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CS340
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Coffee Types Database
Project Step 2

Project Outline and Database Outline - Updated Version

The only thing that I would like to change is the name of the primary id key. I will be adding the name of the entity so that each id has a unique name.

Project Outline

I will be making a database for coffees from all over the world. There are many different varieties, roasts, and origins, and each roaster can create a unique coffee by changing each of these features. This database will store information on many different coffees in a well-organized and easy-to-understand format.

Database Outline

The entities in my database are:

- **Coffee** – This will be the type of coffee. Coffee names are usually descriptive of the type of coffee used, but it can have a creative name chosen by the roaster as well. Coffee is the main entity in the database and is connected to all of the other entities.
    - **coffee_id:** Each coffee has a unique id that is automatically generated upon creation. This is an auto-incremented number which is the primary key.
    - **name:** Each coffee has a name associated with it. This is a string with a max of 100 characters, which cannot be blank and has no default.
    - **origin:** The country of where the coffee was originally grown. This will contain the id of that origin in the database. It cannot be blank and there is no default.
    - **roaster:** Which Roaster created this coffee. Contains the id of the Roaster, cannot be null, there is no default, and cannot be from a Roaster not in the database.
    - **roast:** This will contain the id of which Roast is used. Cannot be null and must be one of the four Roast options in the database, and there is no default.
    - **variety**: Contains the id of the Variety of the coffee. Must be one of the Varieties in the database and cannot be null. The default is Coffea arabica.
    - **description:** A description of what the coffee is like. A string of max 255 characters, and the default is null.
- **Origin –** The origin is the place that the coffee was grown.
    - **origin_id:** Every origin has a unique id that is automatically generated upon creation. This is an auto-incremented number which is the primary key.
    - **country:** The name of the origin which is a string of max 100 characters. It cannot be null and has no default.
    - **continent:** The name of the continent in which the country belongs to. It is a string of max 100 characters and cannot be blank.
- **Roaster –** The roaster is the entity that makes each coffee.

    - **roaster_id:** Each roaster has a unique id that is automatically generated upon creation. This is an auto-incremented number which is the primary key.
    - **name:** The name of the roaster, either a business name or an individual. It is a string of max 100 characters and cannot be blank.
    - **city:** The city where the roaster is located. It is a string of max 100 characters and cannot be blank.
    - **state:** The state where the roaster is located. It is a string of 2 characters and cannot be blank.
- **Roast –** There are light, medium, medium-dark, and dark roasts.
    - **roast_id:** Each roast has a unique id that is automatically generated upon creation. This is an auto-incremented number which is the primary key.
    - **roast:** The roasting type of the coffee. A string of max 11 characters and must be either light, medium, medium-dark, or dark.
- **Variety –** This entity holds the different varieties of coffee plants, such as Coffea arabica.
    - **variety_id:** Each variety has a unique id that is automatically generated upon creation. This is an auto-incremented number which is the primary key.
    - **name:** The name of each coffee variety. Cannot be blank and must be a string of max 100 characters.
    - **description:** Details about the coffee variety. A string of max 255 characters, and the default is null.

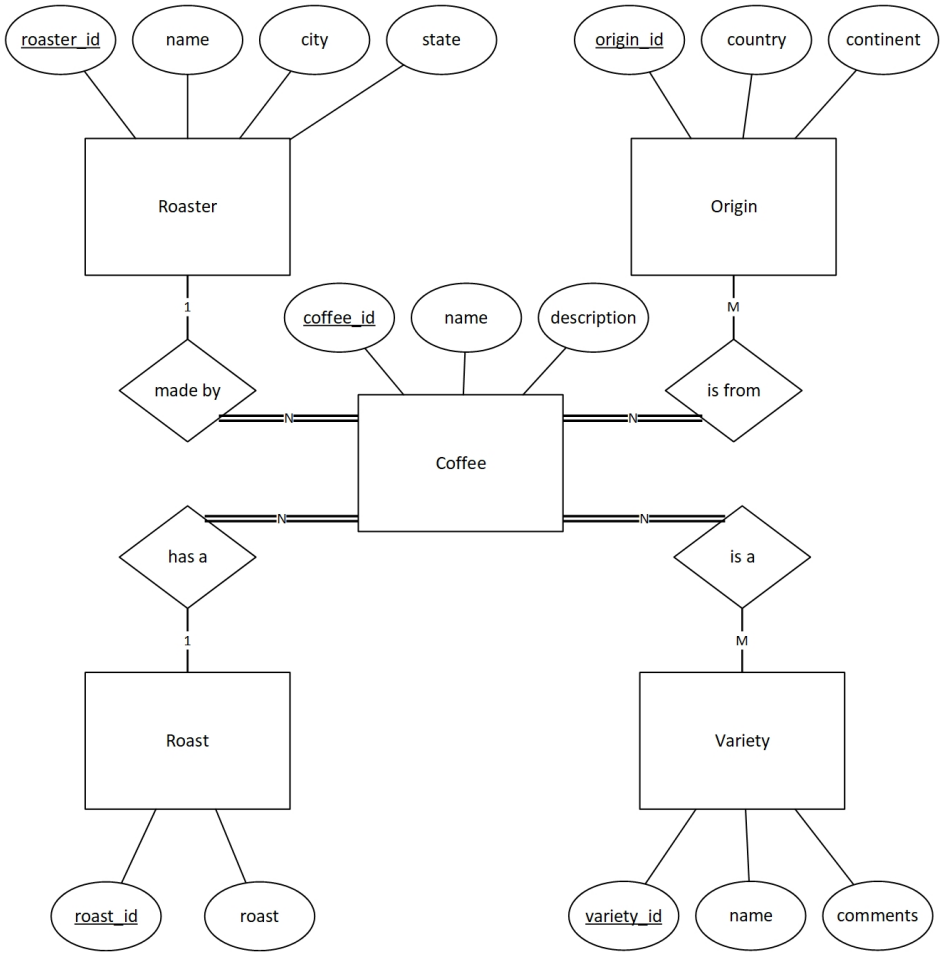
The relationships in my database are:

- **Coffees are from origins** – This is a many-to-many relationship as coffees can be blended and come from one or more origins, and many different coffees can come from each origin.
- **Coffees are made by a roaster** – This is a one-to-many relationship. Each coffee comes from one roaster, and each roaster can have many different coffees.
- **Coffees have a roast level** – This is a one-to-many relationship. Each coffee must have one of four available roasts, and many coffees can have the same roast.
- **Coffees are a type of variety –** This is a many-to-many relationship as coffees can be blended and consist of one or more varieties, and many different coffees can come from each variety.

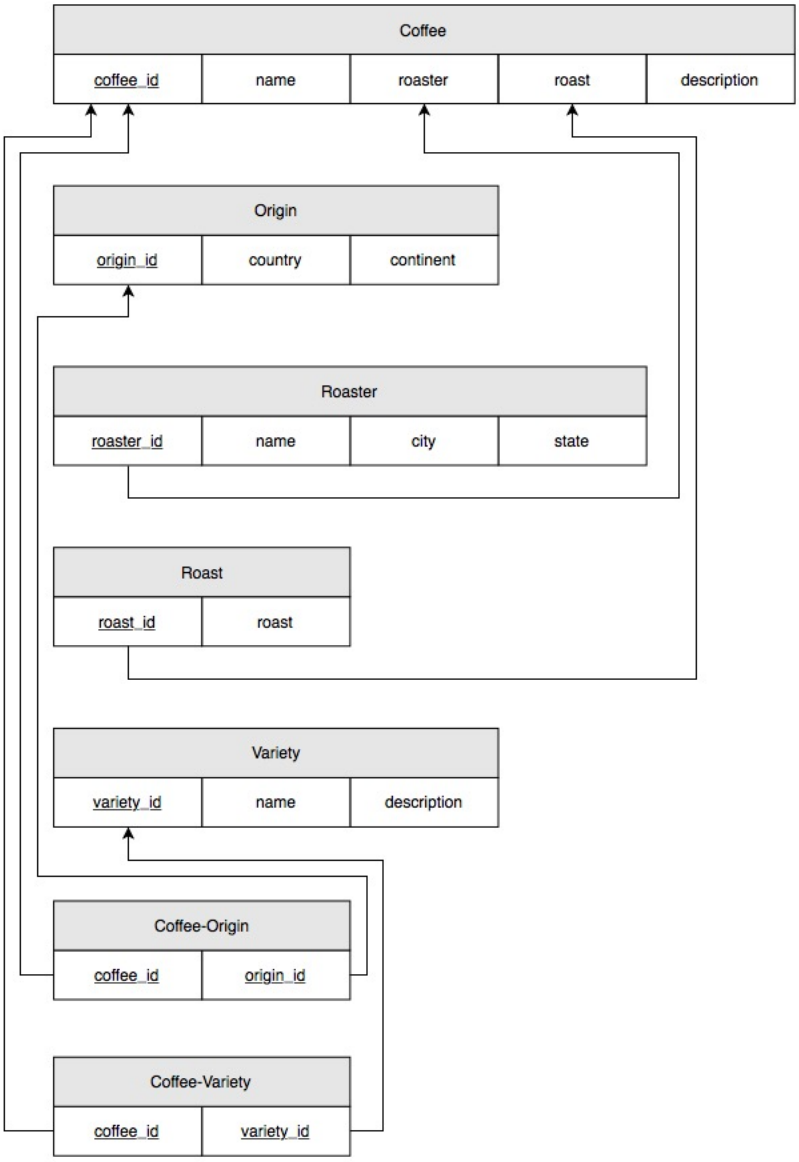
Fixes based on Feedback from Step 1

The feedback I received did not suggest any fixes or changes.

Entity-Relationship Diagram



Schema


Coffee
coffee_id
name
roaster
roast
description
Origin
origin_id
country
continent
Roaster
roaster_id
name
city
state
Roast
roast_id
roast
Variety
variety_id
name
description
Coffee-Origin
coffee_id
origin_id
Coffee-Variety
coffee_id
variety_id