CS 5200 Database Management Systems- Project Proposal

Title: New England Ice Cream Network
Group Name: ArmandZ
Members: Zachary Armand

Project Description

The "New England Ice Cream Network" project is a way for ice cream aficionados to track their favorite flavors and chains, as well as find new flavors to try. The database tracks flavors at ice cream chains, and allows users to submit review ratings of these flavors at chains. Other users can see all reviews, as well as search for flavors and chains to try.

Data Description

Users sign up for the database and provide their name, email, preferred username (if available), and are given a unique user ID. Users submit as many reviews as they want of flavors at specific chains.

Reviews consist of a review ID, a review date, stars (out of ten), and any other remarks about the experience. Reviews are submitted by only one user for one flavor at one chain. A flavor and chain may have zero to many different reviews.

Chains are tracked at the brand level, and receive a unique chain ID and provide a chain name. Chains are brands and not specific locations. That is, J.P. Licks would be stored once in the database as J.P. Licks, and there wouldn't be any information about specific J.P. Licks locations. Generally, ice cream brands stock the same flavors across their locations, so storing location information wouldn't provide any useful information in this iteration of the project. Chains stock one to many different flavors.

Flavors are general flavors of ice cream, with a unique flavor ID and common name. This allows the same flavor to be tracked across different chains, and equivalent flavors can be compared. While there is a general name for a flavor, different chains can call a flavor by different names. When a chain stocks a flavor, it is given a name and stocking status (True or False). For example, "Cookies and Cream" might be the common name of a flavor, but one chain might call it "Oreo" and another chain might call it "Hydrox". But ultimately, they are the same flavor of ice cream. By tracking flavors this way, users can be sure they're reviewing the right flavor at a chain, and also be able to search for flavors across chains regardless of name. Stocking status allows chains to have seasonal flavors that they only keep in stock at certain times. A flavor is stocked at zero to many chains.

Flavors are made of one to many base flavors (e.g. vanilla or chocolate), and can contain zero to many mix ins. This allows for a range of flavors combinations, from plain chocolate to complex flavors that contain many bases and mix ins. Base flavors are stored with a unique base ID as well as a description. Mix ins are also stored with a unique mix in ID as well as a description and

category (such as nut, fruit, candy, etc.). A base may be found in zero to many flavors, and a mix in may be found in zero to many flavors.

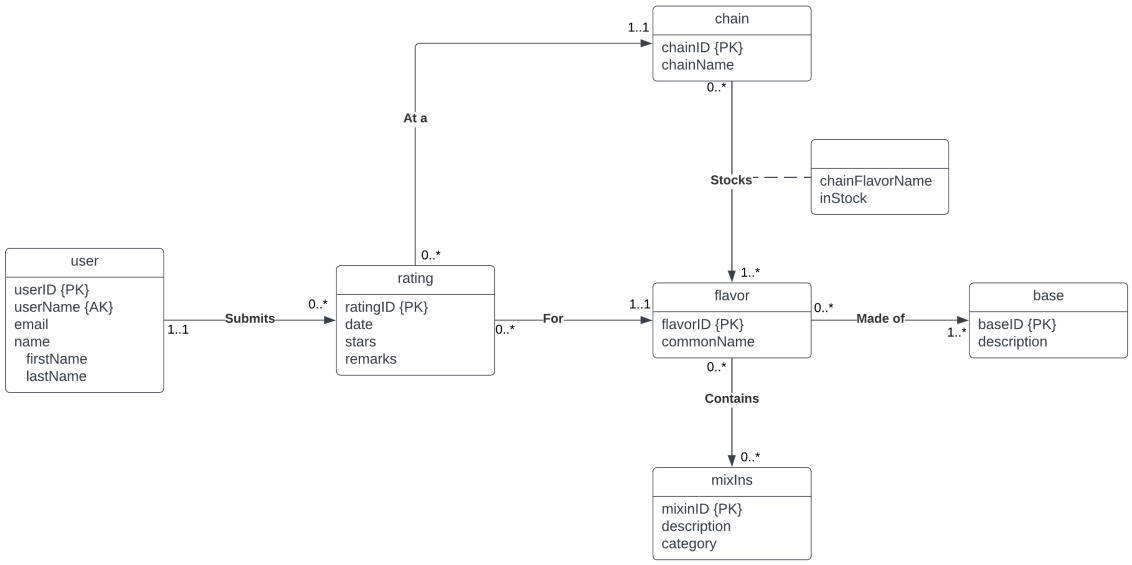
Software

I will be creating a relational database (SQL), using MySQL Workbench. Additionally, I will be using python to develop the backend of the user interface, which will be a basic terminal/command line output. There are no known machine restrictions.

Project Motivation

I am mostly interested in this project from a personal perspective – I love ice cream! I also really enjoy trying new and novel flavors at different ice cream shops. With this project, users will be able to find flavors that interest them, as well as let other users know which flavors they think are worth trying. Some people are also very into specific flavors, and want to try them at every location that has it (I know several people who feel this way about Black Raspberry Chip, for whatever reason). So, having a way for people to easily view every ice cream chain that stocks a specific flavor, as well as being able to rate their opinion of this flavor, is another useful application of this project for those who feel strongly enough about ice cream.

UML Diagram



Activity Diagram