Application Name: TravelWise
Project Plan for TravelWise
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1. Executive Summary

Motivation and Importance of TravelWise:

TravelWise is an innovative and comprehensive web-based travel blog app that goes beyond the traditional travel blog. The motivation behind creating TravelWise stems from a deep-seated passion for exploration and a desire to enhance the travel experience for individuals worldwide. I recognize that travel is more than just reaching a destination; it's about the journey, the stories, and the connections made along the way.

What TravelWise Does and How It Helps Users:

You can create an account and share your own experiences with others or browse through the information provided by other posters. It is designed to be a comprehensive companion for individuals looking to explore the world and expand their travel knowledge. Users can engage with posts by liking, adding favorites, commenting (replying to comments), and following fellow globetrotters, facilitating a lively exchange of travel experiences. Meanwhile, the app offers useful tools help users to check the weather for potential destinations, check country info, and search for nearby dining options, making trip planning more convenient.

What sets it apart is the AI-powered travel chatbot that provides personalized planning advice, creating a seamless blend of user-generated content and smart technology to help users craft tailored travel plans, ensuring a smoother travel planning process.

In summary, TravelWise serves as a hub for shared experiences, practical information, and intelligent AI features, enhancing the travel journey for all users.

What Makes It Unique:

The uniqueness lies in the innovative approach, which eliminates the need for users to create their blogging platforms to publish their posts. Instead, my website offers a shared platform focused on travel, where users can freely publish, exchange, and share travel stories, tips, and experiences from various regions and themes all in one place. What truly sets it apart is distinctive features, such as an AI-powered travel chatbot, automated question answering, AI destination identification and real-time weather updates, comprehensive country information retrieval tools, and a Yelp-like local search. These features provide travelers with invaluable resources, enhancing their journeys in ways unlike any other platform.

2. Personas and User Stories

1. Personas:

   Name: Lauren

Personas: A college teacher who also has a passion for travel adventure

Behaviors: Lauren, a passionate teacher, eagerly utilizes her spring break or summer break to embark on adventurous journeys, from hiking the rugged trails of the Andes to exploring exotic locales. Amidst the solitude of nature, she finds solace and inspiration, her experiences enriching not only her own life but also providing valuable lessons and stories to share with her students upon her return. With each adventure, Lauren's spirit soars, reaffirming her deep connection to the world beyond the classroom and fueling her determination to continue inspiring others to embrace the wonders of travel and pursue their passions.

Interests: As a teacher, Lauren is not only passionate about reading travel stories and adventure tips but also delights in sharing her own travel experiences with her students, enriching their lives with stories of exploration and discovery.

Skills: Proficient in using online platforms to search for adventure destinations.

Pain points: Lauren might struggle to make friends with other adventurers who are as excited and prepared for unique and adventurous experiences as she is. Additionally, she sometimes struggles to find detailed information pertinent to her adventurous pursuits.

2. **Personas:**

   Name: Olivia

   Personas: Freelance writer and travel blogger

   Behaviors: Olivia is a travel blogger; she frequently documents her travels through detailed blog posts and social media updates. She has a keen eye for storytelling, which she uses to engage her audience with both the beauty and the realities of the places she visits.

   Interests: She is passionate about composing travel posts that convey her journey's essence, aiming to share her experiences and insights with people who hunger for adventure and discovery.

   Skills: Olivia possesses strong writing skills to create engaging and informative blog posts that capture the attention of readers.

   Pain points: Balancing travel, content creation, audience engagement, and personal time is a constant juggling act.

3. **Personas:**

   Name: Michael

   Personas: A father and family travel lover

   Behaviors: Michael spends an amount of time researching and planning his family trips to ensure that all activities are suitable for all ages and interests within the family. He often looks for unique activities his family can do, like last week's cooking classes in Italy or last summer's snorkeling in the Great Barrier Reef.

Skills: He possesses strong organizational skills that enable him to plan and execute family trips with various considerations such as budget, accommodation, and activities that cater to different age groups.
Interests: Michael is keen on exploring varied locales, cultures, and traditions, aspiring to utilize family excursions as a learning tool to expand his and his family's worldviews.
Pain points: Finding activities that cater to individuals of all ages within the family can be challenging.

4. **Personas:**
   Name: David
   Personas: A journalist and also a solo explorer
   Behaviors: David is a solo explorer, who meticulously plans his trips, from routes to accommodations, relying on a mix of guidebooks, apps, and travel blogs to ensure a smooth experience. He also documents his adventures through writing and photography, capturing the essence of each destination he visits.
   Interests: In addition to exploring new destinations independently, David is passionate about sharing his travel stories and insights with others as a journalist. He enjoys writing articles, creating videos, and hosting podcasts to inspire fellow travelers and provide valuable tips and recommendations.
   Pain points: David might find it challenging to overcome language barriers and cultural differences without a companion to help.

   User Story:
   ● **ID: 001**
   Lauren (a teacher and an adventure enthusiast) wants to browse travel blog posts related to adventure travel so that she can gather ideas for her next thrilling journey.
   Constraints: The platform should offer a robust search and provide a well-organized interface that categorizes content to easily find blog posts specifically focused on adventure travel.
   Priority 1: high

   ● **ID: 002**
   Lauren also wants to be able to ask questions about adventure travel information or plan and get automated responses for quick information to enhance her travel planning.
   Constraints: The platform must feature an AI-powered chatbot capable of understanding and responding to inquiries about adventure travel. This assistant should provide immediate, reliable information and suggestions to facilitate Lauren's travel planning.
   Priority 3: medium

- **ID: 003**

Olivia (a writer and a travel blogger) wants to inspire and inform her readers by sharing authentic travel stories and practical tips, fostering a community of like-minded individuals who share a passion for discovery and adventure.
Constraints: The platform must provide Olivia with a user-friendly interface for content creation and manage her posts easily to share her travel stories and tips. Additionally, it should offer community engagement features such as comments, likes, and add favorites, allowing her to effectively cultivate and interact with a community of fellow travel enthusiasts.
Priority 1: critical

- **ID: 004**

Michael (family traveler and a father) seeks to delve into family-oriented travel blog posts to uncover destinations and activities that cater to his family's interests and needs, aiming to enrich their collective travel experience.
*Constraints***:** The app should provide a curated selection of family-friendly theme travel content, allowing him to easily access personalized recommendations and insights that ensure a fulfilling and stress-free family journey.
Priority 1: critical

- **ID: 005**

Michael (family traveler and father) also wants to check real-time weather information for his chosen family travel destinations, so he can plan and pack accordingly for family adventures.
Constraints: The app should offer a real-time weather check tool to help him stay informed about the current and future weather conditions at their destination easily.
Priority 3: medium

- **ID: 006**

David (a journalist and a solo explorer) needs easy booking options for flights, hotels, car rentals, or homestays to make his solo adventures seamless.
Constraints: This app should satisfy his requirements by having a simple process for booking to help him implement his travel plan and book all travel needs easily.
Priority 2: high

- **ID: 007**

David also needs detailed and easily accessible country information to assist with his travel preparations.
Constraints: The application should provide a seamless interface where David can quickly retrieve country-specific details. This information should be up-to-date and comprehensive, ensuring that David can confidently plan and book all aspects of his travel with ease.

5. Data Definitions and Structure

	Data Definition	
Main Term	**Description**	**Usage**
Users	Registered individuals on the platform with personal accounts.	Facilitates personalization of content, interaction with the community, and management of user-created content such as blog posts, likes, add favorites, followers, comments, and retravel of AI assistant interaction.
Posts	An article.	Allows users to share and read experiences, tips, and stories about different travel destinations. Allows users to manage their posts (new, delete, update)
Search	The tool within the blog that allows users to find content.	Enables users to query the blog database for posts by keyword, region, theme, or other relevant criteria.
Comments	A response or remark that users can post in reaction to a blog post.	Engages the community by allowing users to discuss content, share feedback, and interact with post authors and other readers.
Likes	An interactive feature that allows users to express their appreciation for a blog post.	Serves as a simple feedback mechanism to show approval or support for content within the platform.
Relationships	A subscription-based feature enabling users to update on other users' activities	After clicking the follow button, the user gains the ability to follow all posts authored by the selected user and view all posts from followed users in the personal service settings.
Favorites	A personal collection feature that allows users to save to their favorites list.	Clicking the favorite icon enables users to save the post to their favorites list, where they can later view and manage these posts.
Theme	A subject matter tag used to classify blog posts.	Aids in content discovery by grouping posts by common topics such as 'Adventure', 'Food ', 'Family', etc.
Region	A geographical categorization is used to organize blog content.	Helps users filter and discover blog content relevant to specific parts of the world they are interested in or planning to visit.
Travel-Info	A compilation of data and tools related to travel	Provides users with real-time weather updates, a local search feature similar to Yelp for discovering services and places, and detailed country information to assist with travel planning.
AI-chatbot	An intelligent digital chatbot that aids users in their travel-related queries and tasks.	Offers automated responses to user inquiries, personalized travel suggestions, and itinerary planning assistance enhancing the overall travel experience.

Data structure	
users	id, image, email, username, password, nickname, city
posts	id, title, description, image, date, userId, category
comments	id, description, createAt, userId, postId, paretCommentId
favorites	fid, userId, postId
likes	id, userId, postId
relationships	id, followerUserId, followedUserId
tags	tagId, theme_name

post-tags	postId, tagId

6. Initial list of functional requirements:

Priority Level	Description	Priority Level	Description
1	Critical	4	Low
2	High	5	Minimal
3	Medium		

1) User Login
Description: Registered users should be able to log in to the travel platform with their credentials to access their personalized content and interact with the community.
User Story Reference: As a registered user, I need to log in to my account to manage my profile, and posts, and engage with the community.
Priority: 1

2) User Registration
Description: Users will have the ability to sign up for an account, User Register, also will be able to verify and validate information from previous use and must encrypt the password.
User Story Reference: As a new visitor, I want to register for an account so I can start contributing to the travel blog and access personalized features.
Priority: 1

3) User Profile Management
Description: Provide users with the capability to update personal information, change passwords, update profile images, and delete their accounts within the travel platform.
User Story Reference: As a user, I need the facility to modify my personal details and manage my account settings to maintain up-to-date information.
Priority: 1

4) Blog Post Creation and Editing
Description: Allow registered users to write, publish, and edit their posts with text and images.
User Story Reference: As Olivia, I want to inspire and inform my readers by sharing authentic travel stories and practical tips.

5) Browse the Posts by theme or by region

Description: Offer users the capability to browse travel-related posts organized by specific themes, including adventure, beach, family travel, etc., along with regions such as Asia, Europe, America, and more.

User Story Reference: As Lauren, I want to easily navigate and explore content through categorized browsing, enabling me to find information relevant to my travel interests and needs more efficiently.

Priority: 1

6) Search Functionality

Description: Users can easily find posts by searching through various criteria such as by all, by region, by title, or by author.

User Story Reference: As David, I need to find specific family-related posts that cater to the needs and interests of my family, enabling me to plan our trips.

Priority: 1

7) Country Information Functionality

Description: Display detailed country information, including language, currency, region, population, and so on.

User Story Reference: As a solo explorer, I want to access comprehensive country information to plan my travels effectively.

Priority: 2

8) Weather Information Update

Description: Provide a feature that allows users to check real-time weather information for various destinations, helping them plan their travel more effectively.

User Story Reference: As a traveler, I want to be able to check the current weather conditions and forecasts for my destinations so that I can pack appropriately, and plan activities suited to the weather.

Priority: 3

9) Users' Interaction

Description: Implement features for users to like, comment on, follow, and add favorite posts.

User Story Reference: As a travel community member, I want to engage with content by liking, commenting, and following my favorite authors' posts.

Priority: 2

10) View and Manage Personalized Content

Description: Registered users should be able to access and view their lists of published posts, with options to edit and delete their posts directly. Additionally,

they should be able to view their lists of favorite posts manage them as well, and view posts authored by users they follow.

User Story Reference: As a user, I want to quickly find and view all my posts, and my favorite posts, and see the latest posts from authors I follow, so I can stay engaged with content that is most relevant to me.

Priority: 2

11) Yelp-like Search for Nearby Places

Description: Users should be able to search for nearby places such as restaurants, cafes, and bars.

User Story Reference: As a user, I want to be able to search for nearby places like restaurants and cafes during my travel, so that I can find the best spots to visit based on my location and preferences.

Priority: 3

12) AI-Powered Travel Chatbot

Description: Integrate an AI-powered chatbot to provide users with real-time assistance and travel planning support.

User Story Reference: As Lauren, I want to be able to ask questions about adventure travel information or plans and get automated responses for quick information.

Priority: 2

7. List of non-functional requirements:

1) (Cross-Platform Compatibility) The application should be compatible and fully functional across various platforms and devices, including mobile browsers like Chrome and Mozilla Firefox.

2) (Data Storage and Management) Data shall be securely stored using the selected cloud-based database technology (*Microsoft Azure*) to ensure scalability and reliability.

3) (User Experience and Usability) The application shall offer an easy-to-navigate, intuitive user interface that enhances accessibility and user convenience.

4) (Development Requirement) Code stored in the master branch of the team's GitHub repository shall be consistently well-maintained, thoroughly tested, and guaranteed to be in a workable state at all times.

5) (Performance and Speed) The application shall be optimized for speed and responsiveness, ensuring that page load times are minimal and that there is no perceptible lag in user interaction.

6) (Security and Privacy) The application must implement robust security measures to protect user data and privacy.

7) (Availability) The application should aim for high availability to ensure that the platform is accessible to users at any time.
8) (Fault Tolerance) The application shall be designed to handle an expected user base of a specific number of concurrent users, maintaining performance and stability.

8. Competitive analysis:

Features	(TravelWise)	ytravelblog	travelblog platform	Condé Nast Traveler	nomadicmatt
		ytravelblog.com	travelblog.org	cntraveler.com	nomadicmatt.com
Browsing posts & Publish Posts	Publish your travel posts to share with people in the same travel blog platform (TravelWise), does not necessarily imply that you have to create your blog website. Users can read any posts and include recommended posts.	Users browsing posts, only the owner publishes their posts.	Unlike simply posting on a travel blog, users have to establish their blog site and publish their posts there.	Users browsing posts, only the people who work for the company can publish posts.	Users browsing posts, only the owner of a website can share posts.
real-time weather updates	Include real-time weather checks to help users plan their travel more effectively by providing them with up-to-date weather conditions.	Not available for real-time weather checks.	Not available for real-time weather checks.	Not available for real-time weather checks.	Not available for real-time weather checks.
Country information checks	Include detailed country information checks, such as language, currency, region, population, and more.	Not available for country info checks	Not available	Not available	Not available

Yelp-like local search	Integrating a Yelp-like local search tool by providing them with insights into nearby attractions.	Not available for local search.	Not available for local search.	Not available for local search.	Not available for local search.
AI travel chatbot	Personalized AI travel chatbot to provide users with real-time assistance and travel planning support.	Not available for any AI features.	Not available for any AI features.	Not available for any AI features.	Not available for any AI features.
AI-powered Q&A system **AI destination identification**	Integrating an AI-powered Q&A system enables users to access instant and accurate responses to their travel-related queries.	Not available	Not available	Not available	Not available
Users' engagement	More user engagement, such as likes, comments, follows, and add favorites.	It includes a feature to follow.	It includes a feature for commenting and following.	It includes a feature for saving favorites.	It includes a feature for followers on social platforms.

Advantages Summary:

TravelWise elevates the concept of a travel blog by transforming it into an advanced, interactive platform that goes far beyond the traditional blogging experience of merely browsing posts for tips and advice. The service stands out with Travel Wise's AI assistant and AI-powered Q&A delivering a personalized and intelligent layer of interaction, offering users a responsive and context-aware system to answer their travel-related queries. The Yelp-like local search tool within TravelWise serves as a resource for exploring new locales, making it easier for travelers to search for places in a specific area and retrieve detailed information, including reviews, ratings, and photos as well as essential services for their journey. Finally, the site provides real-time weather checks and detailed country profiles, which are useful for travelers seeking immediate and comprehensive information about their destinations.

Additionally, TravelWise encourages a vibrant community by allowing travelers to share their content and engage with others through a full suite of social features such as liking, commenting, saving favorites, and following other users. In conclusion, TravelWise not only increases user engagement but also fosters a vibrant, content-driven travel blogging platform, setting TravelWise apart as special and distinct from other traditional blogs.

9. High-level system requirements

Sever Host:

- Microsoft Azure

Operating System:

- Ubuntu 22.04 LTM Server

Frontend Frameworks/Tools:

- React.js for dynamic user interfaces and single-page applications.

Backend Frameworks/Tools:

- Node.js with Express.js for a scalable and efficient backend.

Web Application Framework:

- Express

Web Server:

- Caddy

Database Systems:

- MySQL 8.0.35

IDE:

- Visual Studio

APIs and Middleware:

- RESTful APIs for web services.

External APIs Integration:

- **OpenWeather API** for real-time weather information.
- **Yelp Business API** for accessing business reviews and details.
- **OpenAI API** for leveraging AI-driven content generation and processing.
- **Geo API** for implementing geolocation services.
- **CountryAPI** for retrieving detailed country-specific data.
- **Server-Side Events Module**: github:mpetazzoni/sse.js

Testing Tools:

- Jest for unit testing.
- Supertest or Chai for end-to-end testing.
- Postman for API testing.

Authentication and Authorization:

- JWT (JSON Web Tokens) for secure access.

Code Quality Tools:

- ESLint

Supported Browsers

- Google Chrome (latest version).
- Mozilla Firefox (latest version).
- Safari (latest version).

- Microsoft Edge (latest version).