PROJECT PLAN

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Project Title: Travel Agency Management System (TADMS)

Project Lifecycle:

We will use the **Agile** methodology to accommodate evolving requirements and continuous feedback from customers and the agency. Agile facilitates iterative development and frequent releases, improving customer satisfaction and system quality.

Tools Used for the Project:

- **Planning Tools:** Jira for task management and sprint planning.
- **Design Tools:** Figma for designing user flows and mock ups.
- **Version Control:** Git with GitHub for collaboration and code management.
- **Development Tools:**
  - **Frontend:** React.js with CSS for a responsive user interface.
  - **Backend:** Node.js for handling business logic and APIs.
  - **Database:** MySQL for structured data storage (customers, bookings, vehicles).
- **Testing Tools:** Jest for unit testing and Cypress for end-to-end testing.
- **Bug Tracking:** Bugzilla for identifying and resolving issues.

Deliverables:

- **Reusable Components:**
  - **Customer Registration Module:** Can be used across other services to manage users.
  - **Booking Management System:** A template for managing bookings in similar systems.
  - **Driver Assignment System:** A reusable module for other transportation services.
  - **Payment Tracking:** An adaptable module for tracking payments across multiple systems.
- **Build Components:**
  - **Vehicle Management System:** Custom-built to manage travel agency-specific vehicle inventory.
  - **Booking Interface:** Tailored for road trip bookings, preventing double bookings.

o **Driver Assignment System:** Designed specifically for managing drivers based on vehicle and trip availability.

Work Breakdown Structure (WBS):

A **Deliverable-Based WBS** will be used, breaking the project into modules:

1. **Frontend Development:**
   - 1.1. Customer Registration and Login Interface
   - 1.2. Booking and Vehicle Selection Page
   - 1.3. Payment Gateway Integration
   - 1.4. Driver Dashboard for viewing assignments
2. **Backend Development:**
   - 2.1. API for Customer Management
   - 2.2. API for Vehicle and Booking Management
   - 2.3. API for Driver Assignment and Payment Tracking
3. **Database Development:**
   - 3.1. MySQL Schema Design (Customers, Vehicles, Bookings, Drivers, Payments)
   - 3.2. Data Encryption for Secure Payment Processing
4. **Testing:**
   - 4.1. Unit Testing for each module
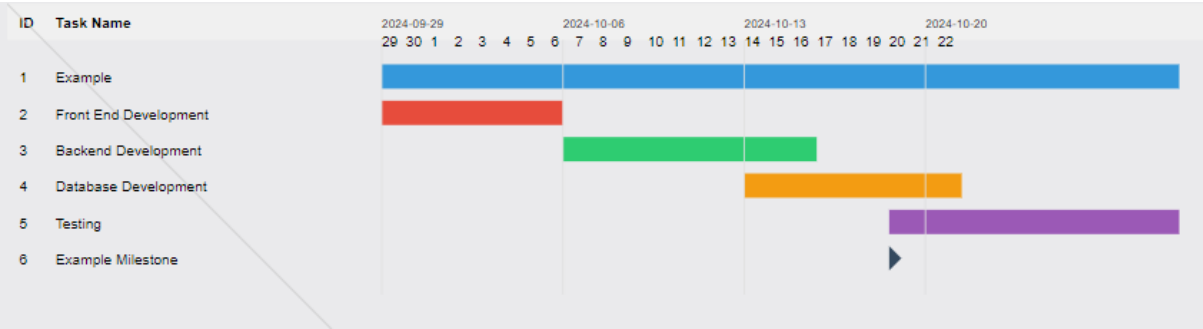   - 4.2. Integration and End-to-End Testing for complete workflows

Effort Estimation (Person-Weeks):

Using the **COCOMO model**:

- **Frontend Development:**
  - Customer Registration & Booking: 0.5 person-week
  - Dashboard & Payment Integration: 0.5 person-week
- **Backend Development:**
  - API Creation for Customer & Booking: 1 person-week
  - Driver Assignment & Payment APIs: 1 person-week
- **Database Development:**
  - MySQL Schema: 0.5 person-week
- **Testing:**
  - Unit & Integration Testing: 0.5 person-week

Total Estimated Effort: 4 person-weeks

Gantt Chart:

Additional Planning Steps:

- Continuous feedback from customers will be collected during each sprint to ensure iterative improvements.
- Additional improvements.