Final Project Report

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Name: Combined AI Assistant

1. What it does?

The Combined AI Assistant is a Java-based application that allows users to interact with both ChatGPT and Perplexity AI simultaneously. This program provides a split-screen interface where responses from both AI models can be compared side by side. Users enter a question in a single input field, and the system sends requests to both AI services concurrently and retrieves their responses. This enables users to compare different perspectives and information from two AI models at a glance, providing more comprehensive answers.

2. What the features are?

- Split-screen interface: Left panel displays ChatGPT responses, right panel shows Perplexity responses
- Concurrent API calls: Background threading allows for simultaneous requests to both AI services
- Simple input interface: Single input field for sending queries to both models at once
- Improved response display: Loading messages are replaced with responses when received
- Response formatting: Processing the responses retrieved through the API calls and automatic cleaning of special formatting (LaTeX, markdown, etc.) for easier reading
- Conversation history: SQLite database integration for storing and retrieving past conversations
- History viewer: UI for browsing, viewing, and loading previous conversations
- Export functionality: Export conversation history to JSON files
- Direct API access: Configure API keys directly from the main menu bar
- Enhanced security: API keys are stored only in memory for improved security

3. How to run?

Running the project in Eclipse:

1. Extract the archive
   - Unzip the submitted .zip file to your desired location.
2. Launch Eclipse and set up workspace
   - Open Eclipse.

- Create a new workspace or select an existing one if needed.
3. Import the project
    - Click on File → Import...
    - Select General → Existing Projects into Workspace and click Next.
    - For Select root directory, choose the folder where you extracted the project.
    - When the project appears in the list, select it and click Finish.
4. Verify libraries
    - Confirm that the SQLite JDBC driver is in the project's lib folder.
    - If missing, right-click on the project → Properties → Java Build Path → Libraries tab.
    - Click Add JARs... and select the sqlite-jdbc-*.jar file from the lib folder.
5. Run the project
    - Find the AppRunner.java file in the src/app_runner package.
    - Right-click on the file and select Run As → Java Application.
6. Configure API keys
    - Once the application starts, click on API Settings in the menu bar.
    - Enter the API keys for ChatGPT and Perplexity AI.
        - ChatGPT API key:
          "sk-proj-Y6RFIzQyM3jkBxJNCWDwyzGK95D-FFbzw_9EIin0qdEzUb1AnHKaYv5V5qf930u
          N6onziWZb1WT3BlbkFJD71SHN4-dCCw5Irk1_-k3WKuromjcROFkZvFY5kbv082fhvDS5gR
          Hu-nZZpz59o2ee2GlrOtEA"
        - Perplexity API key:
          "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"
7. Using the application
    - Enter your question in the input field and click "Submit to Both AIs" or press Enter.
    - The responses from ChatGPT and Perplexity will appear in the left and right panels respectively.
    - To view previous conversation history, click File → View History.
    - To load the previous query and the corresponding response, click File → View History → Select a conversation from the history that is desired to be reloaded → Click Load.
    - To export the history of the conversation, click File → Export History.
    - To clear a conversation, click Clear button under the ChatGPT display panel to clear the log of conversation of ChatGPT, and click Clear button under the Perplexity display panel to clear the log of conversation of Perplexity.
    - To clear the history of conversations, click File → Clear History.

* Additional notes

- The application will not function properly without valid API keys.
- Java 8 or higher is required.