# Analysis Report(S1)

## Introduction:

The purpose of this document is to analyze and outline the business rules and QA practices of our development house (CITE managed services) as well as the development requirements outlined by our client.

## CITE business rules for software development:

These are the rules of our development house that we must adhere to throughout development.

For a more in depth version of these rules the company website is located at this url: https://www.citems.com.au/

But at a most basic level we adhere to these core tenants:

• We always put the client’s needs and interests first and ensure that everything meets our client’s standards and requirements.

• We always allow for ourselves be held accountable for anything we make’s successful operation.

• We see our staff and reputation as our best assets and operate in an ethical manner in any situation to maintain them.

• We aim for professionalism and the highest possible quality in everything we do to ensure all our work is of the highest possible standard.

• We are always open to innovation when it comes to making the best possible product for our client.

• We ensure that our development teams work together as a group to ensure that our client’s needs are met.

We believe that if we adhere to these tenants and adhere to or primary coding standards that are followed company-wide that we will always work to create the best possible products for our clients’ needs and interests.

As an aside while our coding standards are different for each coding language we use all are projects are designed to adhere to the ISO/IEC/IEEE 12207:2017 Systems and software engineering — Software life cycle processes software standard.

## CITE Managed Services Quality Assurance:

This is the outline we must follow when performing testing and quality assurance.

While the full details of CITE’s quality assurance practices can be found at:

https://www.citems.com.au/services/application-development/quality-management/?fbclid=IwAR1yYGMEAfMhdPAQyn3YjIVx9xm99XPEEyWZPT9CLpHRFQfyydZbFa1nyPw

It can be summarized into a few key points:

### Full-cycle QA Testing.

This is performing tests for the sake of quality assurance and fault prevention each development sprint and/or major code change to ensure that the resulting program is always operating at its best.

### Document and Code Reviews

Our documents and code are checked by those not doing the core development to ensure that they are up to quality standards from a separate person’s perspective

### Defect Tracking

This is the process of keeping track of all known flaws and defects in the program/product and ensuring they are all given attention where needed and not allowed to just sit there.

### Configuration Management

This is the process of handling changes in a manner that both allows for rollback and tracking and helps allow for development to go smoothly by keeping track of each version of the program to what works

### Process Monitoring

This is the act of keeping track of each process the program in performing to ensure that everything operates and flows as intended.

### Risk Management

This is analyzing data and software risks and assessing their risk level through a mix of likelihood and impact and implementing prevention methods in order of importance.

## Acme Entertainment Pty Ltd development requirements:

These are the requirements from the client that we must meet in development and for this sprint are as follows:

### Create a working prototype of a movie database and webpage frontend.

This webpage must allow for searching of the movie database using a variety of different parameters and have the ability to display the 10 most searched movies in the database.

### Create a multi-platform report to determine if we should use an adaptive or responsive approach for multi-platform support.

This report must include the merits of each approach as well as the chosen approach and reasons for the decision.

### Implement the chosen approach into the prototype.

Once the chosen approach is implemented testing should be performed to ensure that it is working as intended.

### Team Meeting

#### Meeting Minutes

27/05/2021

Present: Blake Topham, Erol Anil, Nathan Tai

Next meeting: 03/06/2021, 9:00AM, Murdoch Campus

**1. Team Role Assignment**

**EROL: Source Control Snapshot**

• Create GitHub, fork to rest of team

• Create Trello account, link with team

• Add tasks to Trello board

• Create documentation with screenshots/evidence of both, add to master document

**EROL: Project Management Plan**

• GANTT Chart for SPRINT ONE (week six)

o Coding

o Documentation

• Include deadlines and milestones

• Include who does what task and by when

• Create Master Document based on agreed template

**BLAKE: Analysis Report**

• CITE business rules for software development

• CITE Managed Services Quality Assurance

• Acme Entertainment Pty Ltd development requirements

**BLAKE: Multi-Platform Report**

• Adaptive vs Responsive

**NATHAN: Software Development Testing Plan**

• Incorporates the QA standards of CITE (from analysis report?)

• What will be tested and at what stages

• Testing types, methods

**EROL: Demonstrate the Movie Database Application**

• Read and understand all documentation

• Read and understand all code

• Demonstrate application on three different sized digital devices

### Client Meeting 1

#### Meeting Minutes

27/05/2021

Present: Client, Blake Topham, Erol Anil, Nathan Tai

Next meeting: 03/06/2021, 9:30AM, Murdoch Campus

**1. Project Requirements**

* Project requirements discussed and documented.
* Project planning commenced.
* Prototype requested.
* Requirements noted and agreed.

**2. Quality Assurance Standards**

* Quality Assurance standards set forth and agreed upon (CITEMS QA standards).

Available at:

https://www.citems.com.au/services/application-development/quality-management/

## Consistency Validation Report

Overall the only data being tested for consistency validation is the database itself. The current measures we have in place in case of failure are that we have the original SQL file used to create the database stored in multiple locations such as personal data storage and a GitHub repository.

As such if the file on the server is corrupted or damaged in any way the database can be easily restored. This will lose any updates made since the last time this backup was renewed but will restore the database to working order.

A table showing how the data will be in a multitude of events is included below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Event no** | **description** | **Main file status** | **Backup status** | **Explanation** |
| 1 | Main file is corrupted or deleted | Main file recoverable from backup | Unchanged | Problem can be resolved easily however site will not operate in the meantime |
| 2 | One backup lost | unchanged | Backup can be restored either from second backup instance or generated again from main file | This will have absolutely no effect other than the need to re-generate a backup |
| 3 | All backups lost | unchanged | All backups gone but can be re-generated from main file fairly painlessly and restored | This will be a dangerous situation however it will be easy to resolve as it will simply need the generation of a new backup and it being placed in all the places it needs to be |
| 4 | Main file and all backups lost | Lost | Lost | This would be a catastrophic situation however the chance of it happening are insanely small as it would require the simultaneous deletion or corruption of multiple files stored entirely separately from one another |

## Adaptive Design

### Description

Adaptive design refers to the creation of websites that operate within static thresholds for display resolution, known as the viewing context. The viewing context of the target device is assessed and a set of stylings are applied accordingly to the elements of the web page.

### Advantages

The main advantage of adaptive design is the final presentation of the webpage’s display is much more predictable during development. This is due to the elements being sized according to a selected fixed layout, determined by the screen’s resolution.

Adaptive designs can be made applicable to older devices that do not support responsive designs.

### Disadvantages

Adaptive design is limited to the static definitions of resolutions defined by the developer. As the webpage is loaded, and the resolution is assessed, a pre-determined layout is selected appropriately. Adaptive design has limitations here bound by the definitions of the developer.

Once a webpage is loading, adaptive layout selection is no longer applied. For example, in modern devices where it is possible to scale the resolution of the web browser on screen, the webpage will not adapt its design to a modified screen resolution after the page has loaded.

## Responsive Design

### Description

Responsive web design refers to the creation of websites using dynamically sized elements that are responsive to their parent containers, and ultimately the display resolution.

### Advantages

Responsive design is extremely flexible in its rendering approach. The designs are fluid are able to display responsively to any viewing context, in contrast to adaptive design’s fixed layout approach.

Statistics show that more than half of the global internet traffic (52+%) is from a mobile device (Hosting Tribunal, 2020). As mobile devices continue to be produced in various shapes and sizes, responsive designs gain an advantage of dynamically adapting to these devices.

Responsive designs achieve higher site rankings by search engines like Google or Yahoo!, therefore leading to more web traffic.

Responsive designs can reduce the need, and therefore the cost of, developing a separate mobile-friendly version of the website.

### Disadvantages

Site navigation can become more challenging to keep consist with responsive designs. As the screen size decreases, so too do the elements portraying the navigation paths.

Responsive web designs can also take longer to load than adaptive designs. This is due to their relative nature where the elements are sized in relation to the size of the parent elements. Longer loading times can often leading to a bad browsing experience on the user’s behalf.

Older browsers, or older devices who are limited with software, may not be compatible with responsive designs and will therefore show incorrectly.

## Project Selection

For this project we have chosen a Responsive design.

Responsive design will provide an overall better look and feel (user experience) to the finished product and result in a higher Search Engine Optimization ranking. The majority of elements will be designed to be responsively sized and placed.

### Navigation Chart

The following illustrates the navigation pathways of the webpage prototype in all directions:

