# Software Requirements Specification (SRS) for Shopping Cart Functionality

# ( <https://www.thegioididong.com/dtdd> )

## 1. Introduction

### 1.1 Purpose

This document aims to describe in detail the functional and non-functional requirements for the shopping cart functionality on the Thế Giới Di Động website. The goal is to create a smooth and efficient shopping experience for users.

### 1.2 Scope

The shopping cart functionality allows users to:

* Add products to the cart
* Remove products from the cart
* Update product quantities
* View the list of products in the cart
* Calculate and display the total order value
* Proceed to checkout from the cart

### 1.3 Definitions, Acronyms, and Abbreviations

* **SRS**: Software Requirements Specification
* **UI**: User Interface
* **API**: Application Programming Interface

## 2. Overall Description

### 2.1 Product Perspective

The shopping cart functionality is part of an integrated e-commerce system that includes other functions such as product search, payment, and user account management.

### 2.2 Product Functions

1. **Add products to the cart**
2. **Remove products from the cart**
3. **Update product quantities**
4. **View the list of products in the cart**
5. **Calculate total order value**
6. **Navigate to the checkout page**

### 2.3 User Classes and Characteristics

* **Regular Users**: Customers can be new or registered. They need to easily add and manage products in the cart.
* **Administrators**: Manage product content and monitor orders.

## 3. Specific Requirements

### 3.1 Functional Requirements

#### 3.1.1 Add Products to the Cart

* **Description**: Users can add products to the cart from the product page.
* **Requirements**:
  + **FR1**: The system must allow users to select the product quantity.
  + **FR2**: The system must display an "Add to Cart" button.
  + **FR3**: Show a confirmation message when a product is added to the cart (e.g., "Product has been added to the cart!").
  + **FR4**: The cart must be updated immediately.

#### 3.1.2 Remove Products from the Cart

* **Description**: Users can remove products from the cart.
* **Requirements**:
  + **FR5**: Provide a "Remove" button next to each product in the cart.
  + **FR6**: Display a confirmation message before removal (e.g., "Are you sure you want to remove this product?").
  + **FR7**: The cart must be updated immediately after the product is removed.

#### 3.1.3 Update Product Quantities

* **Description**: Users can change the quantity of products in the cart.
* **Requirements**:
  + **FR8**: Provide an input box for the quantity of each product.
  + **FR9**: Provide an "Update" button for users to confirm changes.
  + **FR10**: The system must automatically recalculate the total order value when the quantity changes.

#### 3.1.4 View the List of Products in the Cart

* **Description**: Users can view all products added to the cart.
* **Requirements**:
  + **FR11**: Display the product list, including product name, image, price, quantity, and total price for each product.
  + **FR12**: Display the total order value at the bottom of the cart list.

#### 3.1.5 Calculate Total Order Value

* **Description**: The system automatically calculates the total value of all products in the cart.
* **Requirements**:
  + **FR13**: The total order value must be updated whenever there is a change in the cart.
  + **FR14**: Display information about discounts (if any).

#### 3.1.6 Navigate to Checkout Page

* **Description**: Users can proceed from the cart to the checkout page.
* **Requirements**:
  + **FR15**: Provide a "Proceed to Checkout" button.
  + **FR16**: When clicked, the system must navigate the user to the checkout page with cart information pre-filled.

### 3.2 Non-Functional Requirements

#### 3.2.1 Performance

* **NFR1**: The system must process add, remove, and update requests in the cart within 2 seconds.

#### 3.2.2 Security

* **NFR2**: User data and product information must be encrypted and protected from unauthorized access.

#### 3.2.3 Usability

* **NFR3**: The user interface must be user-friendly and easy to navigate, with clear instructions for each function.

#### 3.2.4 Availability

* **NFR4**: The shopping cart functionality must be available 99.9% of the time during website operation.

## 4. Conclusion

This document outlines the detailed requirements necessary for the shopping cart functionality. Successful implementation of these requirements will enhance user experience and boost revenue for the Thế Giới Di Động website.