed and signed to all employees and contractors associated with this project, and acknowledgement receipts of compliance have been returned to CITE Managed Services.
* Distributed Environment – All source code and document information have been distributed across multiple machines and cloud-based environments to ensure that information will always be available to all parties and mitigate the risk of catastrophic data loss.
* Title Transfer – Contractual obligations to assign all intellectual property to CITE Managed Services immediately on creation pertaining to the Movie Database project were created on acceptance of the tender contract by BKL Development.
* Data Destruction – Data will be subjected to CITE Managed Services data destruction process on handover of the project. All disks and permissions to cloud based data management will be turned over to CITE Managed Services and all hardware will be wiped by authorised individuals employed by CITE Managed Services before being returned to BKL Development. If data wipe is impossible or unfeasible, the disks will be kept or destroyed by CITE Managed Services
* Physical Security
  + Access Cards
  + Role-based Access
  + CCTV
  + Fire Protection
  + Alternative Power Sources

### Coding Standards

CITE Managed Services employs a strict set of coding standards designed to ensure readability and consistency throughout all coding development of the Movie Database project. These coding standards are as follow and can be referred to in the ISO/IEC/IEEE 12207:2017 standard documentation:

* Naming Conventions
* File Naming and Organisation
* Formatting and Indentation
* Comments and Documentation
* Classes, Functions and Interfaces
* Pointer and Reference Usage
* Testing

## CITE Managed Services Quality Assurance

BKL Development will require to the Quality Assurance Practices and Procedures in accordance with the contractual obligations committed in the Tender Acceptance Document. These policies will be outlined in this document and used as a reference by BKL Development and ACME Entertainment Pty Ltd during development of this project.

### Quality Management

CITE Management Services have implemented a robust Quality Management System (QMS) designed with software engineering and software management practices in mind to deliver high quality products that have been rigorously tested. The objectives of this QMS are as follows:

* Industry standard guidelines and practices to implement regulations and policies for the software development process
* Monitoring during project development to ensure compliance with policies and guidelines
* Verification and Validation practices to ensure compliance with client specifications and requirements
* Team member collaboration and teamwork management practices

The following policies are used to ensure the QMS is met throughout all phases of development

* Quality Planning – Planning and documentation that follow industry accepted standards, regulations, procedures, guidelines and tools to be implemented during the project life cycle
* Quality Assurance – Evaluation processes will be used to ensure that all the product complies with client requirements
* Quality Control – Performance measurement practices are employed to identify faults and bugs during construction and build phases to ensure that all iterations are of a satisfactory standard upon demonstration

### Quality Assurance Practices During Development

The following practices will be implemented by BKL Development to ensure that all deliverables meet CITE Managed Services QA policies and guidelines

* Initiation and Planning – The Movie Database application will be provided with all accompanying documentation that meet industry acceptable standards
* First Review – All deliverables will be tested accordingly to the Software Development Testing Plan
* Iteration Audits – Tests will be performed on Iterative builds to ensure that all requirements are met without fault when demonstrated at the end of each sprint
* Verification and Validation – Verification testing practices will be implemented throughout each sprint to ensure a high-quality product is delivered. Validation testing practices will ensure that the product comprehensively complies with all end user and client requirements.

### Testing

The following tests may be used to meet these standards:

* Functional and Regression Testing
* GUI and Usability Testing
* Accessibility Testing
* Compatibility Testing
* Performance Testing
* Installation / Configuration Testing
* System / Integration Testing
* Security Testing
* Internationalisation / Localisation Testing
* User Acceptance Testing

## ACME Entertainment Development Requirements

This section of the report will discuss the buildable aspects of the Movie Database based upon requested specifications made by ACME Entertainment Pty Ltd.

### Functional Requirements

* User accessible database
* Multi-faceted search functionality
* Navigation Functions
* Member Sign up functionality
* Member removal functionality
* Administrator security credentials
* Top 10 movies feature

### Non-Functional Requirements

* GUI user interface
* Application must compatible with at least three differently sized devices
* Search bars and navigation tools to be appropriately labelled for ease of use
* Uniform design aesthetic

### Scale

The relatively low requirements of the project and widely available open source code solutions minimise the amount of coding work necessary to achieve the goals of this product. This is a small-scale application, however as requirements grow with each iteration, this is subject to change