
SOFTWARE REQUIREMENTS SPECIFICATION

for

Decked Out

Version 1.0 approved

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1. Introduction

1.1. Purpose

The purpose of this SRS document is to provide a detailed description of the objectives, scope, and intended use for Decked Out, an e-commerce platform dedicated to providing customers with high-quality skateboarding gear and accessories. This document establishes a clear understanding of the system's objectives, features, and constraints to ensure that all stakeholders, including developers, designers, and testers share the same vision for the application.g developers, designers, and testers share the same vision for the application.

1.2. Document Conventions

Red text is used to denote high priority objectives/requirements.

Blue text is used to denote currently implemented objectives/requirements.

1.3. Intended Audience and Reading

The intended audience of this document includes all stakeholders of the project, including but not limited to developers, project managers, marketing staff, users, testers, and documentation writers. Each section of this SRS is organized to provide a comprehensive understanding of the software requirements, starting with an overview and progressing to detailed specifications. Readers are encouraged to begin with the introduction and overall description before delving into specific system features and nonfunctional requirements relevant to their roles.

1.4. Product Scope

Decked Out is an e-commerce platform designed to provide skateboarders with an accessible, user-friendly, and secure online marketplace for buying skateboards, parts, apparel, and accessories. The system will allow customers to browse diverse product catalog, manage shopping carts, complete secure transactions, and track orders through an intuitive web interface

1.5. References

- Python 3.11.4 documentation. <https://docs.python.org/3/>.
- mySQL. <https://docs.oracle.com/en/database/mysql/otr-installation/index.html#GUID-B41949CF-5344-42E0-9736-B1F3DB1D3D63>
- Django 4.2 documentation. <https://docs.djangoproject.com/en/4.2/>.

2. Overall Description

2.1. Product Perspective

Decked Out is a new, self-contained e-commerce platform and will be built from the ground up. It will be developed using Django for the backend, MySQL as the primary database, and HTML, CSS, and JavaScript for the frontend. Django provides rapid development, and built in security features, while MySQL offers reliable and efficient data management.

2.2. Product Functions

- User Registration and Login: Users can create accounts, log in, and log out securely.
- Product Browsing and Search: Users can browse product categories and search for specific items using various filters.
- Shopping Cart Management: Users can add, view, update, and remove items from their shopping cart.
- Checkout and Payment Processing: Users can enter shipping and payment information to complete purchases securely.

- Admin Management: Administrators can manage user accounts, product listings, and view site analytics.
- Updating Product: Sellers can manage their product listings by adding, updating, or removing items.

2.3. User Classes and Characteristics

Buyers are the primary users of the system. They will browse products, and purchase skateboards, accessories, and apparel. They are expected to have basic computer and mobile device literacy.

Sellers are users who list products for sale on the platform. They can be store employees or 3rd party sellers. They need moderate technical skills to manage their listings and view orders.

Administrators are responsible for managing the platform, including user accounts and product listings. They require advanced technical skills in SQL and web administration.

2.4. Operating Environment

Decked Out will operate as a web service that is supported on major web browser including Chrome, Firefox, Safari, and Edge. The system will be accessible from desktop and mobile devices. The backend will be hosted on an environment with Django and SQL. Django will manage the application logic, while SQL will store product, order, and customer data.

2.5. Design and Implementation Constraints

- Coding standards: Code must follow Python and Django practices.
- Performance: Must handle up to 50 concurrent users.
- Web Standards: Compatible with HTML5 and modern browsers (Chrome, Firefox, Safari, Edge).

3. System Features

3.1. User Account Creation

3.1.1. Description and priority

Allow users to create, view, update, and delete their accounts. Priority: High

3.1.2. Stimulus/Response Sequences

- User creates their account: The system stores user information and confirms successful account creation
- User logs in: the system verifies credentials and grants access to account features.
- User updates account information: the system saves changes and confirms the update
- User deletes their account: The system removes user data and confirms account deletion.
- User views past orders: the system displays a list of previous orders with details

3.1.3. Functional Requirements

- REQ-1: The system shall allow users to create new accounts with a username, password, and email address.
- REQ-2: The system shall allow users to log in and log out securely.
- REQ-3: The system shall allow users to update their personal information.
- REQ-4: The system shall allow users to delete their accounts.
- REQ-5: The system shall allow the user to display past orders.

3.2. Seller Account Creation

3.2.1. Description and priority

Allow sellers to create, view, update, and delete, and add products to their accounts. Priority: High

3.2.2. Stimulus/Response Sequences

- Seller creates their account: The system stores user information and confirms successful account creation
- Seller logs in: the system verifies credentials and grants access to account features.
- Seller updates account information: the system saves changes and confirms the update

- Seller deletes their account: The system removes user data and confirms account deletion.
- Seller adds products: The system is able to add their products to the database to be viewed on the site.
- Seller removes products: The system is able to remove their products that are listed on the site.

3.2.3. Functional Requirements

- REQ-1: The system shall allow sellers to create new accounts with a username, password, and email address.
- REQ-2: The system shall allow sellers to log in and log out securely.
- REQ-3: The system shall allow sellers to update their personal stock.
- REQ-4: The system shall allow sellers to delete their products/stocks.
- REQ-5: The system shall allow sellers to display products and accessories.

3.3. Admin Account Creation

3.3.1. Description and priority

Allow Admin to create, view, update, and delete their accounts. Also manage user and seller accounts and databases Priority: High

3.3.2. Stimulus/Response Sequences

- Admin creates their account: the system creates an admin account from the admin exclusive page and is assigned admin previlages.
- admin logs in: the system verifies credentials and grants access to account features.
- Admin views account information for other accounts: the system allows admin accounts to make changes to user and seller accounts.

3.3.3. Functional Requirements

- REQ-1: The system shall allow admin to create new admin accounts with a username, password, and email address.
- REQ-2: The system shall allow admin to log in and log out securely.
- REQ-3: The system shall allow admin to view seller and users account information.
- REQ-4: The system shall allow admin to manage seller and user accounts.
- REQ-5: The system shall allow admin to manage the product database.

3.4. Shopping Cart

3.4.1. Description and priority

Allow users to add, view, update, and remove items from their shopping cart.

Priority: Medium **3.4.2. Stimulus/Response Sequences**

- User adds an item to the cart: The system updates the cart and displays the new item count, item details, and total price.
- User views the cart: The system displays all items in the cart with their details.
- User updates item quantity: The system adjusts the item quantity and recalculates the total price.
- User removes an item: The system deletes the item from the cart and updates the total price.

3.4.3. Functional Requirements

- REQ-6: The system shall allow users to add items to their shopping cart.
- REQ-7: The system shall display the contents of the shopping cart, including item details and total price.
- REQ-8: The system shall allow users to update the quantity of items in their cart.
- REQ-9: The system shall allow users to remove items from their shopping cart.
- REQ-10: The system shall recalculate the total price whenever items are added, updated, or removed.

4. Other Nonfunctional Requirements

4.1. Performance Requirements

- Clicking any link for a item should take less than 1 second
- Adding an item to the car should take less than 1 second.
- The system should be able to handle 50 concurrent users.
- The system should be able to handle up to 10,000 products and 5,000 users accounts without performance lost

4.2. Safety Requirements

- The user login information should be secure enough so that anyone except for the developers will know that user's username and password.
- The user personal information should be secure enough so that no 3rd party can access it.
- The payment information should be secure enough so that no 3rd party can access
- The system shall implement account lockout mechanisms after multiple failed login attempts to prevent brute-force attacks.
- The system shall regularly update and patch all software components to address known vulnerabilities.

4.3. Security Requirements

- authentication: the system shall require users to input username and password to access their accounts.
- session management: the system shall automatically log out users after 15 minutes of inactivity.
- Data privacy: the system shall allow users to delete their accounts and personal data upon request.

4.4. Software Quality Attributes

- Usability: The system shall have an intuitive user interface that allows users to easily navigate and perform tasks with minimal training.
- Reliability: The system shall have an uptime of 99.9% and be able to recover from failures within 5 minutes.
- Maintainability: The system's codebase shall be modular and well-documented to facilitate future updates and maintenance.
- Scalability: The system shall be designed to handle increased load by adding resources without significant performance degradation.

5. Other Requirements

- Legal Requirements: The system shall comply with all relevant data protection laws.
- Logging and Monitoring: The system shall log critical events

A. Glossary

- Administrator: A user with elevated privileges who can manage the platform, including user accounts and product listings.
- Cart: A virtual container where users can store items they intend to purchase.
- Database: An organized collection of data that the system uses to store information about users, products, and orders.
- Django: A high-level Python web framework that enables rapid development of secure and maintainable websites.
- Frontend: The part of the application that users interact with directly, typically through

B. Analysis Models

C. To Be Determined List

TODO FIX HERE

D. Examples

CSE 4214 / 6214 – Introduction to Software Engineering

Fall 2025

GENERAL INFORMATION

Course dates:	Aug 20, 2025, through December 2, 2025
Lecture:	Old Main Academic Center (OLMAIN) 2180; T & R 3:30 pm – 4:45 pm
Laboratory:	Section 02 – BUTLER 104; Monday 3:30 pm – 4:20 pm Section 03 – BUTLER 102; Wednesday 12:00 pm - 1:50 pm
Prerequisite(s):	CSE 2383 (<i>Data Structure and Analysis of Algorithms</i>) with a grade of C or better
Instructor:	Dr. Nisha Pillai
Email:	pillai@cse.msstate.edu
Office:	208 Butler Hall
Office hours:	Thursday 1.00 PM – 3.00 PM
Website:	Course website on the canvas system
Lab Instructor (TA):	Tirian Judy

More contact information will be provided in the lab.

Figure D.1.: caption text

- Item 1 Item 1 text
- Item 2 Item 2 text

E. No man's land

- Buyers
 - Register an account
 - Log in and log out
 - Reset their password
 - Create, read, update, and delete their profile information
 - Browse product listings
 - Search for products using various filters (e.g., category, price range)
 - View detailed information about a product
 - Add products to their shopping cart
 - Remove products from their shopping cart
 - View their shopping cart
 - Proceed to checkout
 - Enter shipping and payment information
 - Place an order
- Sellers
 - Register an account
 - Log in and log out
 - Reset their password
 - Create, read, update, and delete their profile information
 - Create, read, update, and delete product listings
 - View orders placed for their products
- Administrators
 - Log in and log out
 - Manage user accounts (approve, suspend, delete)
 - Manage product listings (approve, remove)
 - View site analytics and reports
 - Manage site settings and configurations

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