

Software Requirement Specification Document for E-commerce web application

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Table 1: Document version history

Version	Date	Reason for Change
1.0	24-Oct-2023	SRS First version's specifications are defined.

GitHub: <https://github.com/rana2105525/sweet-dreams>

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Abstract

This Software Requirements Specification outlines the development of an e-commerce platform tailored for baby products. The platform aims to provide a user-friendly and secure online shopping experience. Users can browse, search, and purchase baby products, while sellers can showcase and manage their offerings. Administrators will oversee platform operations to ensure security and transaction success. The document details user requirements, including registration, authentication, product browsing, shopping cart functionality, payment processing, and order management. Non-functional requirements address performance, security, usability, and scalability. Legal and compliance requirements include data protection regulations and terms of service. This SRS guides stakeholders, providing a comprehensive overview of the platform's features and constraints. It directs developers to create a secure, efficient, and user-friendly e-commerce platform for parents and caregivers.

1 Introduction

1.1 Purpose of this document

The purpose of this document is to provide an overview of the E-commerce project, including a detailed description of the project's functional and non-functional requirements, as well the design and constraints that this system shall meet. This project targets the project's internal (developers, supervisors) and external (end-users) stakeholders. This document is restricted to the MIU Computer Science school premises. This project is implemented under the guidance of SWE320 course professors.

1.2 Scope of this document

This document defines the requirements for the development of an e-commerce platform specializing in baby products. It outlines the features, functionalities, and constraints of the system, serving as a comprehensive reference for all stakeholders involved in the project. The scope of this document includes:

1. Product Overview: An introduction to the e-commerce platform for baby products, highlighting its purpose and key features.

1.3 Business Context

The e-commerce platform for baby products operates in a highly competitive market where parents and caregivers continually seek convenient and reliable solutions for their child-related needs. To thrive in this environment, the business must establish a robust online presence and deliver exceptional value to its customers. Here are the key aspects of the business context:

1. Market Demands: The market for baby products is characterized by a consistent demand for essential items such as clothing and sleeping bags. Parents often require access to a wide variety of high-quality products, making this market segment lucrative.

2. Customer Base: The primary customers are parents, guardians, and caregivers of infants and toddlers. Targeting a global audience is essential to maximize the business's reach and profitability.
3. Competition: The e-commerce space for baby products is competitive, with both established brands and emerging startups vying for market share. To stand out, the business must offer unique value propositions, such as competitive pricing, high-quality products, and exceptional customer service.

2 Similar Systems

2.1 Academic

- "SpearmintLOVE" exceptional UI/UX design is a great inspiration for our e-commerce platform. Their user-friendly interface, high-quality visuals, and smooth navigation set a high standard. Key features include a wishlist for saving favorite items and an intuitive shopping cart and checkout process.
- "Little Me" website boasts a well-structured layout with a diverse range of options.
- "See Kai Run" inspired our design with its vibrant colors, but we aimed to create a more sophisticated website that goes beyond the basics.

3 System Description

Sweet Dreams, our E-commerce platform, combines seamless login and sign up interfaces with a user-friendly admin panel where admins can efficiently manage product listings and user accounts. Shoppers can effortlessly add products to their wish list and cart, streamlining their experience.

3.1 Problem Statement

This e-commerce website is intended to be a central hub for the client's products, serving as a digital storefront for their diverse range of baby clothing, with a specific focus on the flagship product, Sweet Dreams baby sleeping bags. The objective is to establish a user-friendly, intuitive, and aesthetically pleasing web application that not only showcases the product catalog but also provides a seamless shopping experience for customers. The client aims to streamline inventory management. They want to implement personalized user accounts.

3.2 System Overview

E-commerce specialized in providing cozy and safe sleeping solutions for babies. With our application, we understand that a good night's sleep for your baby is a dream come true for parents. Our E-commerce web application is committed to offering a delightful range of baby sleeping bags that combine comfort, style, and safety.

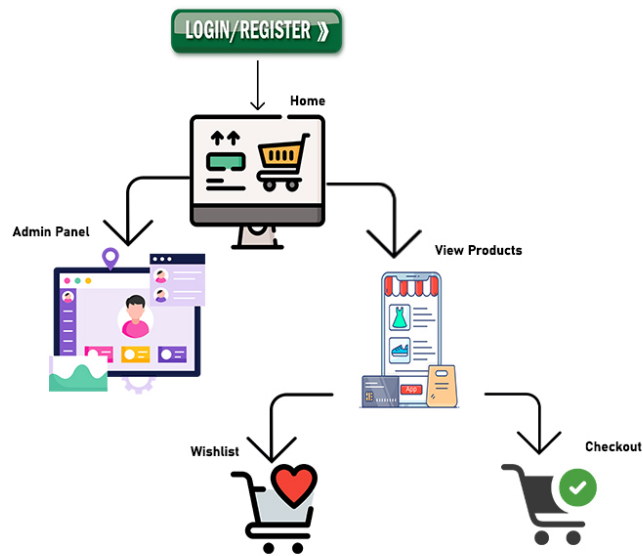


Figure 1: Sweet Dreams System

3.3 System Scope

- Ability to add ,delete, edit products
- Ability to add, delete, and edit both normal and administrative users.
- Filtering products with their categories
- Admin control panel
- Comprehensive online baby-clothing purchase system

3.4 System Context



Figure 2: Essential Use Cases

3.5 Objectives

- Increase brand awareness and reach a wider audience.
- Generate leads and sales.
- Provide a convenient and easy-to-use shopping experience.
- Build customer loyalty and repeat business.

3.6 User Characteristics

This Web application targets are parents, grandparents, or other caregivers of young children. They are looking for high-quality, affordable clothing that is comfortable and stylish for their child. Baby clothing users are also typically concerned with safety and sustainability. They want to know that the clothes they are buying are made with safe materials and that they are produced in a sustainable way.

4 Functional Requirements

4.1 System Functions

- As a user, I shall register to access the system.
- As a user/admin, I shall login to access the system.
- As a admin, I shall add the available products on the system.
- As a user/admin, I shall view the available Products on the system.
- As a admin, I shall edit or delete the products.
- As a user, I shall add or remove products to and from the wish list on the system.
- As a user, I shall add or remove products to and from the cart on the system
- As a user/admin. I shall edit,delete my profile on the system.
- As an admin, I shall delete users on the system.

4.2 Detailed Functional Specification

3.2.1 Customers Customers should be able to create an account and log in to their account to manage their profile, wishlist, cart. Customers should be able to delete or edit their account at any time.

3.2.2 Admin Admins should be able to add new products to the website, including product images, descriptions, and prices. Admins should be able to edit or existing products on the website. Edit or delete profile: Admins should be able to edit or delete their profile. Delete users: Admins should be able to delete users from the website.

3.2.3 Acceptance Criteria Users should be able to successfully create an account and log in to their account. Users should be able to successfully delete or edit their account. Customers should be able to successfully add products to their wishlist or cart. Customers should be able to successfully remove products from their wishlist or cart. Admins should be able to successfully add new products to the website. Admins should be able to successfully edit existing products on the website. Admins should be able to successfully delete products from the website. Admins should be able to successfully edit or delete their profile. Admins should be able to successfully delete users from the website.

5 Design Constraints

- An authorization constraint: roles must be assigned to users to be granted access to resources based on their role type.
- MVC architecture must be used.

5.1 Standards Compliance

- The application must have valid HTML, CSS, and JavaScript
- Alternative Text must be available for Images.

6 Non-functional Requirements

5.1 Security The application should be secure and protect user data and content from unauthorized access or modifications.

- The web application requires users to create accounts to access applications to store information and display profiles. The system grants access to accounts when users enter the correct username and password based on their user role.
- An application may not grant access until the user creates a strong password.
- The system shall use password hashing to store user passwords.

5.2 Usability The application should be easy to use and intuitive, with a user-friendly interface and clear documentation.

- Users can easily navigate to all web pages.
- Users can easily determine what a feature is and what it can do.
- Validation errors are clear so that users can fix them.

7 Data Design

- Users:id,fullname,email,passsword,birth,gender,type,productid.
- Admins:ID,Username,Phone,Email,Password,Gender,type.
- products:id,title,price,description,category,addedat,qty.
- reviews:id,fullname,review.
- blog:id, blogimg, blogtext.
- checkout:id, firstname, lastname, email, phone, address, card holder, expiring date, CVC.

id : int
fullname : varchar(255)
email : varchar(255)
password : varchar(255)
birth : date
gender : varchar(20)
type : varchar(50)
product_id : int

id : int
blog_img : varchar(250)
blog_text : varchar(250)

id : int
firstname : varchar(50)
lastname : varchar(50)
email : varchar(250)
phone : int
address : text
card_holder : varchar(50)
expiring_date : date
cvc : int

id : int
fullname : varchar(250)
review : varchar(250)

ID : int
Username : varchar(20)
Phone : varchar(20)
Email : varchar(255)
Password : varchar(255)
Gender : varchar(20)
type : varchar(50)

id : int
title : varchar(50)
price : float
description : varchar(255)
prod_image : varchar(200)
category : varchar(20)
added_at : datetime
qty : int

Figure 3: Data Design

8 Preliminary Object-Oriented Domain Analysis

9 Operational Scenarios

9.1 Scenario 1:

Initial assumption: The user login or registers on to the site, searches for a product for his/her baby, adds it to the wish list, and wants to inquire about it via cart then checkout.

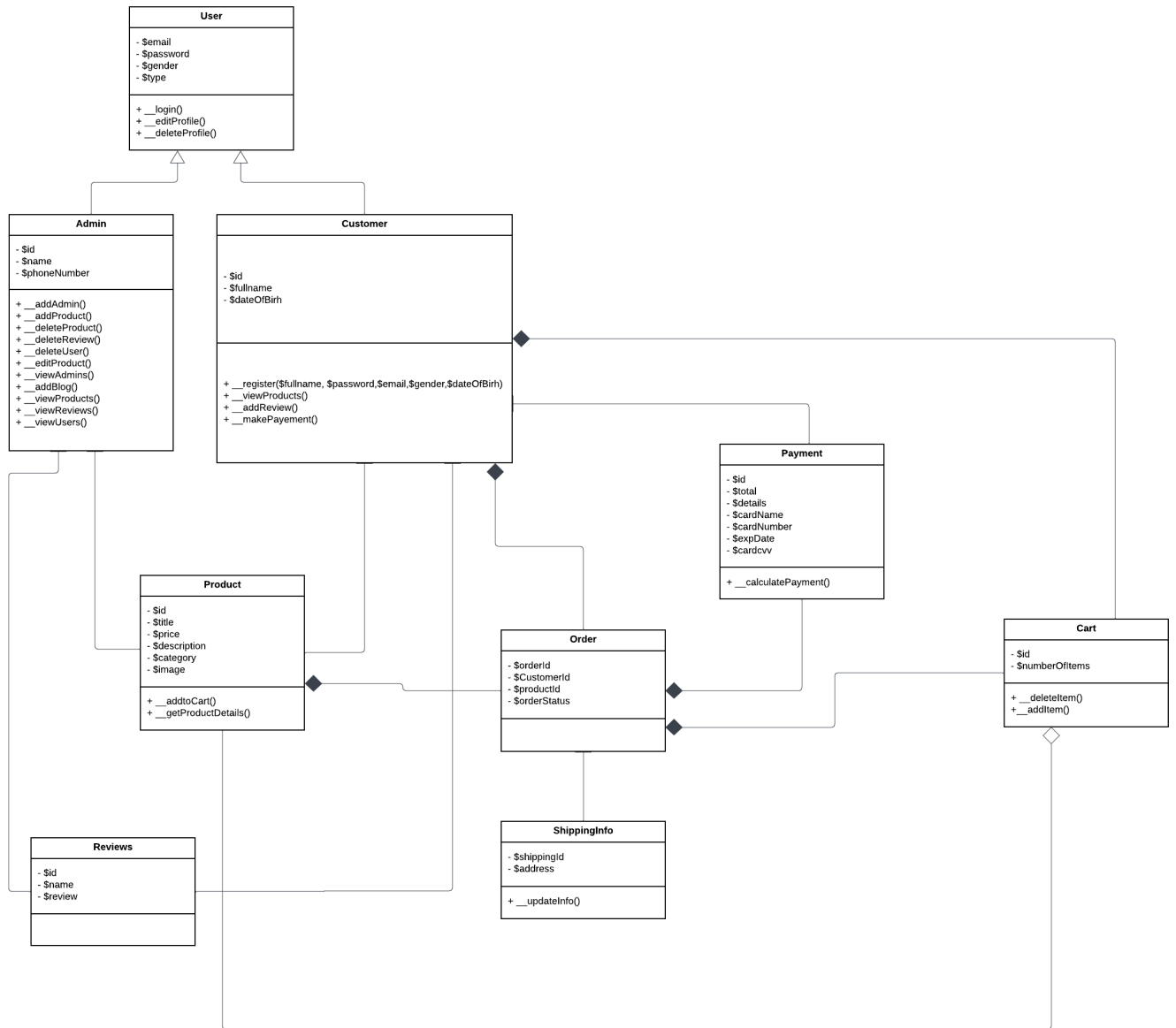


Figure 4: UML

9.2 Scenario 2:

Normal: The user searches for the appropriate sleeping bag, and after finding it and adding it to cart, he must proceed to it as if he wants to finish this process.

9.3 Scenario 3:

What can go wrong: When the user registers for the first time, he may enter an existing email. The system immediately rejects creating a new account, and a message appears to the customer to notify him that he has used this email before. The user has an existing account but cannot log in because the password has been forgotten. The user clicks forget the password and enters his email used in the account. If the email matches, we will send the password to him.

9.4 Scenario 4:

System state on completion: The user enters without any problems and searches for what he wants, and adds it to the wish list. After knowing the code for the apartment, he communicates with the moderator to inquire about it. As shown in Figure 1 ,when users visit our e-commerce platform for baby clothes, they encounter a user-friendly space designed for seamless shopping. Whether they are new or returning customers, registration and login are hassle-free. Our extensive product catalog offers detailed descriptions, images, and reviews for easy decision-making. Users can add items to the cart, create a wish list, and breeze through a simple checkout process. The platform provides an efficient way to view and explore our diverse baby clothing range, catering to the needs of parents and caregivers.

10 Project Plan

ID	Task name	Description	Start date	Duration in hours	Assigned to
1	Home/ reviews /checkout cart/wishlist/profile/registration/login/shop front-end	Frontend pages	9/10	11 hours	Rana mohamed
2	CRUD on user	Create/read/update/delete user accounts (my account)	16/10	5 hours	Rana mohamed
3	Reviews frontend/backend	Insert reviews with the name into database and fetch it	25/10	2 hours	Rana mohamed
4	Registration and login	User make an account and logged in	10/10	1 hour	Mahmoud Hossam
5	Hashing	Passwords are hashed in the database	18/10	1 hour	Mahmoud , Abdulrahman
6	View products	View products in the categories pages	15/10	3 hours	Rana , Mahmoud
7	WishList	User can add product in his wishlist	15/10	3 hours	Mahmoud,aboelala
8	Validation	Validate all user forms	10/10	6 hours	Mahmoud
9	Ajax	Live check on emails	17/10	2 hours	Mahmoud
10	Product Description	Product details view in details	13/10	3 hours	Rana , Mahmoud
11	Blog	Admin publishes	14/10	2 hours	Mahmoud
12	cart	Quantity , total price , add product in card	15/10	3 hours	aboelala
13	database	Set of tables created for information for the website	11/10	5.5 hours	aboelala
14	authorization	All admin pages	26/10	1.5hours	aboelala
15	Edit admin	Ability for admin to edit his information	15/10	5 hours	Abdulrahman,aboelala
16	Add , Delete , View Admin	Operations of add , delete , view , and update Admin	1/10	4 hours	Abdulrahman , Mahmoud
17	Admin Validations	Checking inputs for Admin forms	15/10	2 hours	Abdulrahman , Sara
18	View User	Ability for admin to view users' information	22/10	1 hour	Abdulrahman
19	Delete User	Ability for admin to delete user	13/10	3 hours	Abdulrahman , Sara
20	Admin Frontend	Admin Frontend pages	14/10	15 hours	Sara Yasser
21	Admin sidebar	Admin side bar displaying functionalities	14/10	2 hours	Sara Yasser
22	CRUD Products	Create/read/update/delete products	17/10	5 hours	Sara Yasser
23	View products	Admin view products	19/10	1 hour	Sara Yasser
24	View Admins	Admin ability to display all admins information	22/10	1 hour	Sara Yasser
26	View- Delete Reviews	Admin ability to view and delete reviews	20/10	1 hour	Sara Yasser

Figure 5: Task Distribution

10.1 Supportive Documents

- Eerika Ekberg(2019) "Impacts of supply chain management and fast fashion in kids wear markets." Thesis. Available at: <https://www.theseus.fi/bitstream/handle/10024/159900/Thesis%20Ekberg.pdf> (Accessed 22 October 2023).
- Sidhartha Reddy Vatrapu(2014) "Design and Implementation of E-Commerce Site for On-line Shopping." Academia. Available at: https://www.academia.edu/43527831/Design_and_Implementation_of_E_Commerce_Site_for_Online_Shopping (Accessed 20 October 2023).