Capstone Two: Project Proposal

Project Proposal: All-in-One Travel Checklist and Information Platform

Tech Stack:
- Frontend: React
- Backend: Node.js (Express)
- Database: PostgreSQL

Focus:
- Full-stack application with an even focus on frontend UI and backend functionality.

Platform:
- Website accessible from desktop devices.

Goal:
- Provide users with a user-friendly checklist for trip planning, while also offering essential travel information to enhance their overall travel experience.

User Demographic:
- Targeting users of all ages who love detailed planning and organization, particularly those who plan their trips meticulously and enjoy organizing their time down to the hour

Data Sources:
- Flight details: Fetch from FlightAware API dynamically
- Weather forecasts: Fetch from OpenWeatherMap API dynamically
- Visa requirements: Fetch from visahq.com dynamically
- Additional functionalities: Various websites and APIs for outlet information, currency exchange rates, etc.

Approach:

Database Schema:
- User: UserID (Primary Key), Username, Email, Password (hashed), Other relevant user information
- PackingList: PackingListID (Primary Key), UserID (Foreign Key), TripID (Foreign Key), ParentItemID (Foreign Key, nullable), ItemName, isChecked

API Challenges:
- Ensuring data consistency and reliability from external APIs.
- Handling errors gracefully and providing informative error messages to users.

Sensitive Information:
- Implement user authentication and encryption for securing personal data.
- Use industry-standard security practices to protect user information and maintain privacy.

Functionality:
- User authentication and registration
- Creating and managing packing lists

- Integration with external APIs for flight details, visa requirements, and weather forecasts

User Flow:
- User signs up or logs in.
- User creates a new trip.
- User adds items to the packing list and assigns them to bags.
- User inputs flight details and destination information.
- User receives weather forecast and visa requirements.

Features Beyond CRUD:

Your site goes beyond a basic CRUD app by offering user-specific functionalities such as user authentication, registration, and the creation and management of personalized checklists. Additionally, the integration with external APIs for real-time travel information enhances the user experience by providing valuable and up-to-date travel information.

Stretch Goals:

Integration with external APIs for fetching flight details, visa requirements, and weather forecasts.