**Project: Restaurant Analysis 2025**

**1. SQL Problem Statement and Solution Query (**including 15 other queries**)**

**Problem Statement:**

A restaurant chain wants to understand which cuisines are most popular among their target demographic: **students**. The goal is to identify the **top 5 most highly-rated restaurant cuisines** based on average overall ratings from consumers with the occupation 'Student'. This analysis will help inform strategic decisions, such as menu expansion, targeted marketing campaigns, and new restaurant development.

**SQL Solution Query:**

The following SQL query joins the consumers, ratings, and restaurant\_cuisines tables to solve the problem. It filters for Occupation = 'Student', calculates the average Overall\_Rating for each cuisine, and orders the results to show the top 5.

A file named restaurant\_analysis\_solution.sql containing the SQL query has been generated for project use. Although there are multiple queries in the file

**2. Power BI Report Plan**

The Power BI report will provide a dynamic and interactive visualization of the analysis, offering key insights at a glance. The report will consist of a single dashboard with the following visualizations:

**Title:** restaurants Analysis 2025

**Filters & Slicers:**

* **Cuisine:** A slicer to filter the data by specific cuisines.
* **City and State:** Slicers to explore regional preferences.
* **Age:** A range slider to analyze rating trends across different age groups of students.
* **Overall\_Rating:** A filter to see which cuisines have a rating above a certain threshold (e.g., ratings greater than 1).

**Visualizations:**

1. **Bar Chart: Top 5 Cuisines by Average Overall Rating:** The main visual, displaying the top 5 cuisines identified by the SQL query. The bars should be colored by average rating for easy comparison.
2. **Pie Chart: Distribution of Ratings for Top 5 Cuisines:** A pie chart showing the proportion of Overall\_Ratings (0, 1, 2) for the top cuisines, providing deeper insight into rating distribution.
3. **Table: Detailed Cuisine Ratings:** A detailed table listing all cuisines with their average Overall\_Rating, Food\_Rating, and Service\_Rating. This provides a complete view of the data.
4. **Key Performance Indicators (KPIs):**
   * **Total Number of Student Ratings:** A card showing the total count of ratings included in the analysis.
   * **Average Overall Rating (All Cuisines):** A card displaying the overall average rating for students across all cuisines.

This plan will be included in the file powerbi\_report\_plan.txt.

**3. PowerPoint Presentation Format**

A professional presentation is crucial for communicating these findings to business stakeholders. The following is a slide-by-slide outline of the presentation.

A file named restaurant\_analysis\_presentation.txt containing the presentation outline has been given for better assistance.

**Slide 1: Title Slide**

* **Title:** Restaurant Analysis 2025: Student Consumer Insights
* **Subtitle:** Unlocking Growth Through Data-Driven Cuisine Strategy
* **Presenter:** Your Name
* **Date:** October 2025

**Slide 2: Executive Summary**

* **Key Findings:**
  + Briefly state the top 5 cuisines identified.
  + Highlight the average ratings and any surprising insights.
  + Present a high-level recommendation (e.g., "Mexican and Italian cuisines show high potential for targeted expansion.").

**Slide 3: Problem Statement & Objective**

* **Title:** Understanding Our Target Audience
* **Problem:** "How can we identify the most popular and highly-rated restaurant cuisines among students to guide our business strategy?"
* **Objective:** To analyze consumer rating data to provide actionable insights into student dining preferences.

**Slide 4: Data Sources & Methodology**

* **Data Sources:**
  + **consumers.csv:** Demographic data (occupation, age, etc.).
  + **ratings.csv:** Consumer ratings (overall, food, service).
  + **restaurant\_cuisines.csv:** Restaurant-to-cuisine mapping.
* **Methodology:**
  + Explanation of the data joins and filtering process.
  + Mention the use of AVG(Overall\_Rating) to calculate popularity.
  + Show a simplified version of the SQL query.

**Slide 5: Key Finding 1: Top 5 Cuisines**

* **Title:** The Top 5 Cuisines Highly-Rated by Students
* Display the **bar chart** from the Power BI report.
* Discuss each cuisine and its average rating.
* Provide a narrative for each (e.g., "Mexican cuisine consistently ranks high, indicating its broad appeal.").

**Slide 6: Key Finding 2: Rating Distribution**

* **Title:** The Anatomy of a Rating
* Display the **pie chart** from the Power BI report.
* Analyze the distribution of ratings (0, 1, 2) for the top cuisines.
* Explain what a high proportion of '2' ratings means (e.g., "A high percentage of '2' ratings for 'Mexican' shows a strong satisfaction level.").

**Slide 7: Recommendations**

* **Title:** Strategic Recommendations
* **Actionable Insights:**
  + **Marketing:** Recommend targeted ad campaigns for the top-rated cuisines.
  + **Menu Development:** Suggest expanding menu items or offering specials based on the top cuisines.
  + **Expansion:** Propose focusing new restaurant openings or partnerships in areas with a high student population and a demand for these cuisines.

**Slide 8: Q&A**

* Open the floor for questions.
* Include contact information.

This detailed plan will allow you to generate the required reports and presentations with minimal effort. I will now generate the files. The SQL problem statement and a solution query, a Power BI report plan, and a PowerPoint presentation outline have been successfully generated based on your request. Due to an issue with file access, the analysis was performed by assuming the schema of the uploaded files.

**1. SQL Problem and Solution Query**

**Problem Statement:** The objective is to identify the top 5 most highly-rated restaurant cuisines preferred by students. This will provide actionable insights for business strategy.

**SQL Solution Query:** The SQL query to solve this problem has been written to the file restaurant\_analysis\_solution.sql. This query performs joins on the relevant tables, filters for students, and calculates the average overall rating for each cuisine. There are other 15 queries which gives the further business insights when it comes to numbers.

**2. Power BI Report Plan**

A detailed plan for a Power BI dashboard has been created to visualize the analysis. The plan includes the layout, filters, and specific chart types to be used, such as a bar chart for the top 5 cuisines and a pie chart for rating distribution. This plan is available in the file powerbi\_report\_plan.txt.

**3. PowerPoint Presentation Format**

A comprehensive, slide-by-slide outline for a PowerPoint presentation has been generated to help you present the findings to stakeholders. It includes an executive summary, problem statement, methodology, key findings, and strategic recommendations. This outline is available in the file restaurant\_analysis\_presentation.txt.