Problem Statement: In the context of an academic year, there exist two critical datasets - one detailing demographics and the other documenting assessments. The objective is to integrate these datasets to facilitate cross-tabulations and extract valuable insights at both the school and network levels. The primary focus is on understanding how learning outcomes correlate with engagement metrics, specifically student attendance and retention.

Objective: This assignment aims to assess your proficiency in database design, SQL querying, and the ability to translate analytical requirements into actionable queries for meaningful insights.

Requirements:

1. Create a **relational database schema** to accommodate both datasets -
    a. Demographics Data: Contains information about students, including demographic details like name, age, city, school, grade, etc.
    b. Assessment Data: Encompasses data related to academic assessments, including scores, subjects, and assessment dates.

2. Define appropriate relationships between tables and develop SQL queries that facilitate the **merging** of datasets, providing a unified view for analysis. Allow for different types of joins depending on the analytical requirements.

3. Formulate SQL queries to perform **cross-tabulations** exploring the relationship between learning outcomes and engagement metrics. Consider aggregations such as average scores, attendance rates, etc.

4. Implement SQL queries that allow **filtering** based on various conditions (e.g., city, school, grade, subject, student). Ensure flexibility for users to define their criteria.

Final Output Expected: Execute sample analyses using your SQL queries to demonstrate the tool's capability in extracting meaningful cuts of data and insights.

Submission Guidelines:

1. Submit SQL script files containing the queries (explaining the logic and purpose behind each query).
2. Provide a brief document explaining the schema, relationships, and how to use the queries.
3. Include a summary of insights obtained from the sample analysis.
4. Deadline for submission is 12th Dec 2023.