

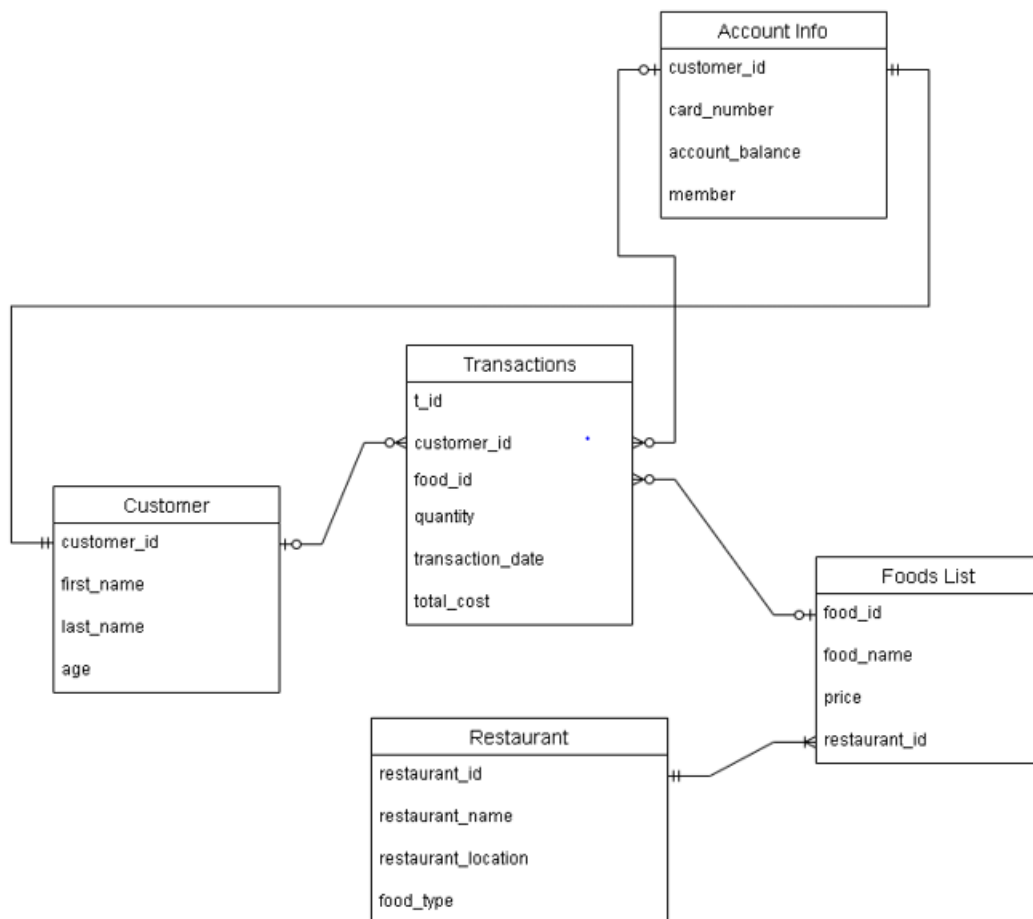
Team 10

COSC 3380

11/22/2023

## Enterprise Database Application

### ER Diagram:



## **Web Application Summary:**

Our web application consists of four main pages: the Home page, the Customers page, the Restaurants and Menus page and the Transactions page.

The Home page contains a 'Clear Tables' button, a 'Make a Transaction' section, three buttons that lead to the three other pages and links to the readme file and demo video.

The Customers page and Restaurants and Menus page are self-explanatory: they contain information about the customers, restaurants, and the restaurants' menus. They also have some additional features that allow the user to update the 'customer,' 'account\_info,' 'restaurant,' and 'food\_list' tables which can be seen in the ER diagram.

Lastly, the Transactions page shows all of the transactions made in the web application. It also has a feature that allows users to view more specific details about a specific customer's transactions.

For more detailed information about our web application, please read the readme file, which can be found in our submitted hw2 folder or through the link provided in the web application.

## **Transactions:**

The main way to make a transaction in this web application is through the 'Make a Transaction' section of the Home page. To make a transaction, the user must first select a customer ID and a food ID (customer IDs can be found in the Customers page and food IDs can be found in the Restaurants and Menus page). Then, the user must select the quantity of the

chosen food item that they want to buy for their chosen customer (max quantity is 10). Lastly, the user may choose to add a tip, but doing so is completely optional. It is important to note that all food items have a 5% tax. Additionally, if a chosen customer is a member, then that customer will receive a 10% discount. The discount is applied first, followed by the tax and the tip is added last. For example, if a customer is a member and that customer buys 10 of a food item that costs \$10 and chooses to tip \$10, the base cost will be \$100, then it will be \$90 after the 10% discount, \$94.5 after the 5% tax is applied and the final cost will be \$104.5 after the \$10 tip is added.

### SQL for Transactions:

```
INSERT INTO transactions (customer_id, food_id, quantity, transaction_date, total_cost) VALUES ($1, $2, $3, $4, $5) RETURNING t_id;
```

This creates a new row in the 'transactions' table. It essentially keeps track of who bought the food item, what the food item was, how much of the food item was bought, when the food item was bought, and how much the total cost for the transaction was.

```
UPDATE account_info SET account_balance = account_balance - $1 WHERE customer_id = $2;
```

This updates a customer's account balance whenever a transaction is added.

### SQL for Important Queries:

```
SELECT * FROM food_list  
JOIN restaurant ON food_list.restaurant_id = restaurant.restaurant_id  
ORDER BY food_list.restaurant_id;
```

This allow for the display of food items that are only from a specific restaurant.

```
SELECT c.customer_id as customer_id, c.first_name as first_name, c.last_name as last_name,
```

```
        c.age as age, a.card_number as card_number, a.account_balance as
account_balance, a.member as member
    FROM customer c
    JOIN account_info a
    ON c.customer_id = a.customer_id
    ORDER BY c.customer_id;
```

This allows for the display of important customer data in the Customers page.

```
SELECT t.*, f.food_name AS food_name, f.price AS food_price, c.first_name AS
first_name, c.last_name as last_name, r.restaurant_name
    FROM transactions t
    JOIN food_list f ON t.food_id = f.food_id
    JOIN customer c ON t.customer_id = c.customer_id
    JOIN restaurant r on f.restaurant_id = r.restaurant_id
    WHERE t.customer_id = $1;
```

This allows for the display of important transaction data in the Transactions page.

### **Demo Video:**

[https://www.youtube.com/watch?v=dJwlax\\_9uN4](https://www.youtube.com/watch?v=dJwlax_9uN4)

### **Web References:**

<https://hillstone.com/>

<https://www.greatamericanrestaurants.com/>