Project Title:

Trip Link: Plan & Find a Buddy

Abstract:

Trip Link: Plan & Find a Buddy is an AI-powered travel planning application designed to enhance solo travel experiences by integrating intelligent trip planning with a traveler-matching system. The application provides an interactive and user-friendly interface, built using Swing, allowing users to easily plan and manage their trips.

By leveraging the **Gemini API**, **Trip Link** generates personalized itineraries based on user inputs such as destination, budget, and travel dates. These details are securely stored in a **PostgreSQL database** via **JDBC**, enabling users to retrieve and review their plans anytime using a unique trip key. The **clipboard copy feature** makes sharing and accessing trip keys quick and convenient.

One of the standout features is **Solo Traveler Matching**, which allows users to connect with like-minded travelers. If multiple users choose the matching option and share the same destination and travel dates, they are notified and can connect via email. Additionally, the **End Trip & Delete** feature provides users with control over managing their trip details, allowing them to remove unnecessary or outdated information.

By combining **AI-driven trip planning**, **database-backed trip management**, and **social connectivity**, **Trip Link** offers a seamless and engaging way to explore new destinations while finding potential travel companions.

Software and Hardware Requirements:

- **Programming Language:** Java
- **Integrated Development Environment (IDE):** Eclipse
- **Database:** PostgreSQL
- **Frameworks:** Swing for UI development
- **Version Control:** Git and GitHub
- **Processor:** Intel Core i3+
- **RAM:** 4 GB minimum
- **Hard Disk:** 500 MB of free space

Domain

Travel Planning (Object-Oriented Programming, Natural Language Processing, AI Integration)

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Features:

- Trip Planning UI using Swing
- Gemini API Integration for generating trip plans
- Database Integration with PostgreSQL via JDBC
- Trip Storage & Retrieval using unique keys
- Solo Traveler Matching with email connections
- Clipboard Copy for Trip Key
- End Trip & Delete Feature

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