Restaurant

- restaurantID
- address
- name
- phoneNumber
- cuisine
- openingTime
- closingTime

1..1 — 0..*

Dish

- restaurantID
- name
- cuisine
- calories
- price

1..1

0..*

Purchase

- purchaseID
- restaurantID
- customerID
- dishName
- price

0..* — 1..1

Customer

- netID
- name
- email
- password

1..1 — 0..*

Review

- reviewID
- purchaseID
- customerID
- rating
- title
- description

1..1 — 1..1

Entities & Assumptions:

The Customer table stores information about each student's login data (NetId, email, etc).

The Restaurant table keeps track of all the restaurants in the area (cuisine, open/closing time, etc).

The Dish table lists every known dish served at a restaurant. Each Dish is tied to a specific Restaurant by its ID (part of Dish Primary Key). Dishes have name, cuisine, calorie value (if data available), and a listed price.

The Review table stores every review entered by a Customer, with ratings and a title/description of the review. They are tied to a specific Customer as well as a specific Purchase.

The Purchase table stores all the purchases entered by Customers. Each Purchase is tied to a specific Dish through the Restaurant ID and DishName. The purchase stores the price paid, in case a discount was applied from the price listed in Dish.

Relationships:

Restaurant 1..1 ⟵⟶ 0..* Dish
Each restaurant can have any number of dishes, but each dish belongs to one restaurant. We assume that some restaurants might be new or have no recorded dishes, so hence the 0..*.

Purchase 0..* ⟵⟶ 1..1 Customer
A customer can make multiple purchases, however each purchase will be associated with one single customer. Because our customers are all UIUC students, a student may not have associated purchases thus a customer may have 0 purchases as well.

Customer 1..1 ⟵⟶ 0..* Review
Each customer can make any amount of reviews, but each review is made by exactly one customer. We assume that some customers might not want to add any reviews, so hence the 0..*.

Purchase 1..1 ⟵⟶ 1..1 Review
Each purchase is tied to exactly one review, and vice-versa. When a purchase is made, the review is created at the same time, so they have a 1:1 relationship.

Dish 1..1 ⟵⟶ 0..1 Purchase
Each purchase is associated with only one dish, but the same dish can be purchased multiple times by the same or different customers resulting in multiple purchases of the same dish.

Schema:
Restaurant(
        restaurantID:INT [PK],
        address:VARCHAR(255),
        name:VARCHAR(255),
        phoneNumber:CHAR(10),
        cuisine:VARCHAR(50),
        openingTime:TIME,
        closingTime:TIME
)

Review(
        reviewID:INT [PK],
        purchaseID:INT [FK to Purchase.purchaseID],

```
        netID:VARCHAR(16) [FK to Customer.netID],
        rating:REAL,
        title:VARCHAR(100),
        description:TEXT(1000)
)

Customers(
        netID:VARCHAR(16) [PK],
        Name: VARCHAR(30),
        Email: VARCHAR(30),
        Password: CHAR(10)
)

Purchase(
        purchaseID: INT [PK],
        restaurantID: INT [FK to Restaurant.restaurantID],
        netID: VARCHAR(16) [FK to Customer.netID],
        dishName: VARCHAR(255) [FK to Dish.Name],
        price: REAL
)

Dish(restaurantID:INT [PK][FK TO Restaurant.restaurantID],
        Name VARCHAR(255) [PK],
        Cuisine: VARCHAR(255),
        Calories: INT,
        Price: REAL
 )
```