CS480 – Course project

Summer 2021

Database:

halal_product

Description:

There will be a list of products. Each product will have an ID, name, product category, manufacturer, product image, and halal status. Each product will belong to a category that will contain an ID, category name. Each product will have a manufacturer that will contain an ID, manufacturer name, and logo.

Each product will also have a Halal Status which will have an ID, status, and halal certification. Each store will have a unique store id, region id, name, address, and zip code. The region ID is contained within the Region entity which also has the region name. Every product will be available at multiple stores. Each store will have several Halal products. If a product at a particular store becomes unavailable, then this information will be saved.

Part 2 – CRUD (Create, read, update, and delete)
Deadline: July 17, 2021

List of strong entities:

1. halal_status
2. product_category
3. manufacturer
4. region

List of weak entities:

1. product
2. store
3. product_store

We will implement the following functionality using Java and SQL with necessary GUI interfaces.

1. Insert/delete/update/read a **store** (all attributes except the id). The id should be generated by the system automatically using MySQL autoincrement.
2. Insert/delete/update/read a **manufacturer** (all attributes except the id). The id should be generated by the system automatically using MySQL autoincrement.
3. Insert/delete/update/read a **region** (all attributes except the id). The id should be generated by the system automatically using MySQL autoincrement.

Part 3 – Queries
Deadline: July 31, 2021

Based on the Demo, we will implement the following functionality using Java and SQL with necessary GUI interfaces.

Trivial Queries:

1.   List all Store.
2.   List all Store in the MidWest region.
3.   List all Store in the West region.

Non-trivial Queries:

1.   List all the products that are halal but not available at any store.
2.   List all Store that have at least one halal product.
3.   List all the halal products by store and availability in region.
4.   List all the stores carrying a particular halal product in a particular zip code
5.   A product is considered more reliable in terms of being halal if it has at least one certification. Create a view called ProductDetails which shows the product name along with the certifications it has associated with the halal status. It also shows the manufacturer, the store and region it is available in.