Eklipse AI Data Optimization Test

Task 1: Game Understanding

Objective: Identify key in-game events that can be reliably detected through UI analysis or other automated methods, and define parameters for automated gameplay clip creation tailored for content creators.

Instructions:

1. **Game Selection:** Choose a game you are familiar with and specify its name and its genre.
2. **Gameplay Observation:** Watch at least 30 minutes of gameplay footage.
3. Event Identification: Identify significant in-game or contextual events that can be detected through UI elements or alternative methods (e.g., audio cues, scene transitions) to enable automated gameplay clip creation for content creators.
4. **Event Justification:** Briefly explain why each event is worth capturing, such as "Shows a crucial decision", "Highlights skill or strategy", or "Represents a key narrative moment".
5. **Detection Criteria:** For each event, describe how it can be automatically detected or captured.
    - *UI Elements (if applicable):* What part of the UI changes?
    - *Non-UI methods (if applicable):* Clearly describe the method (e.g., specific audio cues, scene transitions, etc.).
    - *Trigger:* What specific change signals the event?
    - *Thresholds (if applicable):* Are there minimum/maximum values to consider?
    - *False Positive Mitigation:* How will you reduce incorrect detections?
    - *Clip Definition & Management:* Define how the clip should be created and managed (e.g., pre-roll/post-roll time, duration per clip, clip naming, etc.).

Deliverables: Present your answer in Google Slides.

Task 2: Concise Video Game Data Enhancement with Google AI Studio API

Objective: Use the Google AI Studio API to enrich a video game dataset by generating genres, descriptions, and player modes.

Data: CSV file with: `game_title`: Game name; `image_url`: Image URL

CSV Link: Game Thumbnail.csv

Tasks: Setup - Google AI Studio API

1. **Load:** Load CSV into Pandas DataFrame.
2. **Genre Classification:**
    - New column: `genre` (single-word).
    - Use the API to classify the genre from the `game title`. Design prompt for single-word output.
3. **Short Description:**
    - New column: `short_description` (under 30 words).
    - Use the API to generate a description from the `game title`. Design prompt for brevity.

4. **Player Mode:**
   - New column: `player_mode` ("Singleplayer", "Multiplayer", "Both").
   - Use API to determine player mode from `game_title`. Design prompt for these options.
5. **Save:** Save DataFrame to new CSV with added columns.

Deliverables:

a. **Python Script:** Well-commented script with error handling, secure API key management, installation instructions.

b. **Enhanced CSV:** CSV with added `genre`, `short_description`, `player_mode` columns.

c. **Presentation (Max 5 Slides):**
   - Slide 1 : Intro (Task & tools)
   - Slide 2-3 : Prompt Engineering (Examples of good/bad prompts & reasoning)
   - Slide 4 : Challenges & Solutions (API issues, solutions, limitations)
   - Slide 5 : Conclusion & Reflections (Lessons learned, future improvements)

Task 3: Data Analysis

Data:

- You will be provided with Eklipse user data, where each CSV file represents a table from our SQL Database.
- In Eklipse, visitors can register as `free users`, `submit streams` (or `gamesessions`), and have Eklipse generate clips.
- Users can `download`, `share`, `or edit` their clips via `CTT (convert-to-tiktok feature)`.
- There are `premium plans` available, a premium plan is for users that became Premium.
- For more detailed information, you can read the dictionary files

Dictionary : **Data Dictionary for DA Test.pdf**
Test File : da_test_v2.zip

Task:

- Identify important metrics that Eklipse needs to regularly track as a business. Provide a reason for choosing these metrics and some basic analysis to justify them.
- Write five SQL queries to extract the metrics from the dataset. Each query must join at least two tables.
- You must use SQL to extract the data, but you may use other analytical tools and languages (such as Python) for the analysis component.

Deliverables :

- Find and explain your metrics and justification into PPT.
- *Note* : Please ZIP the presentation file with the .sql files.

Final Deliverables:

- Compile all answers into one Google Slides presentation covering all tasks.
- Segment each task with a title slide (*e.g., Task 1: Game Understanding*).
- Include the Python Script, CSV and SQL file as part of the submission.
- Ensure the Google Slides link is accessible to anyone with the link.
- Complete all tasks within **3 Days.**