# Assignment 6 Database UI

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## Database UI

This project expands on using the contents of the Shopping Trends file from Assignment 3, and the SQL access demonstrated in Assignment 5. The schema and data files from those projects have been duplicated into this project.

This report is available at https://quoll.github.io/608\_frontend/report.html

## Description

This UI has been built using Flask and the MySQL-connector Python library. All required packages are described in the requirements.txt file. Because the UI is built using Flask, it is not available online, though it can be run locally.

To run the application:

- Load the Table Definitions into MySQL.
- Load the data (transformed from the original CSV) into MySQL.
- In the Flask directory, load the required packages using pip install -r requirements.txt
- Create a .env file in the flask directory.
- Start the Flask server using flask --app app run
  - This starts a web server on localhost:5000
- Open a web browser and navigate to http://localhost:5000/

#### .env file

While environment variables can be set in the terminal, it is easier to set them in a .env file. The following variables are required:

## **Listing Pages**

Each of the following pages displays large lists of data. This data is paged to 50 items per page, with paging controls at the bottom of the list.

#### **Customers**

Upon starting, the UI will show a list of customers. The Customers page can be accessed at ant time by Selecting the "Customers" link in the navigation bar. The initial customer data is extracted from the original CSV file and displays:

- ID: The customer ID. Select this button to view that customer's information.
- Age: The age of the customer.
- Gender: The gender of the customer.
- Subscription Status: Indicates whether the customer is a subscriber or not.
- Previous Purchases: The number of iprevious purchases made by the customer.
- Payment Method: The preferred payment method of the customer.
- Frequency Name: The frequency of purchases made by the customer.
- Location Name: The location of the customer.

• Purchase: This is a button that navigates to the purchases page for that customer. The original dataset contains a single purchase per customer, but additional purchases can be added.

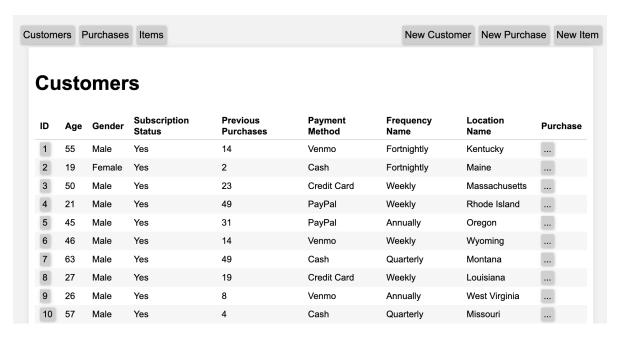


Figure 1: Customer Listing

#### **Purchases**

The Purchases page can be accessed by selecting the "Purchases" link in the navigation bar. The initial purchase data is extracted from the original CSV file. This page displays:

- ID: The purchase ID. Select this button to view the information for that purchase.
- Customer: The ID of the customer who made the purchase. Select this button to view the information for that customer.
- Item: The name of the item purchased. Hover over the item to see the category, size, and color of the item.
- Amount: The amount of the purchase.
- Season: The season in which the purchase was made.
- Rating: The numerical rating given to the purchase by the customer.
- Payment Method: The payment method used for the purchase.
- Shipping Type: The shipping type used for the purchase.
- Discount: Indicates whether a discount was applied to the purchase.
- Promo Code Used: Indicates whether a promo code was used for the purchase.

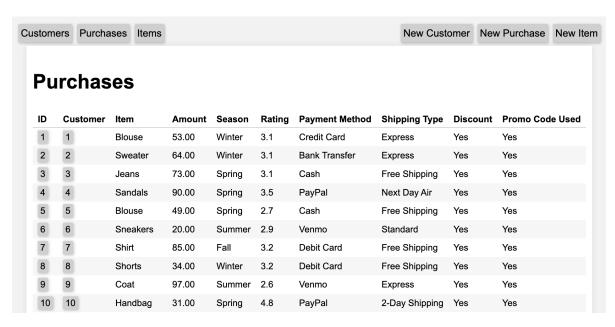


Figure 2: Purchase Listing

#### **Items**

The Items page can be accessed by selecting the "Items" link in the navigation bar. The initial item data is extracted from the original CSV file. This page displays:

- ID: The item ID. Select this button to view the information for that item.
- Name: The name of the item.
- Category: The category of the item.
- Size: The size of the item.
- Color: The color of the item.

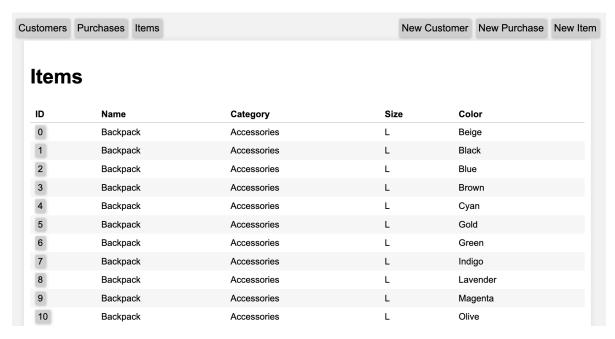


Figure 3: Item Listing

## **Paging Controls**

As mentioned above, each of the preceding listings are shown in lists of 50 elements at a time. An example of the paging controls (from the bottom of Customers) is shown here.

Paging Controls

## View and Editing Pages

#### **Customer View**

The Customer View page can be accessed by selecting the customer's ID button in the Customers page. This page shows the Customer ID in the header, and displays all of the information for that customer:

- Age: The age of the customer.
- Gender: The gender of the customer.
- Subscription Status: Indicates whether the customer is a subscriber or not.
- Previous Purchases: The number of previous purchases made by the customer.
- Payment Method: The preferred payment method of the customer.
- Frequency Name: The frequency of purchases made by the customer.
- Location Name: The location of the customer.

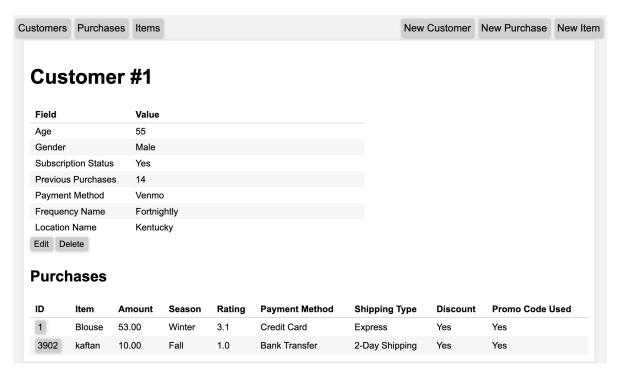


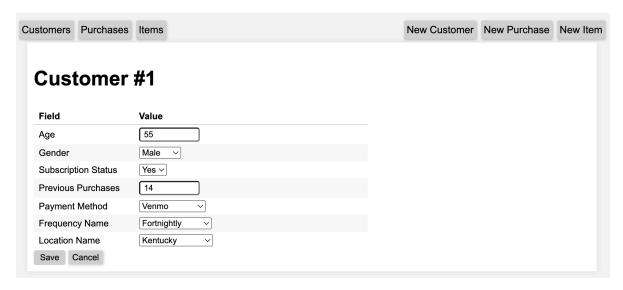
Figure 4: Customer View

Under the customer information, the purchases made by that customer are displayed. These contain the same information as the Purchases page, but only for the current Customer. The information for each purchase can be viewed by selecting the purchase ID button.

Note that the Customer view also has a **Delete** button. This can be used to remove the customer from the database.

Selecting the "Edit" button will take you to the Customer Edit page, where the information can be editing using the same layout as the Customer View page. The "Save" button will save the changes to the database, and the "Cancel" button will take you back to the Customer View page without saving any changes.

Examples of the Customer Edit and New Customer screens are shown here:



New Customer Screen

#### **Purchase View**

The Purchase View page can be accessed by selecting the purchase ID button in the Purchases page. This page shows the Purchase ID in the header, and displays all of the information for that purchase:

- Customer: The ID of the customer who made the purchase. Select this button to view the information for that customer.
- Item: The name of the item purchased. The category, size, and color of the item are displayed to the right.
- Amount: The amount of the purchase.
- Season: The season in which the purchase was made.
- Rating: The numerical rating given to the purchase by the customer.
- Payment Method: The payment method used for the purchase.
- Shipping Type: The shipping type used for the purchase.
- Discount: Indicates whether a discount was applied to the purchase.
- Promo Code Used: Indicates whether a promo code was used for the purchase.

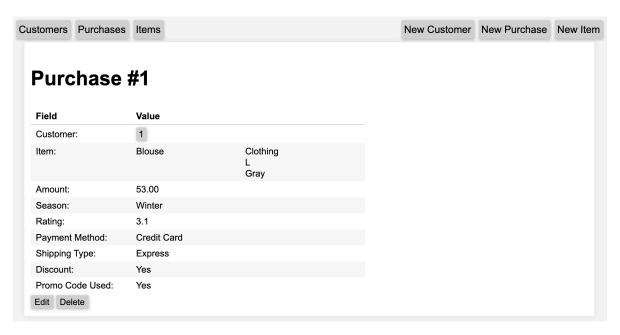


Figure 5: Purchase View

This screen also has a **Delete** button. This can be used to remove the purchase from the database. Note that if the purchase is referenced by a customer, then attempting to remove it will lead to an error page.

Selecting the "Edit" button will take you to the Purchase Edit page, where the information can be editing using the same layout as the Purchase View page. Note that most of these values are dropdowns, and the values are limited to those in the database.

The "Save" button will save the changes to the database, and the "Cancel" button will take you back to the Purchase View page without saving any changes.

Purchase Edit Screen

New Purchase Screen

#### Item View

The Item View page can be accessed by selecting the item ID button in the Items page. This page shows the Item ID in the header, and displays all of the information for that item:

• Name: The name of the item.

• Category: The category of the item.

Size: The size of the item.Color: The color of the item.



Figure 6: Item View

This screen also has a **Delete** button. This can be used to remove the item from the database. Note that attempting to remove an item that is referenced by any purchases, will lead to an error page.

Selecting the "Edit" button will take you to the Item Edit page, where the information can be editing using the same layout as the Item View page. Selecting the "Save" button will save the changes to the database, and the "Cancel" button will take you back to the Item View page without saving any changes.

Item Edit Screen

New Item Screen

#### Data

The schema is in data/definitions.sql

The data is found in data/data.sql