Development Project

CTEC3451

DeMontfort University

Thomas Wilson – P2662655

Contents

No table of contents entries found.

**Abstract/introduction/aims – 700 words**

* Project Overview
* Motivation
* Problem Statement
* Project Scope
* Target Users & Stakeholders
* Personal Development Objectives

**Literature Review – 1200-1500 words**

* 2.1 Centralised Booking Systems – Existing Solutions
* 2.2 Limitations of Individual Store Apps
* 2.3 Technologies for Mobile and Web Booking Systems
* 2.4 Firebase Use in Mobile Applications
* 2.5 Security & Data Management in Booking Systems
* 2.6 Summary & Justification for Tech Choices

**Requirements & Planning 600-800 words**

* 3.1 Functional Requirements (e.g., booking, notifications, login)
* 3.2 Non-Functional Requirements (e.g., usability, performance)
* 3.3 User Stories / Use Cases
* 3.4 Initial Gantt Chart / Milestone Plan
* 3.5 Risk Management Plan (Use your contract risks)

**Design & Architecture 800–1000 words**

* 4.1 Overall System Architecture (client-server)
* 4.2 Mobile App UI Design (with screenshots/storyboards)
* 4.3 Web App Interface & Features
* 4.4 Database Design (Firebase structure, ER diagrams)
* 4.5 Admin Panel Structure
* 4.6 Tools Used

**Implementation 1200–1500 words**

* 5.1 Technology Stack Justification
* 5.2 Mobile App Development (Kotlin) – major features, issues
* 5.3 Web Application (Flask + HTML/CSS/Python) – backend logic
* 5.4 Firebase Integration & Data Handling
* 5.5 Notifications & Authentication
* 5.6 Admin Controls & Role-based Access
* 5.7 Version Control & Deployment

**Testing & Validation 800–1000 words**

* 6.1 Test Plan and Methodology
* 6.2 Unit Testing (Backend + Frontend)
* 6.3 User Testing & Feedback (e.g., Pendulum Gaming)
* 6.4 Bug Tracking & Fixes
* 6.5 Security & Data Validation Measures

**Evaluation & Reflection 600 – 800 words**

* 7.1 Evaluation Against Aims & Objectives
* 7.2 Technical Challenges & How You Overcame Them
* 7.3 What Worked Well
* 7.4 What Could Be Improved
* 7.5 Lessons Learned
* 7.6 Future Enhancements

**Conclusion & Future Work 500–700 words**

|  |
| --- |
|  |

* 8.1 Summary of Work Completed
* 8.2 Project Impact on Stakeholders
* 8.3 Future Potential / Use in the Industry
* 8.4 Final Thoughts

**References**

Harvard style, up to 3 pages (excluded from word count)

**Appendices**

Test logs, diagrams, user docs (excluded from count)