

CST 336 Summer 2021 Final Project

Trip Planner: Go Out & See the World

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Description

Trip Planner is a web application that provides the user with the option to enter a destination or select from recently entered user destinations, select an activity type, and choose from nearby activities based on the type that they may wish to visit. We have utilized Node.js via EJS to provide for a consistent user experience and layout throughout the website. For the backend, a MySQL database connection is used to store and provide

CRUD capabilities for the web application. Also we have linked with the Bing Maps, Yelp, and PositionStack APIs to deliver appropriate content for the website.

Task Distribution

For Trip Planner we distributed the tasks as follows:

Amber Beebe

Full Stack Development: Page Design, Database connection & design.

Delaney Nikoofekr

Full Stack Development: Server Routes, Page Design, GitHub Management, File structure, Animations.

Mohammad Arain

Project Report and Form Elements.

User Stories

Ideation

Users are offered the option to pick a destination or randomize a destination. From there, users will create a plan based on methods of transportation and activities at the destination, both populated by web APIs.

Design Iterations

The design of this project has been progressively developed per the following iterations:

Idea 1

Initial idea called for a simple and elegant design, modeled after the google.com homepage. Where we present the user with an option to select a destination or pick a random pre-planned trip. Upon selecting a destination, the user would be presented with activities available at the destination.

Idea Iteration 2

Added email trip Details

Design Mockup



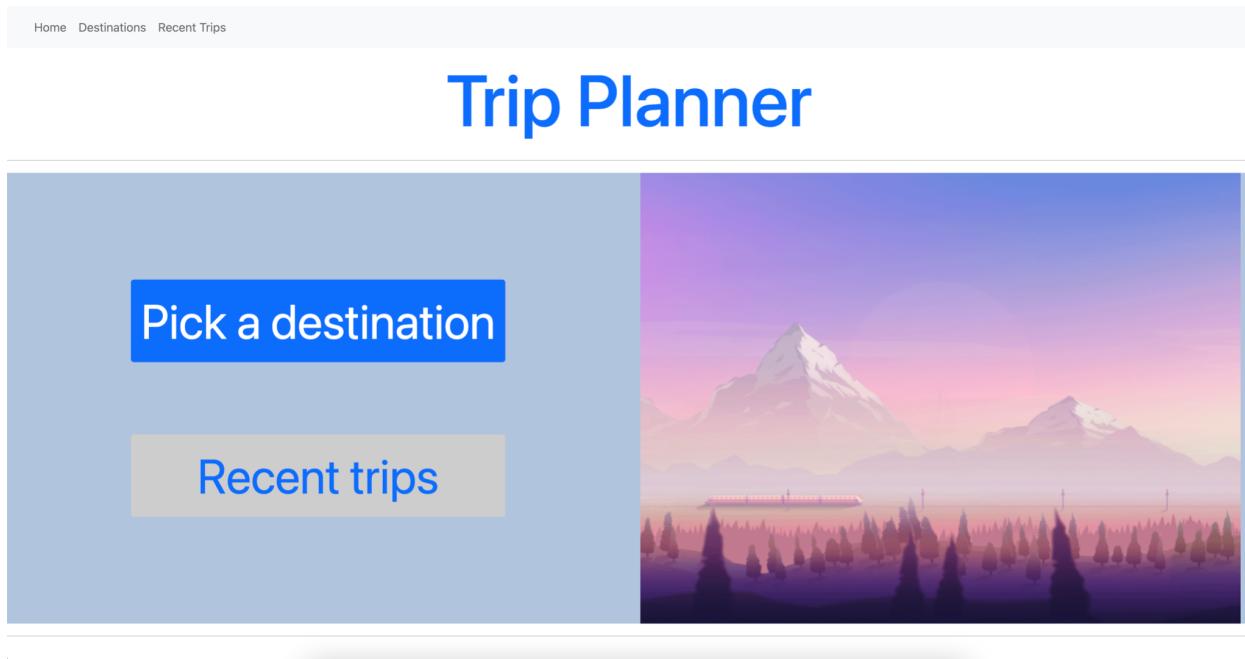
Initial Design philosophy was modeled after the Google.com Homepage, for its simplicity and elegance in design.

Website Functionality & Usage

There are 5 views for user interaction along with an error page which is displayed to account for any errors in submission.

Screenshots

Home Page



Recent Trips

Recent Trips

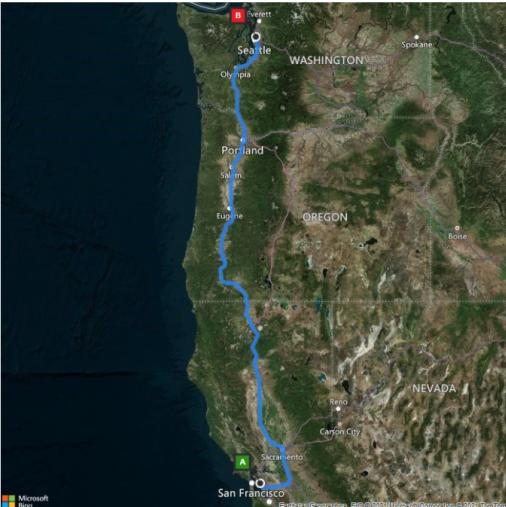
Browse through a selection of recent trips!

Departure	Destination	Times Taken	Take Trip
Long Beach, California	San Francisco, CA	16	Take Trip
Long Beach, California	London, UK	7	Take Trip
Long Beach, California	Grand Canyon	6	Take Trip
Long Beach, California	California	4	Take Trip
Oakland, CA	London, UK	4	Take Trip
Long Beach, California	San Francisco, CA	3	Take Trip
Long Beach, California	New York, NY	3	Take Trip
Long Beach, California	Seattle, WA	2	Take Trip
Long Beach, California	Grand Canyon	2	Take Trip
Oakland, CA	San Francisco, CA	2	Take Trip

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Disclaimer: The information in this webpage is fictitious. It is used for academic purposes only.

Trip Confirmation

Confirmation Form

Trip Details: <p>Departure: Oakland, CA</p> <p>Destination: Seattle, WA</p> 	Selected Activities: <p>Ellenos Real Greek Yogurt 1500 Pike Pl, Seattle, WA 98101 (206) 535-7562 Go</p> <p>Biscuit Bitch 1909 1st Ave, Seattle, WA 98101 (206) 441-7999 Go</p> <p>Tillikum Place Cafe 407 Cedar St, Seattle, WA 98121 (206) 282-4830 Go</p>
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Activities Page

Activities:

[Lush](#)

175-179 Oxford Street, London W1D 2JS, United Kingdom

+44 20 7789 0001

[Add](#) [Remove](#)



[Frith Street Tattoo](#)

18 Frith Street, London W1D 4RQ, United Kingdom

+44 20 7734 8180

[Add](#) [Remove](#)



[Jack the Clipper](#)

4 Toynbee Street, London, London E1 7NE, United Kingdom

+44 20 7247 1524

[Add](#) [Remove](#)



[Windle London](#)



Trip Finalization

Finalize Trip

Departure:
Oakland, CA

Destination:
London, UK

Activities:
Beauty & Spas

Email Trip Details

Email:
abeebe@csumb.edu

Destination Confirmation

Home Destinations Recent Trips

Destination Confirmation

[Randomize](#)

OR

Enter Details:

Departure:
Oakland, CA

Destination:
London, UK

Preferred Activities:
Beauty & Spas

[Confirm Destination](#)

Email Trip Details



1:58 Trip Planner 1:54 now AT&T

To me ↗ [Attachment] [Delete] [Email] [More]

Thank you for using Trip Planner!

Trip Details:

Departure: Oakland, CA
Destination: London, UK

Activities:

Lush
[175-179 Oxford Street,London W1D 2JS,United Kingdom](#)
+44 20 7789 0001



Jack the Clipper
[4 Toynbee Street,London](#),London E1 7NE,United Kingdom

Database

We have used MySQL Databases, one for development and another for production.

Table Schemas

The database tables with their respective schemas are as follows:

Trips Table

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra	Comments
date_created	datetime		NO			select,insert,update,references		
departure_id	int		NO			select,insert,update,references		
destination_id	int		NO			select,insert,update,references		
distance	float		YES			select,insert,update,references		
duration	varchar(15)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references		
last_time_done	datetime		NO			select,insert,update,references		
times_taken	int		YES			select,insert,update,references		
trip_id	varchar(255)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references		

Locations Table

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra	Comments
address_string	varchar(255)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references		
id	int		NO			select,insert,update,references	auto_increment	

Activities Table

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges	Extra	Comments
activity_name	varchar(255)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references		
location	varchar(255)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references		
phone	varchar(50)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references		
raw	json		YES			select,insert,update,references		
trip_id	varchar(255)		NO	utf8mb4	utf8mb4_090...	select,insert,update,references		
yelp_url	varchar(255)		YES	utf8mb4	utf8mb4_090...	select,insert,update,references		

APIs

API, which is short for Application Program Interface, is a way for two pieces of software to “talk” with each other. The API’s utilized by our team are as follows:

Yelp

There are two APIs available on Yelp platform: Fusion and GraphQL. We have used Fusion because the data is placed within categories, also known as endpoints. These endpoints make it easier to get a bulk of data from one or two requests. Fusion contains seven major endpoints all of which provide useful listing data. It includes:

Name	Path	Description
Business Search	/businesses/search	Search for businesses by keyword, category, location, price level, etc.
Phone Search	/businesses/search/phone	Search for businesses by phone number.
Transaction Search	/transactions/{transaction_type}/search	Search for businesses which support food delivery transactions.
Business Details	/businesses/{id}	Get rich business data, such as name, address, phone number, photos, Yelp rating, price levels and hours of operation.
Business Match	/businesses/matches	Find the Yelp business that matches an exact input location. Use this to match business data from other sources with Yelp businesses.
Reviews	/businesses/{id}/reviews	Get up to three review excerpts for a business.
Autocomplete	/autocomplete	Provide autocomplete suggestions for businesses, search keywords and categories.

PositionStack

The API was built to offer an affordable and straightforward REST API interface for global forward and reverse geocoding in real-time, supporting nearly all countries worldwide with more than two billion global addresses covered. The API is making use of a number of trusted data sources to provide a high level of accuracy for every geocoding API request made.

Bing

The Bing Maps REST Services include powerful routing services that enable you to calculate and optimize routes for several modes (driving, walking, public transit), commercial vehicles, and multi-agent scenarios with traffic information included.

The Bing Maps REST Services offer powerful location intelligence capabilities that allow you to perform tasks like geocoding, reverse-geocoding, time zone lookup, and more. Being a REST-based API, the Bing Maps API can be easily accessed from almost any development environment.

Geolocation (Local API)

The Geolocation API allows the user to provide their location to web applications if they so desire. For privacy reasons, the user is asked for permission to report location information.

API Usage

The Geolocation (local API) fetch call is used to prepopulate the origin/departure of the trip on the finalize trip page.

The Yelp fetch call is used for loading the activities on the activities page.

The Positiontack Api call is used to convert user departure/destination inputs into coordinates.

The Bing maps API uses these coordinates to provide a complete trip Map.

Node.Js is used to deliver trip details to the provided email.