



AUSTIN'S ONLINE MUSIC STORE

Final Deliverable

Capstone Project

Austin Nguyen
austin.nguyen@hcl.com

Write Up

Austin's Music Store has finally reached its product release. By deploying the application, we were able to enter the market with various USPs (unique selling points) that the stakeholders specified on the design document. The program utilizes great modularization, coupling, and cohesion to provide the customer with an exceptional experience.

Through the development of this program, Austin's Music Store, the developer was able to showcase their control in a variety of Full-Stack Java concepts for source code optimization and increased performance. The concepts highlighted include: Java 8, Spring Boot, MySQL, Spring Data JPA, JSP, Swagger, Lombok, & Bootstrap. The Java 8 concepts include topics such as: Control Statements, Collections, Sorting Techniques, Interfaces, and I/O Stream. Furthermore, the Eclipse IDE dueled with Git version control helped increase productivity. By exactly matching the wire frames (sample output), the stakeholder is now able to move into the online retail space.

The developer began developing the project by solely implementing the backend with Swagger. The various POJO's created were user, product, as well as a cart. The constructors, setters, and getters were easily implemented by Lombok. Furthermore, to ease the CRUD operations with the MySQL database the DAO interface for these POJOs extended the JpaRepository. After verifying that the controllers worked through Swagger, the front end was then implemented by creating JSP dueled with Bootstrap. After the aesthetics were adequate, the developer then had to handle the session management. Upon completing this, a similar wire frame was replicated per the stakeholder's request.

Following the design document, the online product catalog can easily be browsed. To display products to the user, the database is already prepopulated with items for sale which includes displaying categories, a photo thumb, condition of the product, as well as the price. Additionally, a simple search feature was implemented which allows the user to quickly find a product they are looking for.

To ease the User Experience, a navigation bar was implemented. It easily allows the user to quickly view the home page as well as the product page. Furthermore, if the user has admin privileges the navbar also allows the user to access the administrative interface which we will discuss later. This navigation bar also allows a user to log out effectively closing the session which will empty the user's cart at that point in time and then redirect them back to the home page.

Also, per the stakeholders request a custom shopping cart and checkout was implemented. The shopping basket is stored locally, and a user may only checkout if they are logged into an account. Furthermore, before the user checks out a product summary is displayed including quantity number as well as a grand total. Upon checking out, the user must verify the billing and shipping address before they are provided with a receipt of their purchase. These entries are prefilled as this information was requested from the user when they registered for an account.

The program also allows for Catalog Administration. This Administrative Interface is implemented to allow for easy management of the web store data. Administration privileges include: adding/removing/updating products as well as the ability to view User's personal data.