Software Requirements Specification

for

PULSE

Providing Users Life Support Everyday

Prepared by

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| Date: | 2/21/2025 |

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Revisions

| Version | Primary Author(s) | Description of Version | Date Completed |
| --- | --- | --- | --- |
| Draft Type and Number | Full Name | Information about the revision. This table does not need to be filled in whenever a document is touched, only when the version is being upgraded. | 00/00/00 |

# Introduction

This document outlines the software requirements for **PULSE**, a web-based system designed to assist disabled individuals who have lost their limbs by providing artificial limbs such as prosthetic arms and legs at highly affordable prices. The system functions as an online store where users can browse, customize, and purchase prosthetic devices with the support of financial assistance programs.

## Document Purpose

This document provides a structured description of the **PULSE** system, defining its purpose, functionality, and technical constraints. It aims to serve as a reference for developers, testers, project managers, and stakeholders, ensuring a clear understanding of the system’s objectives and requirements.

## Product Scope

**PULSE** is an accessible, user-friendly e-commerce platform tailored for individuals requiring artificial limbs. Its primary goal is to make high-quality prosthetics widely available at affordable prices. Key benefits include:

* Financial assistance and discounted prices for affordability.
* A seamless online shopping experience with customization options.
* Accessibility features Designed for disabled users.

## Intended Audience and Document Overview

*This document is intended for:*

* *Developers implementing the system*
* *Project managers overseeing progress.*
* *Testers ensuring functionality and accessibility.*
* *End users (customers and support organizations).*
* *Instructors and evaluators of the project.*

## Definitions, Acronyms and Abbreviations

* **PULSE**: Providing Users Life Support Everyday
* **SRS**: Software Requirements Specification
* **UML**: Unified Modeling Language
* **GUI**: Graphical User Interface
* **API**: Application Programming Interface

## Document Conventions

This document follows IEEE formatting guidelines:

* Font: Arial 12
* Spacing: Single
* Titles: Bold

## References and Acknowledgments

* IEEE Software Engineering Standards
* Online Accessibility Guidelines
* Course Materials from Software Engineering Fundamentals
* Prosthetic Designs for Restoring Human Limb Function by William Craelius
* Prosthetics and Patient Management a Comprehensive Clinical Approach by Kevin Carroll
* Musculoskeletal key:

[(Ideal functional outcomes for amputation levels)](https://musculoskeletalkey.com/ideal-functional-outcomes-for-amputation-levels/)

[(Prosthesics)](https://musculoskeletalkey.com/prosthetics/)

[(Prosthetics and orthotics)](https://musculoskeletalkey.com/prosthetics-and-orthotics/)

[(Prosthetic training)](https://musculoskeletalkey.com/prosthetic-training/) Overall Description

# Overall Description

## Product Overview

**PULSE** is an innovative e-commerce platform that simplifies access to affordable prosthetic limbs. The platform allows users to explore, customize, and purchase prosthetic devices with financial support options. The system is standalone and integrates with payment gateways and third-party support organizations.

## Product Functionality

* User registration and authentication.
* Browsing and filtering prosthetic products.
* Customizing product specifications.
* Secure online purchases with multiple payment options.
* Integration with financial aid programs.
* Customer support and inquiry handling.

## Design and Implementation Constraints

* The system must use **COMET method** for software design.
* The **UML modeling language** will be used for design representation.
* Must comply with accessibility standards for disabled users.
* Data security measures will be implemented to protect user information.

## Assumptions and Dependencies

* Users will have internet access to use the platform.
* Payment processing will be handled via third-party services.
* Manufacturing and shipping will be managed by partnered vendors.