Project Name

RecordSwap

Project description

Our project is essentially a digital shelf and marketplace for physical music media. Users will be able to see available physical music media for purchase and accompanying info like price and sellers. They will also be able to track their own physical music collection and view the collections of others. They will do this with a unique account to access their information. Additionally, if there is time we will implement an ordering feature, where users can wishlist specific media and be notified when it becomes available to purchase.

Description

We want to have a digital way to keep track of physical music media that is built around individuals. We want to make it easy and accessible for less technologically savvy people to be able to quickly and easily see what they have in their collection as well as add to it. We would also like to let users visualize the data by release and artist to better track and what they need for their collection.

Creative Component

For our creative component, we plan to implement an interactive data visualization. We can build a “Collection Dashboard” where users can see a breakdown of their collection by format (vinyl, CD, cassette), pie charts of collection by genre, and bar charts showing how much of their collection is from each year. Users will be able to interact and customize these graphs. This will require calculations by SQL queries in the backend and then feeding that data to the frontend for rendering.

Usefulness

This application is useful for music collectors who want to organize and track their physical music collection.
Basic functions include:

- Search and filter music releases by artist, album, label, or year
- View detailed release information, including tracklist, release year, and genre
- Create, update, and delete person collection entries
- Mark items for sale or trade (admin or user side)
- View other users public collections

Complex features include:

- Advanced SQL queries for filtering, grouping, and sorting releases and collection data

Similar websites:

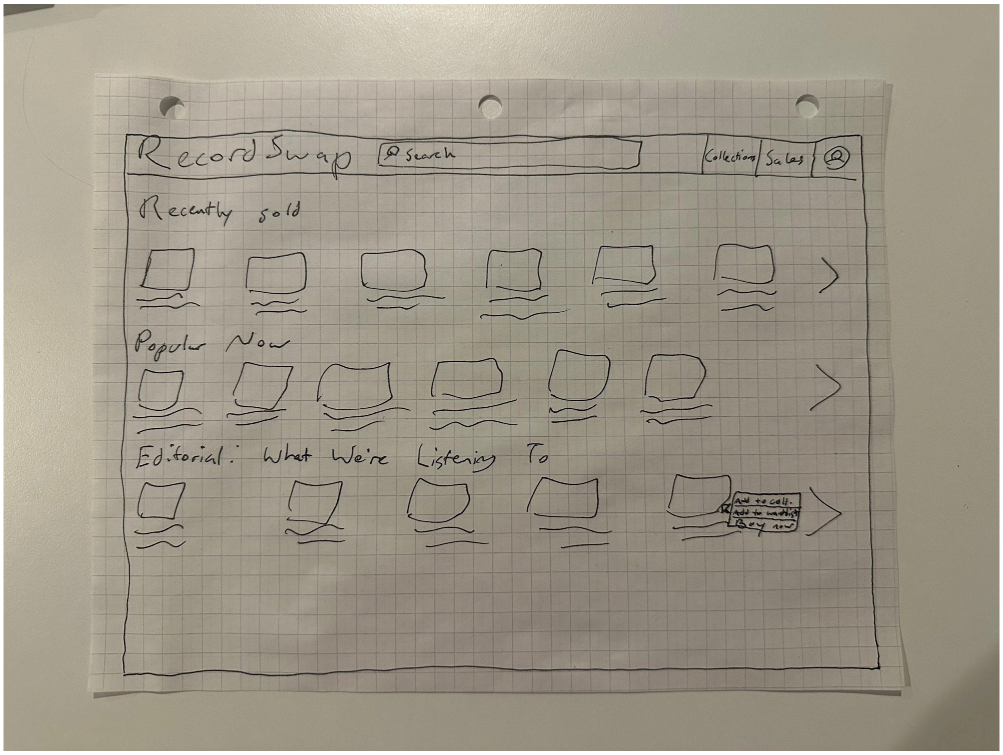
- discogs.com

Realness

We will be getting the data from Discogs APIs, such as sale listing info, We also will be getting other info such as artists and releases from Discogs previously released data. We will also get data from MusicBrainz Database. Additionally, we use randomly generated user data to simulate having a large user population on our website.
Discog API: https://www.discogs.com/developers/
Discog past data: https://discogs-data-dumps.s3.us-west-2.amazonaws.com/index.html
MusicBrainz Database: https://musicbrainz.org/doc/MusicBrainz_Database/Download

Functionality

Users will be able to create or delete an account. Users could create, delete, and update listings for products for sale, as well as search for active listings from other people for specific products. They will also be able to add specific products to wishlists and their personal list of things they already have in their collection. They would also be able to add information (upon review) to specific products, such as barcodes and matrix runout information for specific pressings of records. Users will also be able to list items in their “wantlist”, whereupon they will be notified when someone lists an item they have in their wantlist.



Project Work Distribution

Max Duquaine: Database design and Data preprocessing
Cole Zimmerman: Search and Filter SQL queries

Suhaas Kolli: CRUD operations

In addition to this defined task distribution, we will also meet weekly to determine progress and redistribute tasks if the workload is lighter or heavier than initially thought. We want to make sure tasks are evenly distributed on a week to week basis, as we want to account for potential changes or difficulties in the project that we didn't account for here. Additionally, once we all have completed the backend together, we will distribute the remaining functionality of the frontend for the last tasks of the project.