CSE3207 Project #1

Implementation of a simple database application

- ✓ Assignment Date: April 1, 2025
- ✓ Due Date: May 4, 2025
- ✓ TA: Jaeyeon Lee (dlwodus159@naver.com)
- ✓ Weight: 15% of the course grade.
- ✓ Please read this description carefully.

I. Relational Tables

The following relational tables show information about a restaurant, a chef, a dish, an award, and a customer. The underlined attributes are the primary key of the table. In the restaurant table, a value of 'avgRate' column should be automatically calculated when a customer gives a rate.

restaurant(<u>restaurantID</u>, restaurantName, location, establishedYear, avgRate)

dish(<u>dishID</u>, dishName, price, cuisineType, isSeasonal)

chef(<u>chefID</u>, chefName, specialty, dateOfBirth)

cook(<u>dishID</u>, <u>chefID</u>)

serve(<u>restaurantID</u>, <u>dishID</u>)

work(<u>restaurantID</u>, <u>chefID</u>)

customer(<u>customerID</u>, customerName, dateOfBirth, preference)

review(<u>customerID</u>, <u>restaurantID</u>, rating, comment, reviewDate)

award(<u>awardID</u>, awardName)

restaurantObtain(<u>restaurantID</u>, <u>awardID</u>, year)

chefObtain(<u>chefID</u>, <u>awardID</u>, year)

reservation(<u>restaurantID</u>, <u>customerID</u>, <u>reservationDate</u>, numberOfPeople)

II. Queries

Translate the following statements into SQL and process the query using an application.

After processing each statement, you should show the results for inserts/deletes/updates queries and the updated tables.

1. Create the tables and insert the proper data based on the provided data. You should make the restaurant, chef, dish, and customer tables first and insert data into other related tables.

2. Insert the proper data from the following statements.

   2.1. Mei Tanaka won the "Best Grilling Performance" award in 2021

   2.2. Gabriel Lefevre won the "Best Italian Cuisine" award in 2015

2.3. The restaurant Ember & Thyme won the "Best Interior Design" award in 2003

2.4. Hana Kim won the "Best Baking Technique" award in 2014 and the "Chef of the Year" award in 2020

2.5. The restaurant La Mer Bleue won the "Best Pasta Restaurant" award in 2016

2.6. The restaurant The Hidden Fork won the "Best Fusion Menu" award in 2018

2.7. Kevin Lim made a reservation for 2 people at Saffron Garden on December 1st, 2024.

2.8. Grace Jung made a reservation for one person at The Hidden Fork on November 8th, 2023.

3. Insert data to the proper tables based on the following statements and update avgRate if necessary.

   3.1 Brian Kim rates 5 to "Ember & Thyme".

   3.2 Daniel Choi rates 5 to the restaurants where the chef is "Luca Romano".

   3.3 Emily Han rates 3 to the restaurants where the chef specializes in Grilling on March 15th, 2025.

   3.4 James Yoo rates 4 to the restaurants that serve "Japanese" dishes on March 18th, 2025, leaving the comment "Fresh flavors".

   3.5 Rachel Song rates 4 to the restaurants located in "Montreal" on March 20th, 2025, with the comment "Cozy place".

4. Select the names of the restaurants where the chef(s)' specialty is "Sauce Crafting".

5. Select the names of the chef(s) who work at more than one restaurant.

6. Delete the restaurants established before 2002, along with all related data from other tables.

7. Delete all customers and delete all associated data from related tables.

8. Delete all tables and data.

III. Implementation Environment

Programming Languages: Java or Python

DBMS: PostgreSQL (mandatory)

IV. Submission

1. Files to submit:

   A. Program source files

   B. README.doc

   - What you have implemented and what you have not

   - Brief explanation of your implementation (less than 1 page)

   - How to compile and run

   - Talk about your experience of doing this project

   - Write your available contact information such as phone number (just in case)

2. Due date: May 4, 2025 Midnight

3. Penalty: 20% per day

4. Score

    A. Create table processing (20%)

    B. Insert processing (20%)

    C. Update processing (15%)

    D. Query processing (15%)

    E. Delete processing (15%)

    F. README and comment (15%)

V. Initial data

Restaurant				
Name	**Chef**	**Dish**	**Location**	**Established Year**
Ember & Thyme	Luca Romano	Truffle Tagliatelle	Montreal	2001
		Pistachio Pesto Pici		
La Mer Bleue	Luca Romano	Truffle Tagliatelle	London	1998
		Saffron Seafood Paella		
Basilico	Mei Tanaka	Yuzu Glazed Chicken Skewers	Osaka	2005
		Grilled Lemongrass Tofu		
The Hidden Fork	Gabriel Lefevre	Duck with Orange Reduction	Athens	2010
		Cajun Butter Shrimp		
Saffron Garden	Hana Kim	Citrus-Marinated Sashimi	Seoul	2003
		Cold Buckwheat Noodle Stack		

Chef		
Name	**Specialty**	**Date of Birth**
Luca Romano	Pasta Making	1972.4.25
Mei Tanaka	Grilling	1965.8.12
Gabriel Lefevre	Sauce Crafting	1988.10.28
Hana Kim	Knife Work	1983.3.3

Dish			
Name	**Price**	**Cuisine Type**	**IsSeasonal**
Truffle Tagliatelle	200	Italian	False
Pistachio Pesto Pici	100	Mediterranean	True
Saffron Seafood Paella	130	Spanish	False
Yuzu Glazed Chicken Skewers	245	Japanese	True
Grilled Lemongrass Tofu	270	Vietnamese	True
Duck with Orange Reduction	420	French	False
Cajun Butter Shrimp	380	Cajun	False
Citrus-Marinated Sashimi	145	Japanese	True
Cold Buckwheat Noodle Stack	450	Korean	True

Customer		
Name	**Date of Birth**	**Preference**
Olivia Chen	1992.05.14	Vegetarian
Brian Kim	1988.10.25	Meat Lover
Chloe Park	1992.04.09	Spicy Lover
Daniel Choi	1980.12.01	Low-Carb
Emily Han	1999.03.20	Pasta Lover
James Yoo	1974.07.07	Gluten-Free
Grace Jung	2002.01.16	Seafood Enthusiast
Kevin Lim	1990.08.30	Dairy-Free
Rachel Song	1985.11.14	Vegan
Thomas Shin	1968.05.03	Anything with Cheese