Software Requirements Specification

for

E-Commerce Web Application

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(2023PIS5097)

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April 26, 2024

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1 Introduction

The E-Commerce Web Application aims to provide customers with an easy and user-friendly online platform to purchase products from various categories, such as watches, mobiles and headphones. The application shall have two main actors: the users and the administrators. Users will be able to register, login, browse products, add products to the cart, checkout, view their orders and update their profile. Administrators will have the additional capability to add, delete, and update products and manage customer orders.
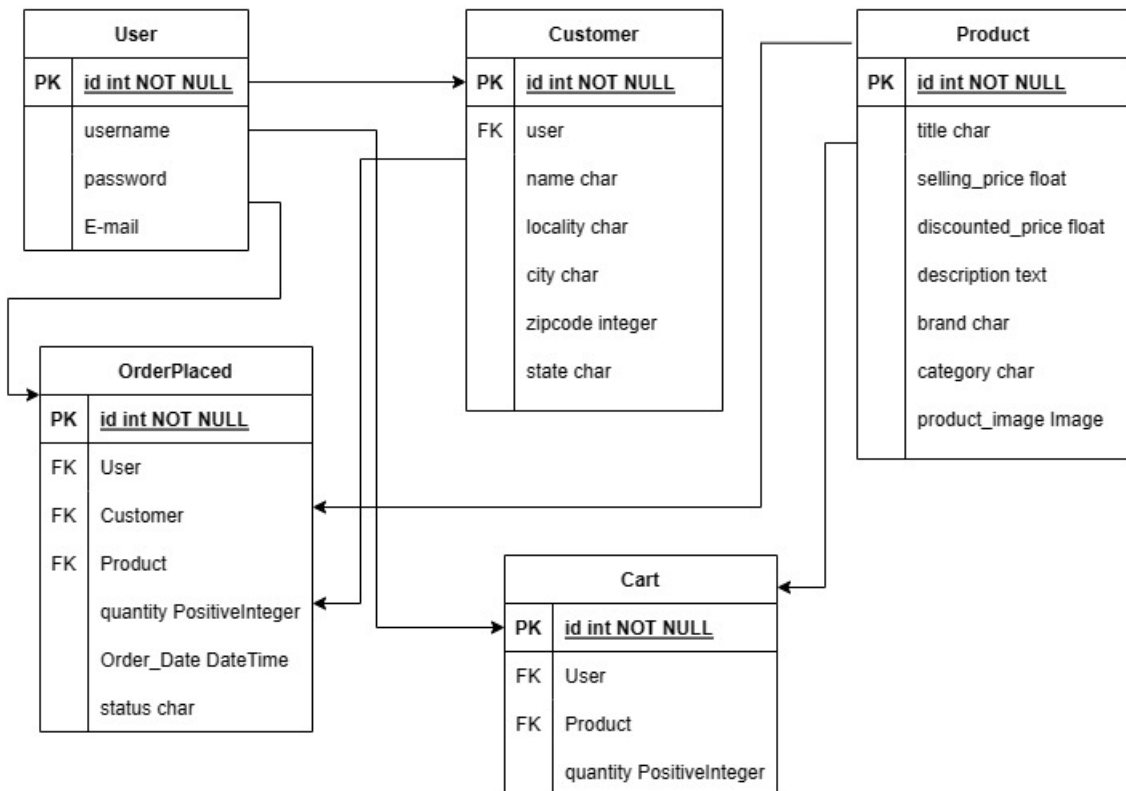
1.1 Purpose

The purpose of this document is to describe the requirements for web application that allows customers to view and purchase products. The application allows customers to add items to their cart, update their cart, place orders, and view their order history. The application also includes a filter feature, which allows customers to filter for products based on price.

2 Overall Description

2.1 Product Perspective

Application defines various views and functions to handle different tasks related to the website such as displaying products, adding them to the cart, updating the cart, displaying the cart, displaying orders, displaying addresses, etc.

The major features of E-Commerce Application is as shown in below Relational model:

User

PK	id int NOT NULL
	username
	password
	E-mail

Customer

PK	id int NOT NULL
FK	user
	name char
	locality char
	city char
	zipcode integer
	state char

Product

PK	id int NOT NULL
	title char
	selling_price float
	discounted_price float
	description text
	brand char
	category char
	product_image Image

OrderPlaced

PK	id int NOT NULL
FK	User
FK	Customer
FK	Product
	quantity PositiveInteger
	Order_Date DateTime
	status char

Cart

PK	id int NOT NULL
FK	User
FK	Product
	quantity PositiveInteger

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3 Requirements

3.1 Functional Requirements

3.1.1 User Registration and Login

The application requires users to register first. Users will be able to create an account by providing a valid email address, a password, confirm password and username.

3.1.2 Login

The application requires users to log in to purchase products. Users can log in using their username and password.
The system should validate that the user's email and password are correct.

3.1.3 Change Password

The user should be able to change/update their password if required.

3.1.4 Logout

The application should allow user to logout the application.

3.1.5 View Products

The application should allow customers to view products available for purchase. Customers can view products by category (watches, mobiles, headphones).
It should display the product image, name, and discounted price.

3.1.6 Product Detail View

The application provides a detailed view of the product, including its description, price, and discounted price.
Customers should be able to add the product to their cart from the product detail page Or buy single product directly.

3.1.7 Filter Products

Customers can filter any category price range.

3.1.8 Add to Cart

The application allows customers to add products to their cart by clicking the "Add to Cart" button. Customers can add multiple products to their cart. The Cart should update with each addition of product. The product should be there till the order is placed or product is removed.

3.1.9 Shopping Cart

Customers should be able to view the products in their shopping cart. Customers should be able to change the quantity of a product in the cart. Customers should be able to remove a product from the cart. The system should display the total amount and shipping amount in the cart.

3.1.10 Update Cart'

Customers can update the quantity of products in their cart by using the plus and minus buttons. The default quantity should be 1.

3.1.11 Remove from Cart

Customers can remove products from their cart by clicking the "Remove item" button.

3.1.12 Place Order

Customers can place an order by clicking the "Place Order" button. The application will prompt the customer to enter their shipping address and display total amount.

3.1.13 Checkout

Customers should be able to checkout their shopping cart. Customers should be able to select the delivery address from their address book. The user should not proceed further if no address is selected , if the total cost displayed is Rs. 0. The system should calculate the total amount, shipping amount, and the final amount.

3.1.14 Order History

The customer should be able to look their order history starting from initial purchase to latest purchase. It should didsplay the Product name , Quantity and the total amount.

3.1.15 Product Management

Administrators should be able to add new products to the product catalog. Administrators should be able to delete products from the product catalog. Administrators should be able to update the product information, such as name, description, price, and discounted price. Administrators should be able to upload the product image.

3.1.16 Order Management

Administrators should be able to view the list of orders placed by the customers. Administrators should be able to change the status of an order, such as pending, shipped, or delivered. Administrators should be able to view the order details, including the products and its quantity , user and its customer , order date and the status.

3.2 Non-Functional Requirements

3.2.1 Usability

The application should be easy to use and navigate. The user interface should be intuitive and user-friendly.

3.2.2 Security

The application should ensure that all user data is protected from unauthorized access.

3.2.3 Maintainability

It should be easy to maintain and update, with clear documentation and well-structured code.