Hop To It Database

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Abstract

- Abstract
- Project Description
- Database Modeling
  - ER/EER explanation: entity, relationship, hierarchy.
  - Database schema explanation
  - SQL Functions
- Database app
- Summary of findings and process

Description

- Website is easily navigated with the search bar or by clicking buttons and elements, links take users to external pages easily.
- The website is designed to make the database information as accessible and interesting as possible, complete with images, and interactive elements.
- The website was created to help users find new Beers, Breweries, and Bars to learn about, and to help document their favorite discoveries.

Purpose and Mission

- Purpose: Resource to learn more about beer, breweries, and bars while expanding the network of beer lovers

- Mission: To share the joy of beer and give people a utility to help them explore the world beer and explore new aspects of world of Beer

Database Schema Explanation

- We planned our database functions to streamline the addition of new data. New entries are easily added and removed.
- Tables are strategically linked to facilitate multi table updates and queries.
- Hierarchy was outlined in Schema to improve Complex Queries and Functions for maximum efficiency.

App: Tools, Functions, Interaction

- Python Flask Framework
- Tools:
  - Complex Queries
  - Cursor, View, Trigger, Function
  - Add/Remove Functionality
- User Interaction
  - Search Bar, Interactive Buttons, Links, Ability to Add/Remove
- Functions
  - Update Beer to increase Price_Range_Code to allow modification of Beer prices, update brewery's # of beers.

SQL

- We loaded data manually by adding to each separate entity.
- Simple Queries to display content of tables.
- View
- Trigger
  - Updates the number of beers each brewery has represented in the database.
- Procedure
  - Change Price and Update Price Range Code
- Cursor: Iterates through rows to find information.
- Our multi-table query returns the Beers listed by Brewery. In addition another complex query we added is a filter by feature on the Brewery page so that users will be able to see Breweries organized by region and filter beers by beer style on the beers page.

Database Modelling

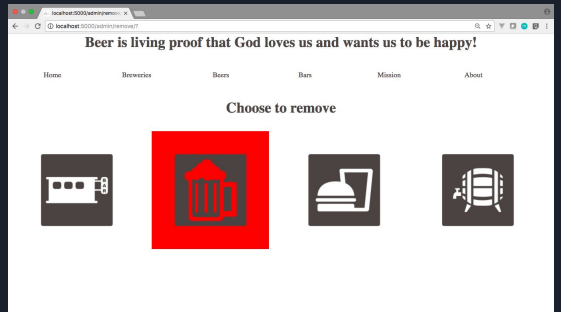
- The primary key from the Brewery table, Brewery_id is a primary and foreign key in the Beer table, the Bars table, and the Likes table to facilitate ease of understanding for our website and database.
- The hierarchy was considered to maximize functionality of our database and our intended use with the web framework.
- Parent Tables: Beer, Bars, Brewery, Beer_Food, Locations, Region
- Child Tables: Food_Pairing, Beer_in_Bars, Beer_Style, Seasonal_Availability

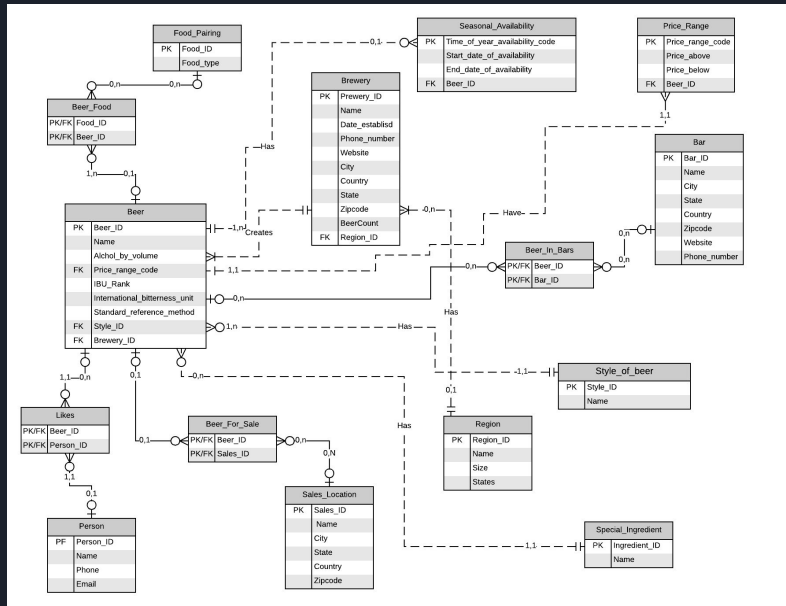
ER/EER Explanation

- Entities: BEER, BREWERY, BARS, BEER_FOOD, FOOD_PAIRING, BEER_FOR_SALE, CREATE TABLE BEER_IN_BARS, SALES_LOCATION, BEER_FOR_SALE, BEER_STYLE, REGION, SEASONAL_AVAILABILITY, BEER_FOR_SEASON, PRICE_RANGE

- Each Table has many features and interaction with other tables

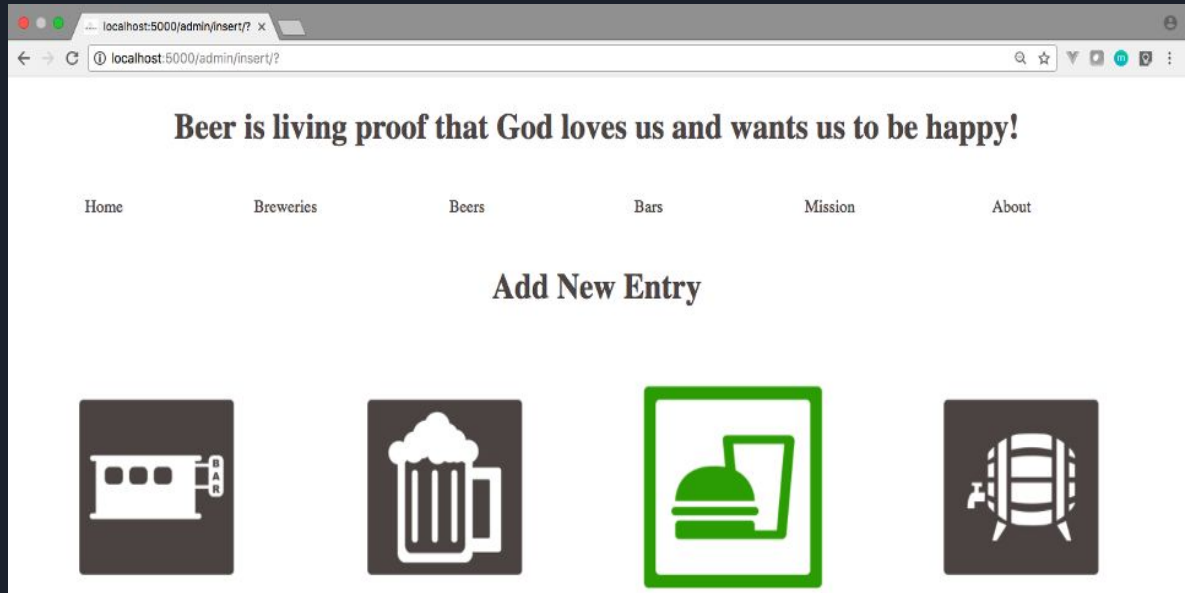
- Hierarchy utilized to maximize functionality of database/web app





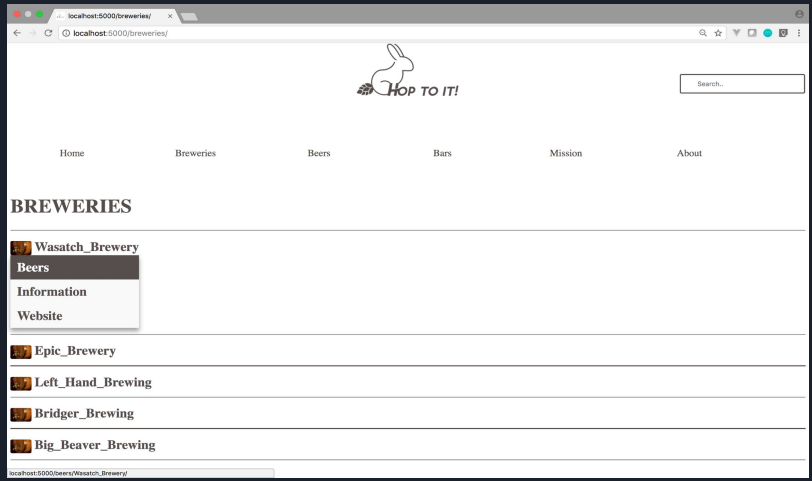
Functions

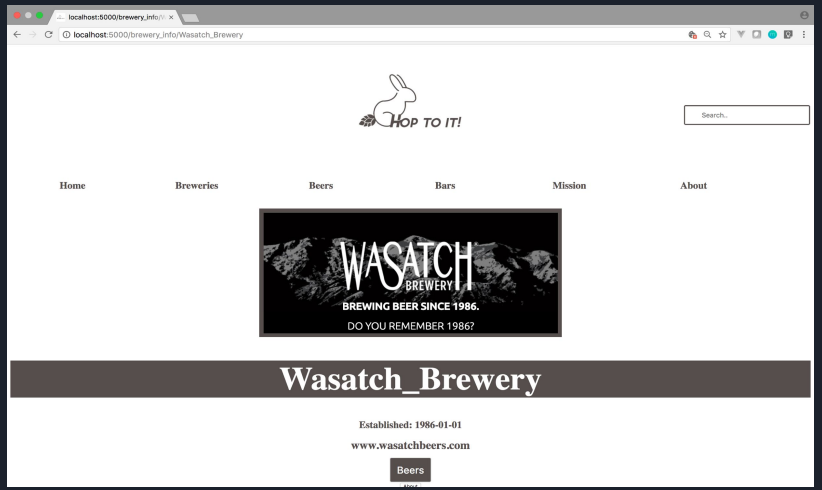
- Ability to add/remove entries
- Complex queries
- Cursor
- Search Bar
- Expanding Tabs
- View
- External Links
- Filter By Ability



Links to Information

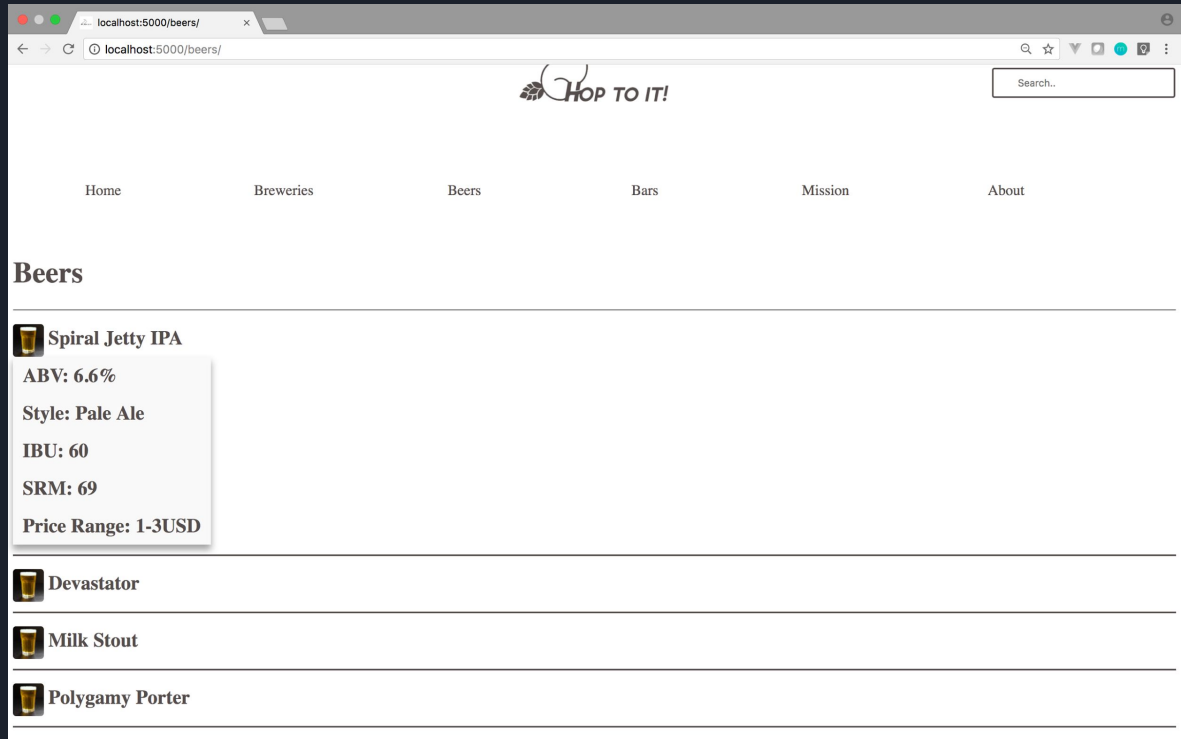
- Our website allows users to navigate to Brewery websites by hovering over each brewery in the Breweries page and clicking on the link.





Procedure and View

- View displays Beers organized by Beer Style to improve the organization of our website and database
- Procedure allows the prices of beers to be changed and will automatically update the Price Range Code of the altered Beer



Summary

- Robust database that allows users to learn more about bars, various beers and breweries, and to use the website as a point of reference where they can save their favorite beers, bars, and breweries.
- Hiding Add/Remove functionality behind an Admin page to prevent online users from using the functionality and changing our hard work.

Difficulties:

- Integration of the user profile system.
- Formatting of our inserts, queries, and functions.
- The website development presented challenges. The images and website features had to be customized in order to work well with our web framework

Future Work

- Could include adding regions to the Bars table or add other countries to the database.
- Implementing a calendar to organize events in.
- Implementing user login function
- Implementing user actions on specific breweries/beers such as ‘like’ or ‘dislike’.
- Creating a chat function for users to communicate with.
- More robust filtering options