



# SpotMusic

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Team C

EN 605.782.81.SU17 Web Application Development with Java



## Overview

Music eCommerce store that allows users create a user account by filling out a registration form, search music and artist, select desired music album and have it stored in a shopping cart with checkout functionality.

### Need for the system:

This software system is being developed as a project required towards fulfillment of the course 605.782.81: Web Application Development with Java in the Summer 2017 term.

### Project Definition:

Implement a music e-commerce store that allows multiple users to browse, search and purchase music albums simultaneously. User must log on prior to purchasing music albums and can easily access a library of purchased songs.

### Project team:

The team consists of the following team members:

Sarah Meehan, Earl Elias, Theodore Han Zhang

The project name is SpotMusic.

## Specifications

- Purchase
  - The customer shall register and log on to purchase albums. Email address and password shall be provided to register. Customer can add or edit billing address, shipping address and credit card info after login.
  - The customer can add multiple albums to the shopping cart and checkout.
  - Checkout form shall be filled with customer's details.
  - The customer can enter/edit billing address, shipping address and credit card info in the checkout form.
  - After checking out, a confirmation page will be shown and user can browse their purchased albums in the purchase library.
- Search/Browse music
  - The customer can type in the search box to search for albums according to album name or artist name.
  - The customer can browse albums by selecting genre or artist.

- There shall be a page showing a list of albums after submitting the search form or selecting a genre or artist.
- The customer can click on an album and the album details shall be shown in a new page.
- The album detail page shall contains album cover image, album release date, artist name, album tracks and the add to shopping cart button.

## Architecture

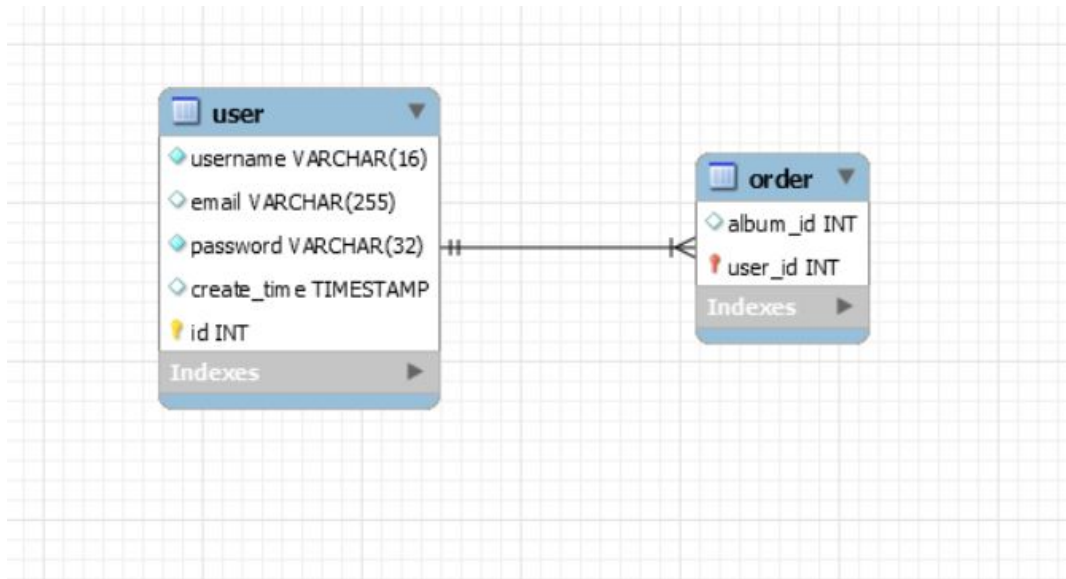
This project will be developed in MVC architecture..

- Views

Screen name	Description
Registration	New customer may enter their email address and password to register
Login	Allows customer to log on to the web site
Search/Browse	A search box allow user to search for albums. A list of genres and artists user can click to show the albums.
Album list	Display a list of albums according to user search term, genres or artist.
Album	Display album details and allow customer to add album to shopping cart.
Shopping cart	Shows a list of albums to be purchased. Allows modifications and checkout.
Checkout	Shows checkout form which allows customer to fill in their billing details and checkout.
Purchase library	Shows customer's purchased albums.

- Database

- User information would be stored in the database.
- The user table shall include the following fields: id, email address, password (hashed), billing address and delivery address.
- The order table shall include the following fields: user id and album id in spotify.



- Spotify Web Api

- Spotify web api would be used to retrieve album or artist details.
- The base url of the API is <https://api.spotify.com>
- Following endpoints would be used:
  - </v1/search?type=artist> search for an artist. Example:  
`GET https://api.spotify.com/v1/search/?type=artist&q=muse`
  - </v1/search?type=album> search for an album. Example:  
`GET https://api.spotify.com/v1/search/?type=album&q=ok+computer`
  - </v1/browse/new-releases> get a list of new releases
  - </v1/browse/categories> get a list of browse categories
  - </v1/albums/{id}> get an album by id



## Technologies

Server-side: Java Servlets

Client-side: JSP, HTML and spotify web api

Database: MySQL and Hibernate ORM

## Work Distribution

Each member of the team is expected to contribute development time. Team members are encourage to help each other and make changes if needed during the development.

Earl Elias

- Database implementation
- Front-end coding
- Code servlet for shopping cart management
- project documentation/presentation

Sarah Meehan

- Code jsp/html pages
- Implement dynamic web pages
- Code servlet for user validation
- project documentation/presentation

Theodore Han

- Implement database api with CRUD methods on user entity and ORM mapping.
- Code servlet for interacting with the spotify web api.
- Provide initial template for website
- project documentation/presentation