Online Store Management System Report

# 1. Introduction

This project implements a simple online store management system that allows users to view products, add new products, edit existing products, delete products, search within products, and sort them based on various attributes. The system uses a MySQL database, an interactive frontend built with HTML, CSS, and JavaScript, and a backend API implemented using Python and Flask.

# 2. Project Components

## 2.1 Database (Backend)

- The project uses MySQL as the database management system.  
- The database contains a `Products` table with the following columns:  
 - Product\_ID  
 - Name  
 - Description  
 - Size  
 - Color  
 - Price  
 - Quantity  
- A RESTful API is built with Flask that supports CRUD operations (Create, Read, Update, Delete) on the products.

## 2.2 Frontend

- The user interface is built using HTML, CSS, and JavaScript.  
- Features of the frontend include:  
 - A table displaying all products.  
 - A modal form for adding and editing products.  
 - Search functionality to filter products.  
 - Sorting functionality to sort the table by any column.  
 - Edit and Delete buttons for each product.

# 3. Core Functionalities

## 3.1 Display Products

- On page load, all products are fetched from the backend API and displayed in a neatly organized table.

## 3.2 Add New Product

- Users can open a modal form to enter details for a new product.  
- Upon submission, the product is sent to the backend API and saved in the database.

## 3.3 Edit Existing Product

- Users can click the Edit button next to any product to open the modal pre-filled with that product’s data.  
- After editing, the changes are sent to the backend API and updated in the database.

## 3.4 Delete Product

- Users can delete a product by clicking the Delete button.  
- The product is removed from the database and the table updates accordingly.

## 3.5 Search Products

- A search bar filters the displayed products dynamically as the user types.

## 3.6 Sort Products

- Clicking on any table header sorts the products by that column in ascending or descending order.

# 4. Conclusion

This project demonstrates a fully functional online store management system with seamless integration between frontend and backend. The system supports efficient product management with an easy-to-use interface and robust database operations through a RESTful API.