FINAL PROJECT PROPOSAL

EPIC ESCAPES TRAVEL AGENCY (v2)
4/6/25

PREPARED FOR

COM S 3190 - Construction of User Interfaces
Iowa State University Computer Science Department

PREPARED BY

Trice Buchanan
Roan Angerer

Table of Contents

1. Introduction

We, **Trice Buchanan** and **Roan Angerer** are from team **PS14**. We are both Sophomores Majoring in Computer Science at Iowa State University. We are in the process of learning many demanding web development skills through our mutual class, SE 3190. Some examples of such skills are the basics: HTML, CSS and JavaScript, as well as more modern development tools: React, NodeJS, and MySQL. From our in-class activities and assignments we have learned how to build, design, and style various websites. We are also both skilled at project management through participation in SE 1860, a project-based class in which a product is developed from conception to completion. We believe that we can combine our thoughts and skills to make a functional, useful, and elegant website.

2. Purpose of the Proposal

We are aiming to rebuild and make additions to our previous website, which served as both an inspiring and practical hub for travel enthusiasts. Through our platform, Epic Escapes Travel Company, we will showcase the world's most breathtaking destinations and hidden gems. We believe that travel has the power to transform lives, opening minds to new cultures and experiences. Our interactive website will allow users to explore, plan, and immerse themselves in unforgettable journeys. As for new features, users will be able to create accounts and post on the Epic Escapes message boards, letting other users know what incredible journeys they've been on.

3. Goals and Objectives

Our project's goals and objectives include, but are not limited to:

- Developing a user-friendly website with an attractive and engaging design.
- Providing detailed information about various travel destinations, including history, attractions, and hidden gems.
- Creating an easy-to-navigate interface for users to explore destinations, view travel guides, browse itineraries, and learn about travel tips.
- Demonstrating proficiency in HTML, CSS, Javascript, React, NodeJS, and MySQL for web development.
- Organizing destinations into clear categories, making it easy for users to browse and discover new travel ideas.
- Consistently updating the website with the latest travel trends, new destinations, and travel advisories.

- Including a survey feature to gather user feedback, ensuring the website aligns with travelers' needs and expectations.
- Including a login/signup feature which allows users to post on a message board.

4. Project

We believe that travel is one of the most enriching experiences, opening doors to new cultures, landscapes, and adventures. Our goal is to provide users with in-depth insights into breathtaking destinations while also offering travel-related services and resources.

Key Features of Our Website:

- **Destination Highlights** – A curated collection of top travel spots, including historical landmarks, natural wonders, and hidden gems. An API may show current weather and other statistics.
- **Interactive Travel Guides** – Engaging articles, itineraries, and expert tips to help users plan their perfect trip.
- **Photo Galleries** – Stunning visuals showcasing destinations, local experiences, and cultural highlights.
- **Travel Resources** – Practical advice on accommodations, transportation, and essential travel tips.
- **User Reviews & Recommendations** – A community-driven section where travelers can share insights and experiences.
- **Travel Blog** - A way for users to tell others about their experiences and interact with other travel enthusiasts.

Description of Visual Elements:

- The homepage will have an inviting and visually rich layout, ensuring users can easily explore different travel categories.
- The destination galleries will feature an interactive and immersive browsing experience, encouraging users to dive deeper into travel planning.
- There will be a login and signup page where users can create accounts on the website
- There will be an Entity Details/Edit View page for admins to manipulate individual database entries
- There will be a process flow page (when writing a review)

- There will be a confirmation page when confirming a new review or account
- There will be an about page detailing information about the authors
- There will be error pages as needed

5. Path Selection

We will be taking **Option 1** as our path, choosing to rebuild and then build further upon our previously created website. We chose this option because while we were satisfied with the looks of our website, we had so many features that we thought were cool but we didn't have the abilities to create. Now, with React to make easy web applications and MySQL to store things like user credentials, we can make these ideas a reality. Our implementation plan is as follows:

- Frontend built with React to recreate our previous pages and add new ones
- To create functionality, backend will be handled with NodeJS (with Express)
- User accounts and reviews stored in MySQL database
- APIs will be used as needed to display things such as weather or plane flights.

6. Feature Ownership

Feature Name: Destinations w/ API Integration
Feature Description: Allows users to view destinations and current info
Assigned Developer: Trice Buchanan
Tech Involvement: Handled by Trice (Frontend + Backend)

Feature Name: Blog Page
Feature Description: Allows users to create blog posts to share with others
Assigned Developer: Roan Angerer
Tech Involvement: Handled by Roan (Frontend + Backend)

Feature Name: Login & Signup
Feature Description: Allows users to create accounts, necessary for posts and travel info
Assigned Developer: Trice Buchanan
Tech Involvement: Handled by Trice (Frontend + Backend)

Feature Name: Destination Filter
Feature Description: Allows users to filter destinations according to various refinements
Assigned Developer: Roan Angerer
Tech Involvement: Handled by Roan (Frontend + Backend)

7. Resources

1. **Web Development Stack** – The website will be built using React. NodeJS, and MySQL to ensure a responsive and interactive user experience.
2. **Data Management** – JSON files will store information about various travel destinations, including key attractions, history, and travel tips. There will be a MySQL database to hold account information and user reviews
3. **Image Assets** – High-quality travel images sourced from reputable platforms to showcase destinations visually.
4. **Travel Insights** – Destination details, historical context, and visitor tips will be gathered from trusted sources like travel blogs and official tourism websites.
5. **Embedded Media** – Videos from YouTube will provide travelers with virtual tours, and highlights of different locations.
6. **Dynamic Content** – The DOM will be utilized to efficiently update and manipulate website elements using JavaScript.
7. **Team Collaboration** – Tasks will be assigned among team members to ensure efficient development and content creation.
8. **Version Control** – GitLab will be used as a remote repository for version control, allowing seamless collaboration and updates.
9. **Optimized Performance** – We will optimize the website with small images and low memory usage to ensure fast loading and interaction
10. **API Integration** – A travel-related API will be integrated to provide real-time updates on destinations, weather, and travel advisories.
11. **Wireframing** – Wireframes will be built for key pages such as the homepage, destination catalog, gallery, and travel guides, ensuring a seamless user experience.

TIME COMMITMENTS:

- Each member will work according to the mini-assignments on THEIR OWN TASK
- Both developers will work with the full stack
- Tentatively, each developer will work for around thirty minutes a day

8. File Structure

Our file structure will be as follows:

- **frontend/** – Contains all React-related files.
    - **src/**
        - **assets/** – Images and external data.
        - **components/** – React components.
        - **App.jsx, main.jsx**
- **backend/** – Express server, API routes, and database logic.
- **Documents/** – Planning sketches, Software Architecture Document, final report, and video.

This will allow the functionality of our website to remain separated and clean. The frontend and backend will communicate using RESTful APIs. The frontend will send HTTP requests to the backend, which then processes those requests and returns responses to the frontend.

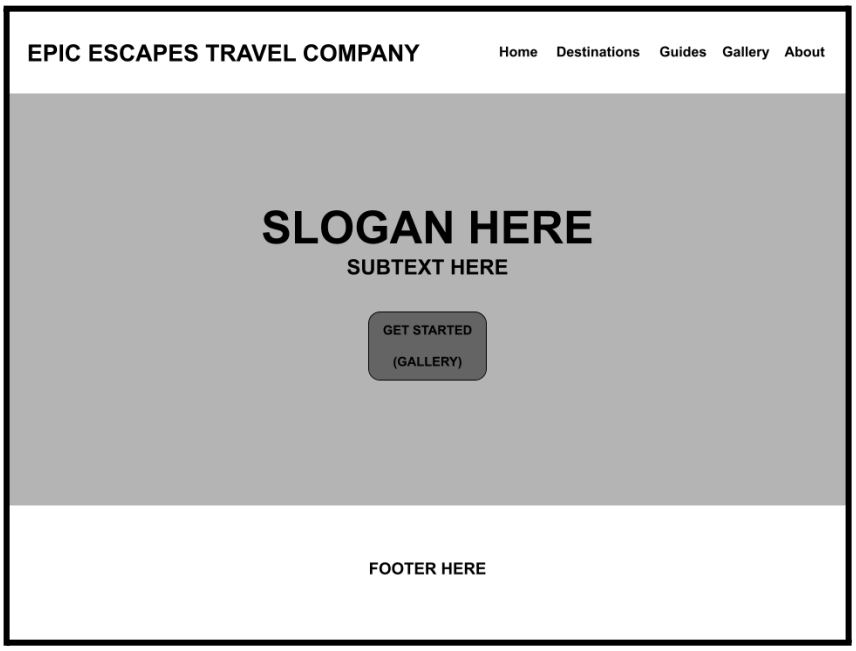
9. Data Sources and Management

In our website which is built with React, Node.js, and MySQL, application data will come primarily from user input (such as signing up, searching for trips, and booking travel packages) and data stored in the MySQL database (such as destination listings and package details). Third-party APIs will also be used for dynamic data like up-to-date weather and flight prices. Data will be stored in JSON format during frontend/backend communication. For example, a travel package might include

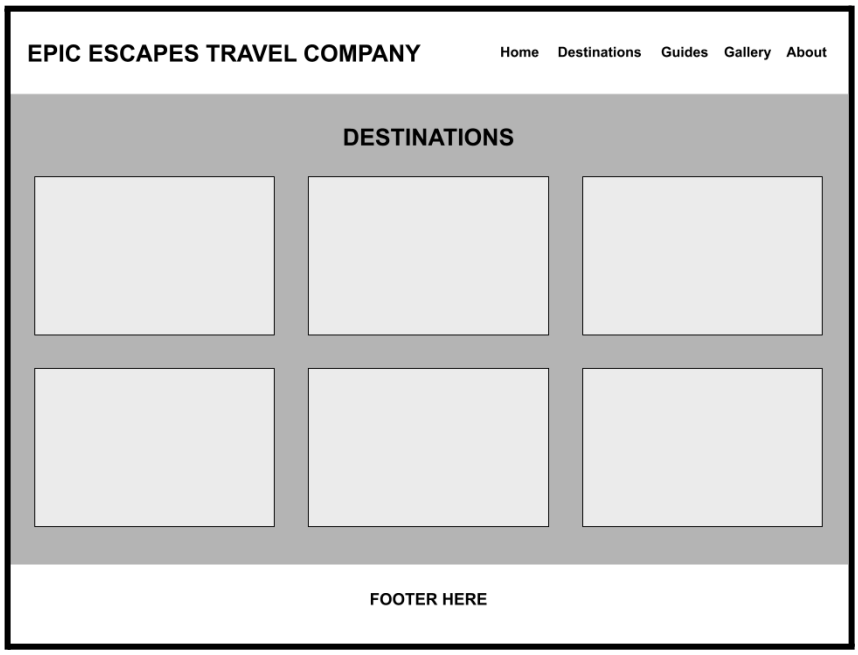
{ "id": 1, "destination": "Paris", "price": 1200, "price": "$$$$$", “url”: “XXX”}.

CRUD operations will be implemented via RESTful routes in the Node backend. React will send HTTP requests, which the backend will then handle by querying or updating the MySQL database. The flow of data goes from the user through React to the server, interacts with the database, and returns results that React uses to update the UI dynamically.

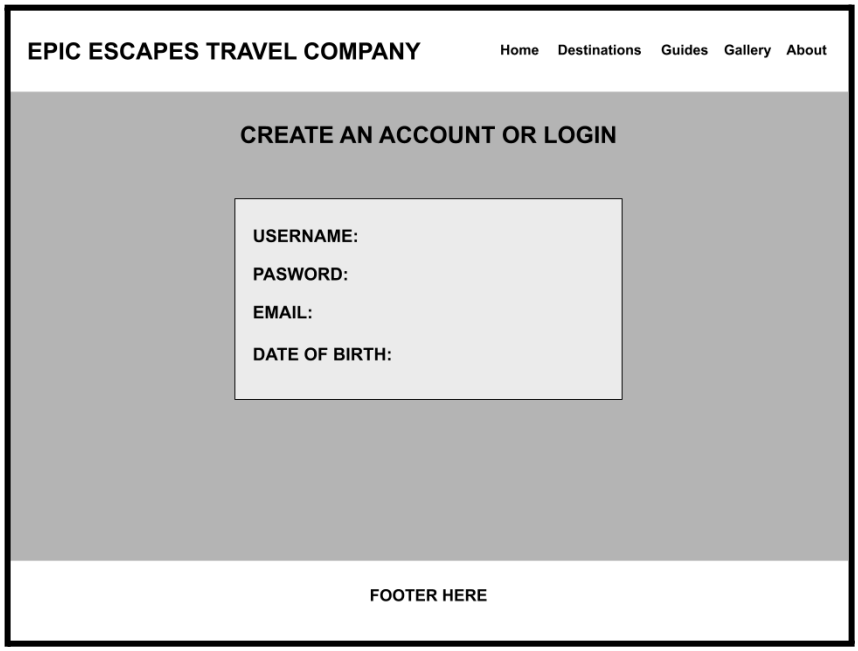
10. User Experience Views



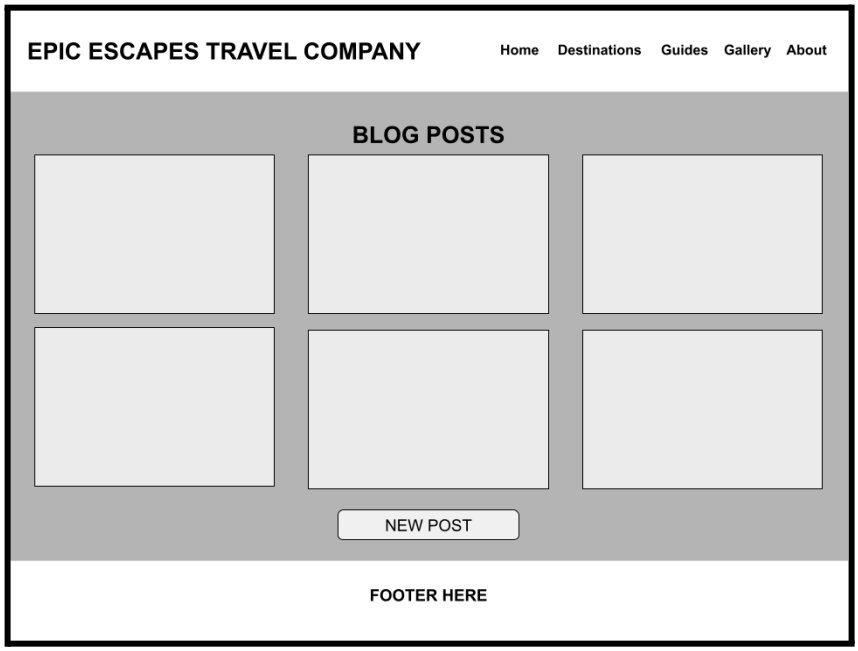
Visual: The landing page of the website. Must be aesthetically pleasing and inviting
Actions: The user should be able to reach every other page of the website from here
Flow: This is the central hub from which every other page is connected in some way.



Visual: The layout for the two location pages of the website. Each (domestic and foreign) will have multiple destinations and information about them.
Actions: The user can filter these with the search bar as well as find current information about them such as weather and flight prices.
Flow: This is the heart of the website, where most users who want to learn about travel will spend most of their time browsing



Visual: The layout where users can create an account or login
Actions: The user must enter their info and then submit whether they want to make a new account or login. All boxes must be filled to submit
Flow: This is where every user should go at some point when browning the website. They will then be directed to a success page upon logging in.



Visual: The layout for the blog page of the website
Actions: The user can view current posts by clicking on them to view the full post , or click for a new post where they can enter their own
Flow: This is where users can navigate to leave their posts and other experiences, representing an essential part of the site flow.

THESE ARE THE BARE ESSENTIALS OF THE WEBSITE, AND MORE NUANCE WILL BE ADDED AS NEEDED.

11. Final Comments

This is our proposal for Epic Escapes Travel Company. We believe this project will not only enhance our skills but also serve as a valuable resource for travelers worldwide.

Thank you for considering our proposal. We welcome any feedback or suggestions.

You can reach out to us at:

triceb@iastate.edu or **rangerer@iastate.edu**