CS 340-400

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Project Step 1: Draft

Project + Database Outline

Project Outline

This database will represent a review and information system for restaurants and their customers. Customers can review restaurants which will generate a rating for the restaurant. Customers must add their information in order to add a review. Restaurants will have information about their name, location, cuisine, and rating.

Database Outline

Entities and Attributes:

- **Restaurants**
  - **Id:** This is an auto-incremented, not null, and unique number used to identify a restaurant. This is the primary key.
  - **Name:** This is the restaurant's name. This is a string with a max of 200 characters. It cannot be blank or null.
  - **Rating:** This is an average rating based on customer reviews. This is a decimal number to two decimal places to represent a percentage. It cannot be blank or null. The numbers will be calculated as an average of likes (value of 1) and dislikes (value of 0) based on the number of customers who left reviews.
  - **Location:** This is the physical location of the restaurant. This will be an id of the location entity. Only one restaurant can be at any given location, so the id must be unique. Location cannot be null or blank.
  - **Cuisine:** This is the cuisine which the restaurant serves. This will be an id of the cuisine entity. The cuisine does not have to be unique.
- **Location**
  - **Id:** This is an auto-incremented, not null, and unique number used to identify a location. This is the primary key.
  - **Address**
    This is the physical address of a restaurant. It must be unique.
    - **Street:** This is the street name of the restaurant. This is a string with a max of 255 characters. This cannot be null or blank.
    - **Suite number:** This is the suite number of the restaurant. This can be blank.
    - **City:** This is the city where the restaurant is located. This cannot be null or blank. This is a string with a max of 100 characters.
    - **State:** This is the state abbreviation where the restaurant is located. This cannot be null or blank. This is a string with a max of 2 characters.

        - **Zip code:** This is the zip code of where the restaurant is located. This is an integer with 5 numbers. This cannot be blank or null.
- **Customers**
    - **Id:** This is an auto-incremented, not null, and unique number used to identify a customer. This is the primary key.
    - **First name:** This is the customer's first name. This is a string with the max of 100 characters. This cannot be blank or null.
    - **Last name:** This is the customer's last name. This is a string with the max of 100 characters. This cannot be blank or null.
    - **Email:** This is the customer's email. This is a string with the max of 100 characters. This cannot be blank or null. This must be unique.
    - **Birthdate:** This is the customer's birthdate. This is a date in the format YYYY-MM-DD.
    - **Preferences:** This is the customer's cuisine preference. This will be an id of the cuisine entity.
- **Reviews**
    - **Like/Dislike:** This represents the customers review of a restaurant. This is a Boolean which defaults to true (like). This cannot be null.
- **Cuisine**
    - **Id:** This is an auto-incremented, not null, and unique number used to identify a cuisine. This is the primary key.
    - **Type:** This is a description of the type of food a restaurant serves. This is a string with a max of 100 characters.

Relationships:

- **Restaurants have customers:** Many restaurants have many customers. This is a many-to-many relationship
    - **And these customers generate reviews:** Many restaurants have many customers and many customers generate many reviews. This is a many-to-many relationship.
    - **Example of this relationship:**

Restaurant	Customer	Review
ABC	123	TRUE
DEF	123	FALSE
ABC	456	TRUE

- **Restaurants have locations:** Every restaurant has a single location which belongs to it. This is a one-to-one relationship.
- **Restaurants serve cuisine:** A restaurant serves one cuisine, but a cuisine can be served at many restaurants. This is a one-to-many relationship.
- **Customers have cuisine preferences:** Every customer has a single cuisine preference, but a cuisine can be a preference for many customers. This is a one-to-many relationship.