**Simplilern: Advanced Java Development**

**Project: E-commerce Website for Sporty Shoes**

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**Project Overview:**

1. **E-commerce Website for Sporty Shoes -** The website displays an overview of all shoes. These are listed by ID, name, price, and image. Additionally, the products can be filtered and sorted by categories. If you are registered and logged in as an administrator, you can also see a list of all users. They decided to hire a Full Stack Developer to design and develop the website.
2. This project focuses on developing a backend project using JDBC, JSP, and Servlets, although a minimal frontend should be implemented. You can create frontend forms on your own or use online resources. It should include a search form to allow entries product details, list the available products with prices, and an image of the product.

**Technical Components –Frontend, Backend, Database Management & Test:**

* IDE: IntelliJ
* Programming Language: Java
* Java Server Pages (JSP)
* Java Servlets
* Java JDBC
* Database: MySQL
* Hibernate
* Frontend: React
* Test API functionality: Postman

**Core Concepts Demonstrated:**

* JSPs, Servlets, and JDBC to implement a fully connected application to a MySQL Database
* Implement frontend Form Design
* Implement Database CRUD features using JDBC
* Populated tables via script

**Features Roles:**

|  |  |
| --- | --- |
| **All Users** | **Admin Users** |
| * register new user | * Login |
| * Login | * Sort and filter products |
| * Change Password | * product maintenance (adding, updating, deleting and viewing) |
| * sort and filter products | * User management (adding, updating, deleting and viewing) |
| * click product to add to the cart |  |
| * remove products from the cart |  |

**HIGH LEVEL DESIGN**

**E-Commerce Website APP**

**Server**

**Browser**

HTTP - Request

Java Class

Java Servlet

Java Servlet

Java Servlet

Java Class

Java Class

HTTP - Response

1. User wants to load the E-commerce Website application. The Browser will send an HTTP request over to the server for the Website landing page.
2. Servlet will execute and generate HTML code on the fly (dynamically), and
3. Servlet will send the HTML file back to the browser as a HTTP response.

Backend

Frontend

**MySQL**

**Database**

**Java JDBC**

Repositories

(Business Logic)

**JSP Servlets**

(Controllers)

Business Logic

Styling

(CSS)

Java Models

(POJOs)

**JSP Pages**

(Forms)

View/Presentation