**1. Introduction**

**1.1 Purpose**

The purpose of this Software Requirements Specification (SRS) document is to define the requirements for the **Classy Outfit Web Application**. This document provides a detailed description of the login, registration, and product search functionalities of the system. It serves as a reference for developers, testers, and stakeholders to understand the software’s goals and expected behavior.

**1.2 Scope**

The system is a **web-based application** that allows users to register, log in, and search for products. The application will provide functionalities like:

* User registration with email validation.
* Login using valid credentials.
* A product search bar to find products.
* Security features like password masking and protection against SQL injection.
* Session management with automatic time-out after inactivity.

**1.3 Definitions, Acronyms, and Abbreviations**

* **SRS**: Software Requirements Specification.
* **UI**: User Interface.
* **SQL**: Structured Query Language.
* **HTTPS**: Hypertext Transfer Protocol Secure.
* **Session Timeout**: Period after which the user is logged out due to inactivity.

**2. Overall Description**

**2.1 Product Perspective**

The **Classy Outfit Web Application** will be a responsive e-commerce platform that allows users to register, log in, and browse products. The system should support all modern browsers, such as Google Chrome, Mozilla Firefox, and Microsoft Edge.

**2.2 Product Features**

* **User Login**: Users can log in with their credentials (email and password).
* **User Registration**: Users can create a new account by entering valid details, including email and password.
* **Product Search**: Users can search for products by entering keywords in the search bar.
* **Security**: The system will prevent SQL injection attacks and use SSL encryption for data transmission.

**2.3 User Characteristics**

* Users should have access to the website via modern web browsers.
* Users will have the option to register a new account or log in with existing credentials.
* Users can browse products once logged in or as guests.

**3. System Features**

**3.1 Login**

* **Description**: Users should be able to log in using their registered email and password.
* **Functional Requirements**:
  + The system should allow login with valid credentials.
  + The system should display an error message when invalid credentials are entered.
  + The system should mask the password during entry.

**3.2 User Registration**

* **Description**: Users should be able to register by providing necessary details (email, username, password).
* **Functional Requirements**:
  + The system should verify the email format.
  + The system should store the user credentials securely.
  + Users should receive a confirmation email after registration.

**3.3 Product Search**

* **Description**: Users should be able to search for products.
* **Functional Requirements**:
  + Users can enter a search keyword.
  + The system should display relevant products based on the search term.
  + Search results should be displayed with product images, names, and prices.

**3.4 Security**

* **Description**: The system must ensure secure login and data transmission.
* **Functional Requirements**:
  + The system must implement SSL encryption for secure connections.
  + The system should prevent SQL injection by sanitizing inputs.
  + Passwords must be stored securely using hashing techniques.

**3.5 Session Management**

* **Description**: The system should automatically log users out after a certain period of inactivity.
* **Functional Requirements**:
  + The session should expire after 15 minutes of inactivity.
  + Users should be redirected to the login page after the session expires.

**4. External Interface Requirements**

**4.1 User Interfaces**

The application will have the following user interfaces:

* **Login Page**: A form to enter the email and password for login.
* **Registration Page**: A form to create a new account with username, email, and password.
* **Product Listing Page**: A page that displays products based on search results or categories.

**4.2 Hardware Interfaces**

The application will run on any standard laptop, desktop, or mobile device with internet access.

**4.3 Software Interfaces**

The web application will interact with:

* A database management system (DBMS) for storing user data and products.
* Payment gateway for processing transactions (if applicable).
* Email service for sending user registration confirmation emails.

**5. System Features and Requirements**

**5.1 Functional Requirements**

* **FR1**: Users should be able to log in with their registered credentials.
* **FR2**: Users should be able to register a new account.
* **FR3**: The application should support secure communication over HTTPS.
* **FR4**: SQL injection should be prevented through input validation and sanitization.

**5.2 Non-Functional Requirements**

* **Performance**: The application should load in less than 3 seconds.
* **Usability**: The system should be user-friendly and intuitive, with easy navigation between pages.
* **Reliability**: The system should handle up to 1,000 concurrent users.

**6. Assumptions and Dependencies**

* The application assumes that users have an internet connection and a compatible web browser.
* The system will depend on external services for email notifications and possibly payment processing.