**Business Problem Statement: Pixar Films Data Analysis**

Over the last 30 years, Pixar has built a legacy of producing high-quality animated films that captivate audiences worldwide. However, as the entertainment industry evolves, it is crucial to analyze the performance of Pixar films from different perspectives—financial success, audience reception, critical acclaim, and creative contributions.

To better understand these aspects, we need to answer the following key business questions:

1. **Financial Performance Analysis:**
   * What are the top 5 highest-grossing Pixar films worldwide?
   * How have Pixar films performed financially over the years? What is the relationship between budget and box office earnings? Which films were the most profitable
   * How does budget correlate with box office performance across different regions (US/Canada vs. International)?
   * Which films achieved the highest return on investment (ROI), and how does this compare across different decades?
2. **Audience and Critical Reception:**
   * How do audience ratings (IMDB, Rotten Tomatoes, Metacritic) correlate with box office earnings?
   * What is the distribution of Pixar films by CinemaScore rating, and how does it impact financial success?
   * Have audience ratings improved or declined over the years?
3. **Awards and Recognition:**
   * Which Pixar films have won or been nominated for Academy Awards?
   * How does winning an Oscar impact a film's financial success?
   * Which directors and writers have worked on the most award-winning Pixar films?
4. **Genre Trends and Film Characteristics:**
   * Which genres (Adventure, Comedy, Fantasy, etc.) are most common among Pixar films?
   * What is the average runtime of Pixar films over different periods, and does it affect box office performance?
   * Are certain genres more likely to receive higher critic or audience scores?
5. **Creative Team Contributions:**
   * Who are the most frequent directors and writers in Pixar's history?
   * Is there a correlation between specific creators and the success of films?
   * Which individuals have worked on the most financially successful and critically acclaimed Pixar films?

**Technical Requirements**

To answer these business questions, students must:  
✅ Create a relational database in SQL and load the dataset.  
✅ Perform data cleaning (handling missing values, standardizing formats).  
✅ Write **complex SQL queries** utilizing:

* **JOINs** to combine multiple tables (e.g., linking box office earnings with critic scores and awards).
* **Aggregate functions** (SUM, AVG, COUNT, MAX, MIN) to generate key statistics.
* **Conditional statements** (CASE WHEN) to categorize and analyze data trends.
* **Subqueries and Common Table Expressions (CTEs)** for breaking down data into manageable insights.
* **Window functions** (RANK, DENSE\_RANK, ROW\_NUMBER) for ranking financial performance and critic ratings.

**Project Deliverables**

* **SQL Scripts** for database setup, data cleaning, and query execution.
* **Power BI Dashboard** visualizing key findings (financial trends, rating distributions, genre popularity, etc.).
* **A summary report** documenting the analysis, insights, and recommendations for Pixar’s future films.
* **GitHub Repository** containing SQL scripts, datasets, and project documentation.