**Software Requirements and Design (SRD)**

Project Title: PixelPals  
Module: CS2TP Team Project  
Date: 19.10.2025  
Version: Draft 1.0

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*(Right-click → Update Field → Update Entire Table once complete)*

# 1. Team Information

## 1.1 Team Members and Roles

*List each team member, their role, and main responsibility.*

## 1.2 Belbin Roles

*Identify each member’s Belbin role and how it supports the team.*

## 1.3 Team Logo and Identity

*Insert logo image here and describe colour scheme / brand identity.*

# 2. Project Description

## 2.1 Project Overview

*Briefly describe what your project is about, its purpose, and context.*

## 2.2 Vision and Objectives

*Write a short statement outlining your overall goal and measurable objectives.*

## 2.3 Target Audience

*Describe who your product is for (e.g. children, parents, accessible users).*

## 2.4 Technologies and Tools

PixelPals is going to use certain technologies and tools for the current design stage and for future development of the system.

|  |  |  |
| --- | --- | --- |
| **Category** | **Technology and Tools used/planned** | **Purpose** |
| Backend development | Laravel (PHP), MySQL | Will be used to make user accounts, product data and parental controls. |
| Frontend development | HTML, CSS, JavaScript | Will be used to make the website interface and for browsing and selecting products. |
| UI/UX design | Figma, Canva | Used to create layout, logo and accessibility structure. |
| Version Control | GitHub | Used to store project work and control changes by using pull requests and commits. |
| Project Management | Trello, Discord | Trello is used to assign and track tasks with deadlines. Discord is used for team communication. |
| Documentation | Microsoft Word | Used to make and update the Software requirements design report. |

# 3. Functional Requirements

## 3.1 Introduction

Functional Requirements is based on what the system should do, This can done by the usage of features, specific actions, and behaviours so that it helps the user throughout the website. For the PixelPals Project, Function Requirements will make sure that system functionally will allow the users to register, sign in, placing orders and adding Parent control. Furthermore, Function Requirements will support both users and admins by providing features to manage and interact with the ecommerce website with ease .

## 3.2 Requirement List (FR1–FR5)

*List and describe each functional requirement (FR1, FR2, etc.).*

1. The System will allow the users login and register

2. The system will allow the users to add items into their baskets + place orders

3. The System will allow admins to manage and view products

4. The System will allow the users to add a parent to allow the parents monitor the users account

5. The System will allow the users to place and order and review

# 4. Non-Functional Requirements

## 4.1 Performance

*State any speed, responsiveness, or load time requirements.*

## 4.2 Security

Parental Control and Data Privacy:

The PixelPals website is designed for children and parents, which means data protection must be prioritised at every stage of development. To achieve this, the system will include parental control features and account security to support safe and responsible use.

|  |  |
| --- | --- |
| **Security requirement** | **Planned implementation** |
| Child data privacy | Only essential user data will be collected, and the data will be stored securely in the database. |
| Parental control access | Parents will have access to screen time rules for children. |
| Password security | Passwords will be hidden and will have minimum length rules, so they cannot be easily guessed. |
| Access permissions | Only authorised members can change or update product information. |

Overall, these measures will keep the system suitable for children while giving parents reassurance and control over their child’s digital wellbeing.

## 4.3 Usability and Accessibility

*Describe how your design accommodates different users and devices.*

## 4.4 Maintainability

Documentation and structure:

The PixelPals system is designed to be easy to update and expand in the future. The team has used organised and traceable development practices to support all continuous improvements.

|  |  |
| --- | --- |
| **Maintainability principle** | **Application in PixelPals** |
| Clear folder structure | Creating organised files that are easy to locate, such as SRD, Drafts, Evidence and Docs files on GitHub. |
| Version control best practice | Team members will be their own branches on GitHub and use pull requests to the main area to avoid conflicts and track changes early. |
| Continuous documentation | All meeting notes, commit summaries and report document versions will be recorded throughout development. |
| Modular design approach | Frontend and Backend components will be built in small functional parts for easier updates and fixes. |

To summarise, all these approaches will support long-term maintenance by allowing new features and bug fixes to be added without difficulty.

# 5. Use Cases and Design

## 5.1 Use Case Diagram (optional)

*Insert your use case diagram or describe it.*

## 5.2 Use Cases – Products

*Describe product browsing, searching, and filtering features.*

## 5.3 Use Cases – Login & Basket

*Describe login, account, and basket management features.*

## 5.4 Interface Wireframes

*Insert screenshots or sketches of your interface design.*

## 5.5 Database Design (ERD)

*Insert your ERD diagram and explain relationships between tables.*

## 5.6 Flow Diagrams (Admin/User Journey)

*Insert admin or user journey flow diagram.*

## 5.7 Site Map

This section presents the PixelPals website site map, illustrating the complete navigation structure. It highlights how users move between pages such as Home, Products, Basket, and Account. Each branch represents a major user flow or feature area.

Home

├── Products

│ ├── Categories

│ └── Product Detail

├── Basket

├── Account

│ ├── Login / Register

│ └── Profile & Orders

└── Admin (protected area)

This hierarchy demonstrates how users will navigate through the application. The final visual site map diagram is included in Appendix F.

# 6. Project Management

## 6.1 Development Methodology

*Explain the methodology used (Agile/Scrum) and why it was chosen.*

## 6.2 Project Planning Tools (Trello)

*Include link/screenshot of your Trello board and describe how it was used.*

## 6.3 Communication and Collaboration

*Describe how your team communicated (e.g., Discord, in-person meetings).*

## 6.4 Version Control and File Management (GitHub)

*Include your GitHub repository link and discuss how you managed versions.*

## 6.5 Design and Technical Overview

*Summarise key design or technical decisions.*

## 6.6 Team Section Responsibilities

The following table details which team member is responsible for each SRD section.

|  |  |  |
| --- | --- | --- |
| Section No. | Section Title | Assigned Member(s) |

# 7. Conclusion

# Appendices

## Appendix A – Entity Relationship Diagram

*Insert ERD diagram here.*

## Appendix B – Admin Flow Diagram

*Insert admin flow diagram here.*

## Appendix C – Wireframes and Brand Design

*Insert wireframe images and brand colours/fonts here.*

## Appendix D – User Journey Diagram

*Insert user journey diagram here.*

## Appendix E – Product Grid (optional)

*Insert product grid design or screenshots here.*

## Appendix F – Site Map

Insert your final site map diagram (image or exported screenshot from Figma or Draw.io). Reference this appendix in Section 5.7.