**New Zealand Diploma in Information Systems**

**HTCS5607 IS Application Project**

**TECHNICAL REPORT TEMPLATE**

**Project Name: Black Dahlia**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Team Name(s)** | **Student ID** | **Email** | **Phone** |
| ***Project Manager***  *Reuben Csengo* |  |  |  |

**Client Stakeholders**

|  |  |  |
| --- | --- | --- |
| **Client Stakeholders** | **Full name and title** | **Contact details** |
| **Project Sponsor(s)** | *Lei Song, Simon Dacey* | *[phone, email]* |
| ***[add other roles as appropriate]*** | *[full name and title]* | *[phone, email]* |

**DATE OF SUBMISSION**

*dd/mm/yyyy*

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# 1. Document Control

## 1.1 Version History

This document has had the following revisions:

| **Version** | **Date** | **Author** | **Description of Change** |
| --- | --- | --- | --- |
| 0.1 |  |  | Initial draft |

## 1.2 Contribution to Report sections

| **Project Team Member name** | **Student ID** | **Report Section** |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## 1.3 Glossary

To provide clarity, terms and acronyms used in this document are defined as follows:

| **Term / Abbreviation** | **Definition** |
| --- | --- |
| Supervisor | Technical Advisor |
|  |  |

# 2. Executive Summary

# 3. Introduction

This technical report is focused on the case management software, currently being developed for the Black Dahlia. Detailing the process of the application though the software development lifecycle. This report exists to document the research, planning, design, and deployment of the software, among other aspects. Aspects covering the development and tested will be covered on separate but provided documentation.

# 4. Technology Review

My team and I have explored different methods and systems to use when developing this business management software, such as the language it is coded in, and the backend database format. Comparing to find what suites this scenario is important to the success and useability of this software.

The language that the software is created using is the most important part of the project, because its framework will dictate what possible features and functions that the software will be able to perform. There are many options for languages, the most widely used for this purpose are JavaScript, Python, and C#. Deciding on one that matches the requirements of the use cases is essential to the long-term development of this project. JavaScript is a scripting language primarily used in web development and web applications. It is well optimised and very versatile. JavaScript’s compatibility and portability make it a good choice for long term development. Python is also a scripting language, with similar compatibility and portability to JavaScript. It has good readability and its easy to develop for compared to other more complicated languages, but it lacks at times with its efficiency. C# is primarily a Windows/.NET programming language designed for developing applications for the windows operating system, thus making it a bad choice for any application not running on windows, or anything cross platform. Although all three of these could work for the requirements of the software, Python and JavaScript would be better for their compatibility, cross platform potential, and both would work well for long term development. Narrowing this down by its readability and ease of development Python would work well for this project.

There are many development environments available, some target specific languages, and others has a broader range of compatibility. This isn’t as important as the language itself, although a good IDE will streamline development and help in avoiding obvious errors. Pycharm is an IDE with the primary focus of Python, and it is well adapted to this language. It is the best choice for Python if it is used for this project. Visual Studio is a well-known IDE with support for most languages, including an autocorrect, and a good amount of documentation features to increase productivity and efficiency. It is the best choice for C# if it is used for this project. Not to be confused with Visual Studio, Visual Studio Code is a streamlined IDE designed for a quick and efficient debug cycle of development, but it lacks some of the features of more extensive IDEs. It is well adapted to JavaScript and would be the best choice for that language if it is used for this project. Each of these IDEs would work well for each of their speciality coding languages, although since I plan to use Python for this project, Pycharm is the most likely choice because of its proficiency with Python.

A management system requires a sturdy database from which to store and retrieve information. Thus, choosing the correct database software is important for the long-term management and security of the information stored within. MySQL is a well-known open-source database software which is well supported, free, and compatibly with many developments environments making it a strong choice. Its reliable and fast despite lacking some features of larger more expanded database software. Microsoft Access is a database software than can quickly fulfil the needs of small-scale software and do so in a readable way. Although it comes with disadvantages such as it not good for large scale software and that it ties you to the Windows operating system since it isn’t available for other operating systems. Because of this I think that MySQL will work well for this project.

# 5. IT Methodology

# 6. Project Management

## 6.1 Project Management Narrative

*Details with evidence how the development of the project followed the selected systems development lifecycle*

## 6.2 Project Plan with Milestones

*Include an overall plan here and attach a detailed GANTT chart to the appendices*

## 6.3 Project Governance Responsibilities

*Explain who was responsible for project management and quality assurance, and explain how these tasks were carried out*

## 6.4 Project Meetings

*Include a schedule of your meetings (date, duration, participants, and type) and attach the minutes of each meeting to the appendices*

## 6.5 Project Reports

*Discuss the project status reports and attach your project status reports to the appendices*

## 6.6 Project Risk and Issue Analysis

*Discuss project risks and issues and attach your project risk and issue register to the appendices*

# 7. Requirements Analysis

## 7.1 Introduction

## 7.2 Use Case Diagram

## 7.3 Business Use Case Narratives (Descriptions)

## 7.4 Activity Diagrams

## 7.5 Overall Class Diagram

# 8. Project Design

## 8.1 Introduction

## 8.2 Software List

## 8.3 Version Control Software

## 8.4 Design Use Case Narratives (Descriptions)

## 8.5 Sequence Diagrams

## 8.6 Deployment Diagram

## 8.7 Database Design

*Include ERD and data dictionary*

## 8.8 Annotated User Interface Designs

## 8.9 Test Plan

# 9. Project Training

## 9.1 End User Background and Training Objectives

## 9.2 Training Materials

## 9.3 Training Deliverables

## 9.4 Evaluation

# 10. Conclusion & Lessons Learned

# References

# Appendices