Dreamscape Destinations

A journey from your dreams to reality

Group Name: SE PROJECT TEAM 02

Group Members:

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SYSTEM HIGH LEVEL DIAGRAM :

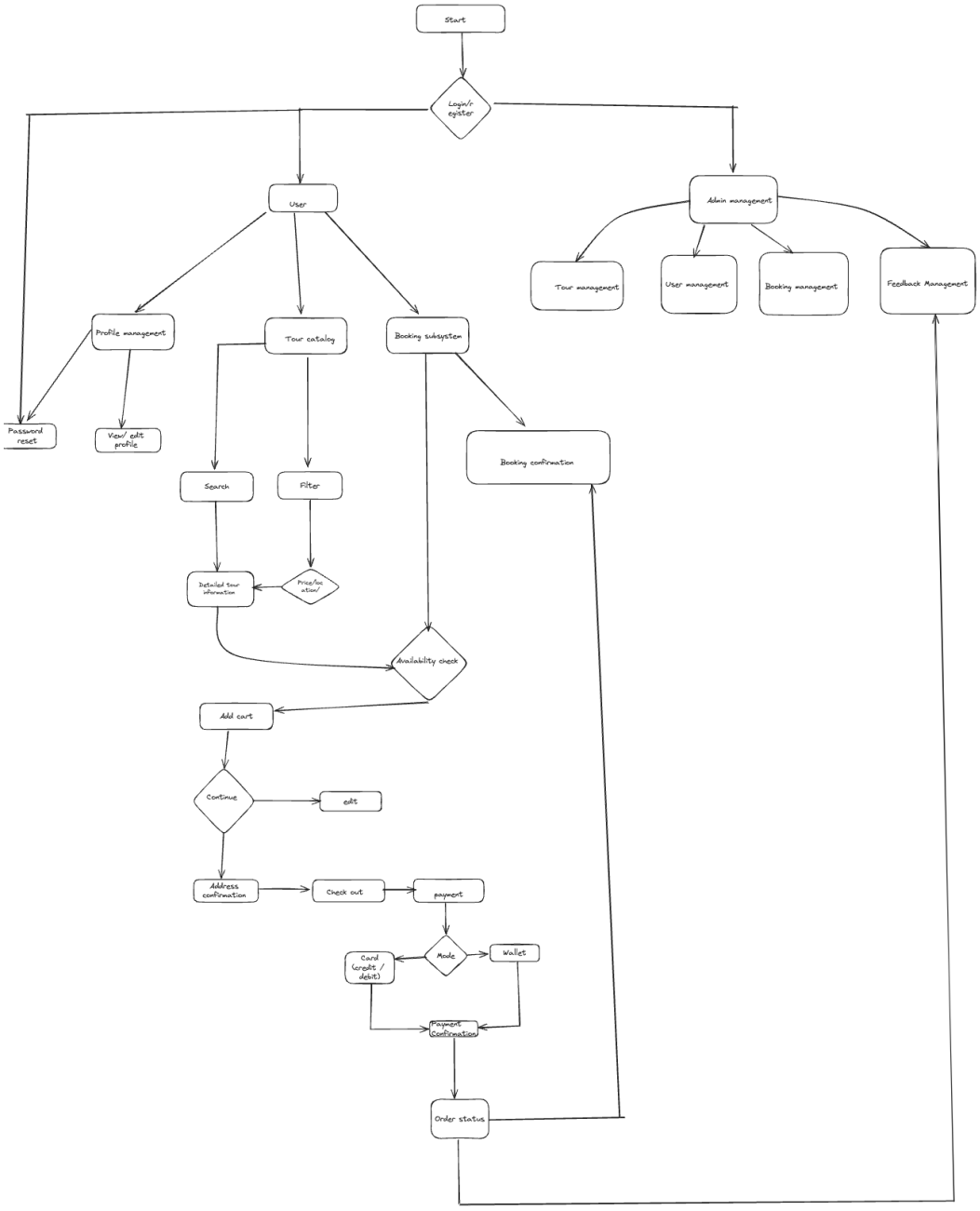

Fig: system diagram

Structure of the System

1. Front-End

- The front end of the system acts as the user-facing interface of the website, providing users with an engaging and interactive platform for users to browse, edit tours packages,car rent, access catalog,chatting and booking.
- It is built with the JavaScript library React to create user interfaces to ensure a dynamic and functional website.
- Bootstrap is used for responsive design, ensuring compatibility with different devices and screen sizes.

2. Back-End

- The back-end of the system handles server-side processing, managing data, implementing business logic, and communicating with the front end and the database.
- It was developed using Node.js as the runtime environment for generating JavaScript code behind a web browser, making it easier to use and processing user requests .
- It also uses the Express framework to develop API for web applications, providing robust features for routing, middleware, and HTTP request processing.

3. Database

- The database part stores and retrieves important data from the system, including user information, travel information, booking records, and other relevant data.
- They used SQLite3, a lightweight relational database management framework chosen for its simplicity and ease of integration with Node.js applications.
- It enables easy storage and retrieval of structured data and supports website functionality.

Individual Components (subsystems)

1. User Management Subsystem

- The user management subsystem handles the user-related functionalities such as registration, authentication,profile management, and account settings.
- It ensures a secure and personalized experience for users interacting with the website, facilitating user engagement and loyalty.
- Key-functionalities:
  1. User Registration
  2. Authentication and login
  3. Profile management
  4. Password reset and recovery

2. Tour catalog Subsystem

- The tour catalog management subsystem is responsible for managing the catalog of tours available on the website.
- It facilitate the browsing, searching, and viewing of detailed information about tours, providing users with a comprehensive overview of available travel option.
- This subsystem plays a crucial role in presenting tours effectively to users and enabling them to find and explore tour options that match their preference and interest.
- Key-functionalities
  1. Tour Listing
  2. Search and filtering
  3. Detailed Tour Information

3. Customization Subsystem

- The customization subsystem enables users to customize their tour packages according to their preferences and needs.
- It offers flexibility and control, allowing users to customize their travel experiences by selecting new services, editing itinerary information, and customizing packages such as car rental,taxis,meal plans,accommodation, guided tour,recreational activity, price adjustments, and lodging.
- Key-functionalities
  1. Additional Services Selection
  2. Flexible Booking option
  3. Real-time Price Adjustments

4. Booking Subsystem

- The booking subsystem simplifies the booking process for users who have created custom tour packages to secure their itineraries and confirm reservations.

- It manages business process entry, manages payment details, creates confirmation forms, and provides users with important information about their subscriptions.
- Key-functionalities
    1. Reservation Management
    2. Availability Checking
    3. Payment Processing
    4. Booking Confirmation

5. Admin Management Subsystem

- The Admin Management subsystem provides administrative tools and services for managing various aspects of the website, including visits, users, subscriptions,FAQs,configuring notifications and system settings.
- It empowers administrators to monitor and control the use of the platform, ensuring that resources, data and services are managed properly.
- Key-functionalities
    1. Tour Management
    2. User Management
    3. Booking Management
    4. Content Management

6. Payment Processing Subsystem

- The payment processing subsystem handles secure payment transactions for registered passengers, and ensures smooth and reliable payment processing between users and the platform.
- It integrates with third-party payment processors to facilitate secure payment processing and comply with industry standards for financial transactions.
- Key-functionalities
    1. Multiple Payment Method Support
    2. Transaction Handling
    3. Security and Compliance

System Structure

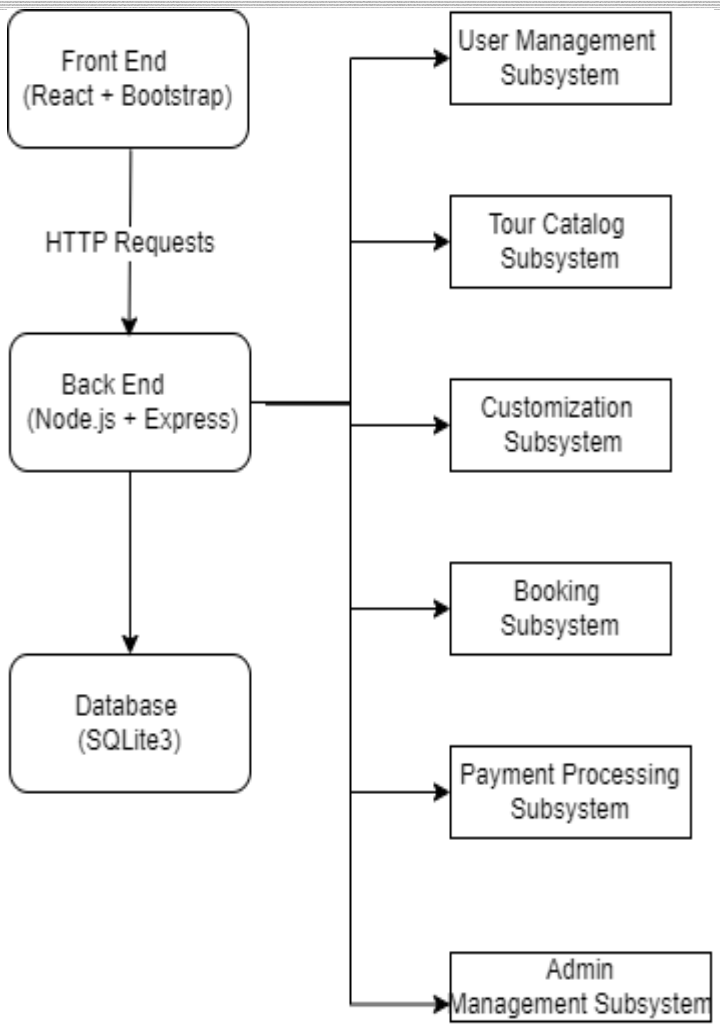

Fig: system Structure and subsystem

Requirements Specifications

1. Functional Requirements

Sr No.	Name	Description
1	User Registration	• The user registration feature enables individuals to create accounts on the platform, allowing them to access individual services, save preferences and interact with system users • Users are provided with a registration form with required information such as user name, email address, password, full name, date of birth, contact details,places of interest to set the feed and other optional information.
2	login	• Registered users should be able to log in using their username/email/contact number and credentials(password). • Password reset mechanism should be provided in case user forget their password.

3	Customization	• Customization feature allows the users the options to customize tour packages according to their preferences.
		• Customization option may include selecting additional services such as:
		  • Accommodation
		  • Transportation
		  • Car rental
		  • Meal plans
		  • Guided tour
		  • Recreational Activity
		  • Taxis
		  • Lodging
		  • Room service

4	Search and Browsing	• The searching feature allow the users to search for tour based on criteria such as location, type, price range,etc. • Users would be able to browse through the catalog of tours available on the platform.
5	Filtering	• The filtering feature allows users to filter

		and narrow down search results or content based on specific criteria, preferences, or criteria. ● It enhances the user experience by helping users quickly find the right information or content that suits their wants and needs.
6	Booking	● Booking feature will allows to securely book tours through this platform. ● Configuration email will be sent to users upon successful booking. ● Users will have access to their booking history for reference.
7	Transparent Pricing	● Pricing information for each tour package will be clearly displayed. ● The breakdown of costs, including accommodation, transportation, meals, additional services would be provided.
8	Car rental	The car rental feature allows users to browse and rent vehicles for their travel needs, providing flexibility and convenience in transportation options.
9	Show Map	● Use an interactive map view to explore sightseeing spots, show geographic locations, landmarks and points of interest. ● Allow users to browse trips based on geography, explore interactive maps to visualize travel routes and destinations.Use an interactive map view to explore sightseeing spots, show geographic locations, landmarks and points of interest.
10	Multi-language	● Provide support for multiple languages to handle users from different languages. ● Allow users to choose their preferred language to browse tours, compose and receive communications.
11	Admin panel	● Admin would be provided for authorized personnel to manage tours,user accounts, bookings, etc. ● Admin would be able to view analytic and reports to gain insights into platform usage

		and performance.
12	Chat with agent	The chat with agent enables users to engage in real-time conservation with customer support agents or representative for assistance, inquires, or support.
13	Help Center	• The Help Center feature is a comprehensive knowledge base and self-service platform where users can access relevant information, resources and instructions on using the platform, troubleshooting common problems and navigating various services • Collection of informative articles, guides, tutorials and how-to items covering a wide range of topics related to platform usage, features, policies and frequently asked questions (FAQs) will be provided.
14	Feedback	• Feedback enables users to provide feedback, ideas and suggestions directly to platform administrators or the customer support team. • It provides a platform for users to express their views, share their experiences and contribute to the continuous improvement of the platform.

2. Non-Functional Requirements

i. Security

- Users' data, including credentials and personal information, will be kept confidential during check-in and vacation.
- Encryption of payments will be kept to ensure secure transactions.
- Strategies will be implemented to prevent common security vulnerabilities such as SQL injection and cross-site scripting (XSS).

ii. Performance

- The system will be responsive and able to handle multiple simultaneous user requests with minimal delay.
- Pages will load quickly for a seamless experience.

iii. Scale-ability

- The system will be designed to accommodate a growing number of users and tours.
- Scale-ability considerations will be taken into account at both the application and infrastructure levels.

iv. Usability

- The user interface will be intuitive and accessible.
- The platform will be accessible on devices such as desktops, laptops, tablets and smart phones.
- Policy will prioritize user-friendly interfaces and transparency.

v. Compatibility

- The compatibility feature ensures that the platform will be compatible with different devices, browsers and operating systems, allowing users to easily access and use the platform across platforms and environments.
- Compatibility is crucial for reaching a broader audience and maximizing users accessibility.

3. Interfaces

i. User

- The web-based interface will give users access to all platform functionality.
- It needs to be visually appealing, easy to use, and consistent across portions of the website.

ii. Hardware

- The platform will be compatible with standard web browsers that run on a variety of devices such as desktop computers, laptops, tablets and smart phones.

Development Phases

1. Front-end Development and Basic Functionality Implementation

- **UI Design and Development**
  - Designing and developing user interfaces for browsing destinations, customizing vacation packages, and booking adventures.
  - Ensuring responsive design and cross-browser compatibility for optimal user experience across devices.
- **User Registration**
  - Implementation of user registration functionality with secure authentication mechanisms.
  - Development of user profile management features to enable users to update their information and preferences.
- **Browse Destinations and Customize Packages**
  - Integrate a catalog of destinations with search and filtering capabilities.
  - Allow users to customize vacation packages by selecting additional services like lodging, transportation, and meal plans.

2. Back-end Development and Advanced Features Implementation

- **Back-end System Development**
  - Develop back-end systems using Node.js with Express framework for handling user requests and business logic.

        - Implement database management using SQLite3 for storing user data, tour information, and booking details.
- **Save info Functionality and Enhanced Search**
    - Implement the ability for users to save their favorite destinations, vacation packages, and preferences.
    - Enhance search and filtering capabilities to provide more granular control over search results.
- **User Communication Interface and Performance Optimization**
    - Integrate communication channels such as messaging and live chat for user support.
    - Optimize system performance and responsiveness to handle increased user traffic and load.

3. Testing, Deployment and Refinement

- **Testing and Quality Assurance**
    - Thoroughly test the platform to identify and resolve bugs, usability issues, and performance issues.
    - Conduct user acceptance testing (UAT) to ensure the platform meets user needs and expectations.
- **Deployment and Launch**
    - Deploy the platform to a production environment, ensuring scalability, reliability and security.
    - Monitor system performance and user feedback after launch in order to promptly address any issues or concerns.
- **Continuous Improvement and Maintenance**
    - Collect user feedback and analytic data to identify trends and changes in the platform.
    - Provide regular updates and fixes to address changing user needs, security vulnerabilities, and technological advances.

Member Contribution

Member	Contribution	Overall Contribution
Veeresh Sakali	I have mainly worked on the gathering functional requirements of the project, assisted in gathering other nonfunctional requirements and did documentation.	12.5 %
Susmith Meesa	I have worked on the software architecture design and its description and documentation.	12.5 %
Harshath Budida	I have worked on gathering nonfunctional requirements and worked on the report.	12.5 %
Harshitha Thokala	I have worked on functional requirements, helped with system structure diagram.	12.5 %
Gopi Krishna Kummari	I have worked on functional requirements, created meeting minutes and note-deliverable-2 files on GitHub and helped with documentation.	12.5 %
Pooja Sree Poka	I have worked on nonfunctional requirements, and documentation.	12.5 %
Sashidhar Chary Viswanathula	I have worked on three development phases and requirements of the project and documentation.	12.5 %
Balaji Valeti	I have worked on the software architecture design and documentation.	12.5 %