

Detailed Design Document: TripForge

1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed overview of the design and architecture of the **TripForge**, outlining its features, functionality, and technical specifications.

1.2 Scope

The website aims to offer users the users to book best suitable trips for themselves in their budget. They will be able to find the best Hotels, destinations. They can also book flight tickets for the trip. The users can also save the remainder and will get notification for their remainder.

1.3 Objectives

- Provide a user-friendly interface for booking Trips, hotels and flights.
- Implement robust security measures to protect user data.
- Ensure scalability to accommodate future growth.

2. System Overview

2.1 System Architecture

The system will follow a client-server architecture with a responsive web-based front end and a back-end server.

2.2 Key Features

- User registration and authentication
- Easy Trip booking and best nearby destinations.
- Ease in flight booking and remainder for events.
- Secured payment gateway.

2.3 User Roles

- Guest
- Registered User

2.4 Technologies Used

- Front-end: HTML, Tailwind CSS/CSS, JavaScript (React)
- Back-end: Node.js
- Database: MongoDB
- Authentication: JWT
- Additional tools/libraries as needed.

3. Database Design

3.1 Entity-Relationship Diagram

- User Entity:
 - Username: User's username for identification.
 - Email: User's email address for communication.
 - Password: Securely stored password for authentication.
- Trips Entity:
 - Category: User's trip preference (with family or with organization or with business family)
 - Budget : User's budget for the trip.
 - TripType : No of people in the trip.
 - Destinations : All the destinations that the user will travel to during the trip.
- Flight Entity :
 - FlightBookingOption : Whether the user wants to book flight or not.
 - Departure Date : When the user will depart For the trip.
 - Return Date : When the user will return from the trip.
- Reviews Entity:
 - UserReviews : The reviews of users for the trip.

4. Deployment:

The TripForge Website Will be Deployed on Vercel.