

# Project Design Report

**Team Members:** Yulduz Muradova, George Pogorelov

**Date:** March 1, 2023

**Updated:** April 21, 2023

**Project Name:** Travel Log Database

**Section1 - Project Description and Motivation:** Our group chose to create a travel blog database because we enjoy traveling and would like to provide people with the ability to log their past vacations. Our traveler blog database is a comprehensive system for organizing and documenting travel experiences. The database will include information about travelers, destinations, accommodations, activities, trips, reviews, and transportation. It is designed for travelers, travel bloggers, and adventure seekers to store and share their travel memories, insights, and recommendations with others. It will be a great tool to use for documenting and sharing their travel adventures.

## Section 2 - Database Requirement Analysis:

- The main users for the database will be travelers and they want to be able to choose the privacy of their travel log: private or public;  
When the traveler logs their trips, the trips entity will have no-null constraints, which will not allow any NULL values.
- Predefined Categories: When selecting an activity category type, travelers are limited to choosing from a predefined set of 10 category names. These names are provided and cannot be modified by the traveler.
- Password Check: When travelers create password, it must be at least 8 characters long and contain at least one uppercase letter, one lowercase letter, and one number,

## The database will have the following functional requirements

1. The database provides a feature that enables travelers to view all the trips they have taken by using their unique username\_id and trip\_id number
2. To view activities related to nature, users can access the database and retrieve all activities that are classified under the 'Nature' category.
3. Travelers who are interested in exploring activities in a certain city can use the database to browse and view all activities that are available in the city by using a coordinate system.
4. Users who want to find activities with a certain rating can query the database to retrieve all activities with any rating from 1 to 5.
5. The database should allow users to search for cities based on their climate.
6. To better organize the activities, the database allows users to retrieve all activities grouped by their respective categories, sorted in ascending order based on the category name.

7. For the Distance relationship entity, the database will allow users to sort and search the cities based on the distance.
8. The database provides the functionality for travelers to search for posts authored by a specific traveler using their unique username\_id.
9. The database can generate a report on the most popular activities in each location based on the number of reviews and ratings
10. The database should be backed up and have a way to recover data in case of a data failure or disaster.

### **Section 3 - ER Model Report:**

The Traveler entity represents users who interact with the database. It includes the following attributes: userID (unique identifier for the user), traveler\_name (the user's name), Password (a unique password), age (the user's age), experience (the number of trips the user has taken), and privacy (the user can set their account to private). Users can add, update, and delete their information using this entity.

Blog: The blog entity represents blog posts written by travelers. It includes the following attributes: blogURL (unique identifier for the blog post), datePublished (the date the post was published), author (the username of the traveler who wrote the post), and content (the full text of the post). Travelers can create and delete their own blog posts, and read blog posts written by other travelers.

Trip entity is for logging the trips taken by individual travelers. The travelers can update, delete, and add their own trips using this entity. It will include information such as tripID (unique identifier for the trip), trip\_name (the name of the trip), traveler\_username (the username of the traveler who took the trip), and start\_date (date the trip started).

The Activity entity holds possible activities that can be done in a city. name\_activity (The name of a given activity), typeActivity( the type of activity), reviewID(unique id for the review of the activity), city\_coordinates( the coordinates of the city that the activity is located in), categoryID (unique id of the category that the activity) and activityID (unique ID of a certain activity ). Travelers can search and sort activities.

The Categories entity is used to classify different activities into different categories. The users can edit the activity categories. It will include the CategoryID (a unique id num for each of the category options), and the category\_name (the name of each categories)

This entity represents reviews written by travelers for activities they have participated in. It includes the following attributes: rating (a rating out of five stars), feedback (an explanation of the review), reviewID (a unique id for each review), and the reviewerID (a unique id of the reviewer). Travelers can write and read reviews for activities using this entity.

The Cities entity holds information about cities. This entity has the attributes Coordinates (the coordinates of a city), cityName (the name of a city), Climate (the climate of a city), and

countryName (the name of the country the city is in). The travelers can choose the cities from the list of given cities and update it.

The Countries entity holds information about a given country. This entity has the attributes Name (The country's unique name), Continent (the continent the country is in or the capital city if the country is located in multiple continents), and Currency (The official currency of the country). The users can log and update the countries.

The Accommodation entity includes information about where travelers stayed during their trip. It allows users to report information about the type of accommodation they used for their trip. Also, the users will report the information about address (the address of the accommodation), name (the name of the accommodation), Price (the price per night), city\_coordinates (the coordinates of the city where the accommodation is located), propertyID (a unique property ID for any accommodation), and type (type of accommodation such as: hotel, Airbnb, hostel, cabin, and other). Travelers can search for accommodations and view information about them using this entity.

The Transportation entity represents the entity for the options of transportation that can be used during the trips. It includes the vinNumber (unique identifier for transportation), type(car, plane, boat, etc), and name(the airline name or car rental agency name). Users can log and update the kind of transportation used.

## **RELATIONSHIPS:**

Traveler has a relationship with a Blog called “Publish” A traveler may or may not have a blog(partial participation), but a blog must be associated with at least one traveler(full participation). Travelers can write many blogs and every blog can only be written by one traveler (One-to-many cardinality constraints).

Traveler entity has a relationship called “Went On” with Trip. A traveler may or may not have gone on a Trip and has an account on a database (partial relationship), but every trip is associated with a traveler. Travelers can go on one or more trips, but the trips will only be completed by an individual traveler (One-to-many cardinality constraints).

Blog has a relationship with Trip called “About”. All blogs are about specific trips (full participation), but not all trips need to have blogs about them (partial participation). Each blog is about one trip and each trip can only have one blog about it. (One-to-one cardinality constraints).

Traveler has a relationship with Reviews called “writes”: Not all travelers have to write a review (partial participation), but all reviews are written by travelers(full participation). Travelers can write multiple reviews, and each review is written by a traveler (One-to-many cardinality constraints).

Traveler entity has a relationship called “to” with Cities. Each city (full participation) must be associated with every traveler(full participation). Travelers can travel to multiple cities and each city can be visited by multiple travelers. (Many-to-many cardinality constraint).

Cities has a relationship called “Travel” with Transportation: All cities are traveled using Transportation (full participation) and all transportation departs from cities. Users can travel to a city using more than one type of transportation and using only one transportation users can also travel to multiple cities (Many-to-many cardinality constraint).

Cities has a relationship called “Based in” with Countries: All cities are located in a country (full participation) and all countries have at least one city (full participation). A city is located in one country and countries have many cities (One-to-many cardinality constraint).

Cities has a relationship called “has” with Activities. Travelers will not have to do activities in every city (partial participation), but an activity must be associated with a city (full participation). A city can have many activities, and each activity is unique and can only be in one city (One-to-many cardinality constraint).

Cities has a relationship called “Located” with Accommodation: All accommodations are located in a city (full participation), but not all cities have accommodations (partial participation). There can be many accommodations in a city, and each accommodation is in only one city (One-to-many cardinality constraints).

Activities has a relationship called “show” with Reviews. An activity may or may not have reviews (partial participation), but a review must be associated with at least one activity.(full participation). Each activity can have many reviews and reviews are only related to one activity (one to many cardinality constraints).

Activities has a relationship called “Classified” with Categories: All Activities are classified as categories (full participation), and all categories are used to classify activities (full participation). Activities can be Classified by many different Categories and Categories can be used for many Activities (Many-to-many cardinality constraints).

### **Relationship Entities:**

Travel relationship entity between Transportation and Cities will show the distance, vinNumber, and cityCoordinate

The “Traveler\_to\_Cities” relationship between Traveler and Cities will show the usernameID and the city\_coordinates

**ER Diagram** - *(See Appendix 1)*

## Phase 4

### Table: Accommodation

This table meets the third normal form (3NF) because each attribute in the table is dependent on the primary key (propertyID) and there are no transitive dependencies. The name, type, address, price, and coordinates attributes all depend on the propertyID, which is the primary key.

### Table: Activities

This table meets the 3NF because all the attributes are dependent on the primary key (activityID) and there are no transitive dependencies. The category\_id, name\_activity, city\_coordinates, and reviewID attributes all depend on the activityID, which is the primary key.

### Table: Blog

This table meets the 3NF because each attribute is dependent on the primary key (blog\_url) and there are no transitive dependencies. The blog\_url, date\_published, blog\_content, author, and trip\_id attributes all depend on the blog\_url, which is the primary key.

### Table: Categories

This table meets the 3NF because each attribute is dependent on the primary key (categoryID) and there are no transitive dependencies. The categoryID and category\_name attributes are both dependent on the primary key, which is categoryID.

### Table: Cities

This table meets the 3NF because each attribute is dependent on the primary key (coordinates) and there are no transitive dependencies. The coordinates, city\_Name, climate, and country\_name attributes are all dependent on the coordinates, which is the primary key.

### Table: Countries

This table meets the 3NF because each attribute is dependent on the primary key (country\_name) and there are no transitive dependencies. The country\_name, continent, and currency attributes are all dependent on the country\_name, which is the primary key.

### Table: Reviews

This table meets the 3NF because each attribute is dependent on the primary key (reviewID) and there are no transitive dependencies. The reviewID, rating, feedback, and reviewerID attributes are all dependent on the reviewID, which is the primary key.

### Table: Transportation

This table meets the 3NF because each attribute is dependent on the primary key (vinNumber) and there are no transitive dependencies. The vinNumber, name, and type attributes are all dependent on the vinNumber, which is the primary key.

### Table: Travel

This table meets the 3NF because each attribute is dependent on the primary keys (city\_coordinates and transport\_vinNumber) and there are no transitive dependencies. The city\_coordinates, transport\_vinNumber, distance, and travel\_time attributes are all dependent on both the city\_coordinates and transport\_vinNumber, which together form the composite primary key.

Table: Traveler

This table meets the 3NF because each attribute is dependent on the primary key (username\_id) and there are no transitive dependencies. The username\_id, password, traveler\_name, age, experience\_level, email, and phone\_number attributes are all dependent on the username\_id, which is the primary key.

Table: Trip

This table meets the 3NF because each attribute is dependent on the primary key (trip\_id) and there are no transitive dependencies. The trip\_id, trip\_name, num\_of\_travelers, start\_date, and traveler\_username attributes are all dependent on the trip\_id, which is the primary key.

## Phase 5

### DATA DICTIONARY

#### Table: Accommodation

Attributes:

- propertyID: Unique identifier for each accommodation property (integer, primary key)
- name: Name of the accommodation property (string)
- type: Type of the accommodation property (string)
- address: Address of the accommodation property (string)
- price: Price per night for the accommodation property (decimal)
- coordinates: Coordinates of the accommodation property (string)

#### Table: Activities

Attributes:

- **activityID:** Unique identifier for each activity (integer, auto-incrementing primary key)
- **category\_id:** Identifier for the category of the activity (integer)
- name\_activity: Name of the activity (string)
- **city\_coordinates:** Coordinates of the city where the activity takes place (string)
- **reviewID:** Unique identifier for the review associated with the activity (integer)

Foreign Key Relationships:

- The **category\_id** attribute in the Activities table is a foreign key that references the category\_id attribute in the Target table.
- The **city\_coordinates** attribute in the Activities table is a foreign key that references the coordinates attribute in the Cities table.

- The **reviewID** attribute in the Activities table is a foreign key that references the reviewID attribute in the Reviews table.

### Table: Blog

Attributes:

- **blog\_url**: Unique identifier for each blog post (varchar(255), primary key)
- date\_published: Date when the blog post was published (date)
  - CHECK (date\_published <= current\_timestamp)
- blog\_content: Text content of the blog post (text)
- **author**: Unique identifier for the author of the blog post (integer)
- **trip\_id**: Unique identifier for the trip number related to blog (integer)

Foreign Key Relationships:

- The **author** attribute in the Blog table references the username\_id attribute in the Traveler table
- The **trip\_id** attribute in the Blog table references the username\_id attribute in the Traveler table

### Table: Categories

Attributes:

- **categoryID**: Unique identifier for each category (integer, primary key)
- category\_name: Name of the category (string)

### Table: Cities

Attributes:

- **coordinates**: Unique identifier for each city (VARCHAR(20), primary key)
- city\_Name: Name of the city (VARCHAR(50))
- climate: Climate of the city (VARCHAR(50))
- **country\_name**: Name of the country where the city is located (VARCHAR(50))

Foreign Key Relationships:

- The **country\_name** attribute in the Cities table references the country\_name attribute in the Countries table

### Table: Countries

Attributes:

- **country\_name**: Unique identifier for each country (VARCHAR(50), primary key)
- continent: Continent where the country is located (VARCHAR(15))

- **currency:** Currency used in the country (VARCHAR(50))

### Table: Reviews

Attributes:

- **reviewID:** Unique identifier for each review (INT, primary key)
- **rating:** Numeric value indicating the rating given in the review (INT)
- **feedback:** Textual feedback provided in the review (VARCHAR(250))
- ***reviewerID*:** Unique identifier for the reviewer who wrote the review (INT)

Foreign Key Relationships:

- The ***reviewerID*** attribute in the Reviews table references the **username\_id** in the Traveler table.

### Table: Transportation

Attributes:

- **vinNumber:** Unique identifier for each vehicle (VARCHAR(200), primary key)
- **name:** Name of the vehicle (VARCHAR(50))
- **type:** Type of the vehicle (VARCHAR(50))

### Table: Travel

Attributes:

- ***city\_coordinates*:** Coordinates of the city where the travel is taking place (VARCHAR(20), primary key)
- ***transport\_vinNumber*:** Unique identifier of the vehicle used for the travel (VARCHAR(200), primary key)
- **distance:** Distance of the travel (FLOAT)
- **travel\_time:** Time taken to complete the travel (TIME)

Foreign Key Relationships:

- The ***city\_coordinates*** attribute in the Travel relationship table references the coordinates in the Cities table.
- The ***transport\_vinNumber*** attribute in the Travel relationship table references the vinNumber in the Transportation table.

### Table: Traveler

Attributes:

- **username\_id:** Unique identifier for each traveler (INT, primary key)
- **password:** Password for the traveler's account (VARCHAR(20))
  - CHECK (LENGTH(password) >= 8 AND password REGEXP '^(?=.\*[a-z])(?=.\*[A-Z])(?=.\*[0-9])') - This check constraint means password must be at least 8 characters long and contain at least one uppercase letter, one lowercase letter, and one number,
- **traveler\_name:** Name of the traveler (VARCHAR(20))
- **age:** Age of the traveler (INT)



- experience\_level: Level of travel experience of the traveler (VARCHAR(20))
- email: Email address of the traveler (VARCHAR(255))
- phone\_number: Phone number of the traveler (VARCHAR(20))
- privacy: Privacy settings for the traveler's account (VARCHAR(10))
  - CHECK (privacy IN ('private', 'public'))

### Table: Trip

Attributes:

- **trip\_id**: Unique identifier for each trip (INT, primary key)
- trip\_name: Name of the trip (VARCHAR(200))
- num\_of\_travelers: Number of travelers on the trip (INT)
- start\_date: Date the trip is scheduled to begin (DATE)
- **traveler\_username**: Unique identifier for the traveler who planned the trip (INT)

Foreign Key Relationships:

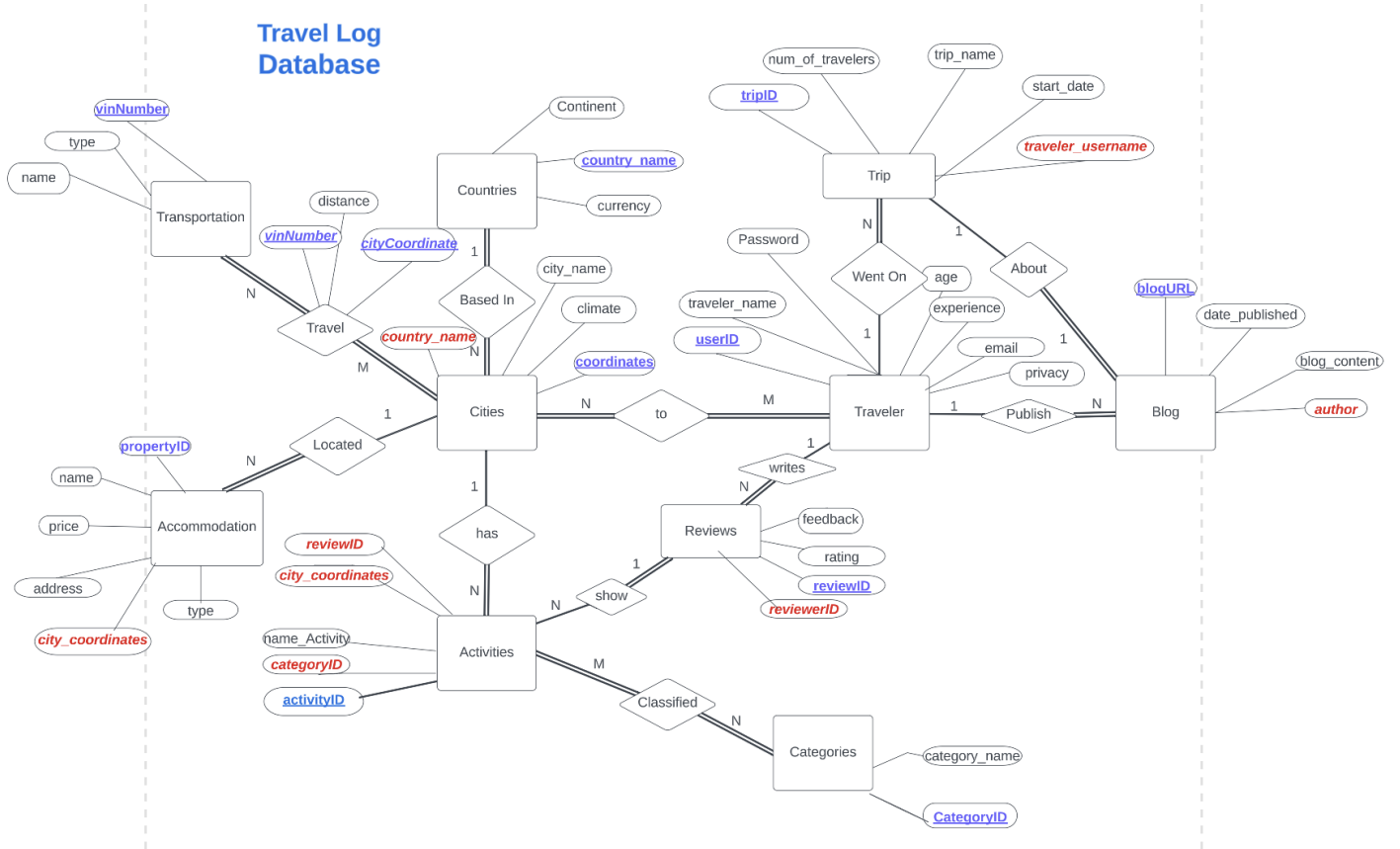
- The **traveler\_username** attribute in the Trip relationship table references the **username\_id** in the Traveler table.

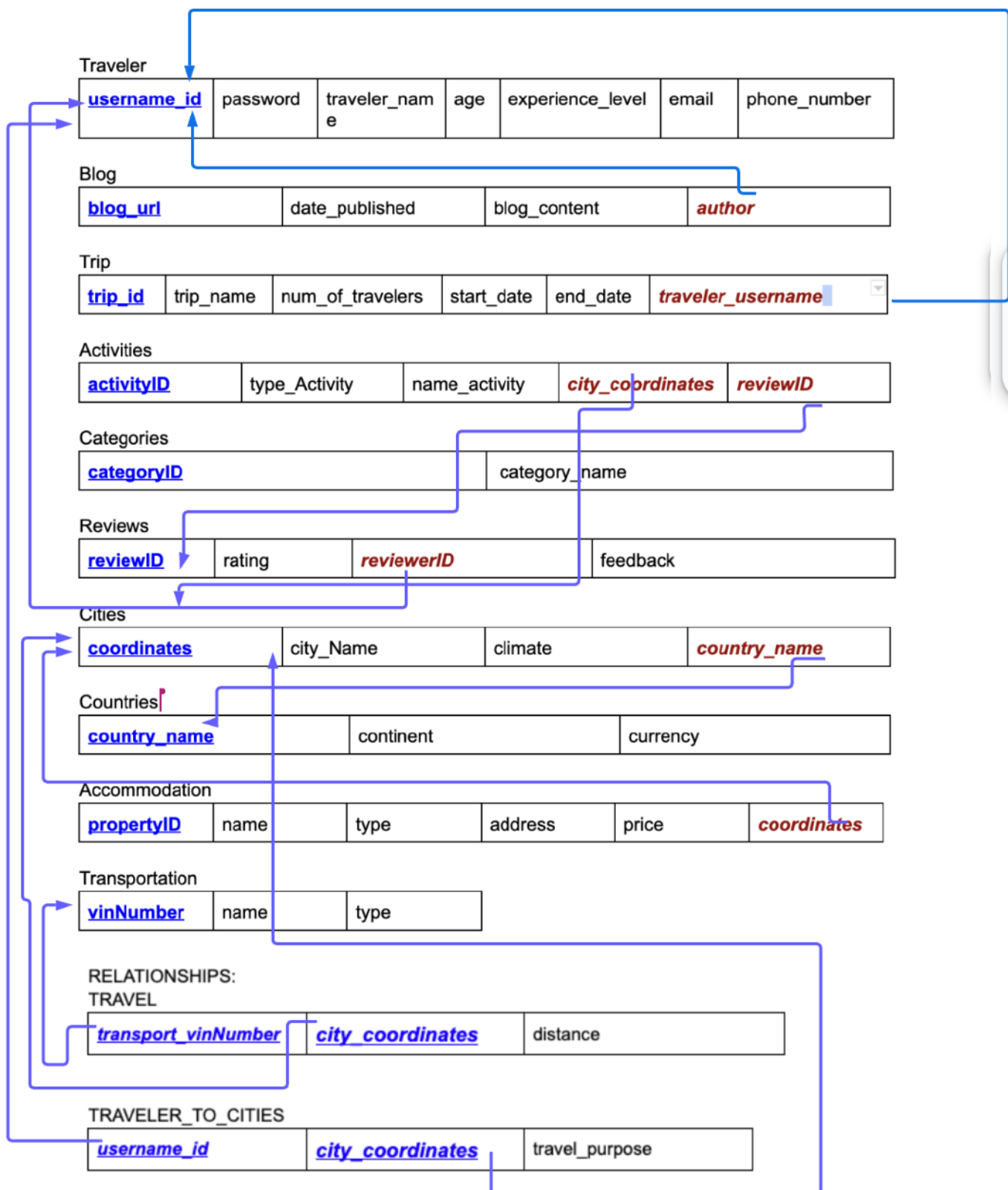
**Works Distribution:** For the ER diagram of this project, team member George Pogorelov worked on the Entity and relationships between entities for the ER diagram. While the team member Yulduz Muradova worked on the attributes of the entities and identified the key attributes for the ER diagram. The team members both worked together on the remaining requirements of the project and wrote the report.

**VIDEO LINK:**

# Appendix

## 1





## 1. Functional Requirements

```
1  /*show all the travelers with username id 347123 and trips they went on ' */
2  • Select * from Traveler;
3  • SELECT t.traveler_username, trip_id, t.trip_name, t.start_date
4  FROM Trip t
5  INNER JOIN Traveler tr ON t.traveler_username = tr.username_id
6  WHERE tr.username_id = '347123';
7
8  /*show all the blogs written by a traveler ' */
9  • SELECT *
10 FROM blog
11 WHERE author = 347123;
12
13 /*show all the activities in Miami ' */
14 • SELECT reviewID, activityID, category_id, name_activity, city_coordinates, reviewID
15 FROM Activities
16 WHERE city_coordinates = '25.7617,-80.1918';
17
18 /*show all the activities with a rating more than 3 */
19 • SELECT a.*, r.rating
20 FROM Activities a
21 INNER JOIN Reviews r ON a.reviewID = r.reviewID
22 WHERE r.rating > 3;
23
24 /* show all the activities classified by categories in ascending order */
25 • SELECT category_id, category_name, activityID, name_activity, city_coordinates, reviewID
26 FROM Activities
27 JOIN Categories ON Activities.category_id = Categories.categoryID
28 ORDER BY Categories.categoryID ASC;
29
```

```
29
30 /*show all the activities with category name 'Nature' */
31 • SELECT Activities.activityID, Activities.name_activity, Categories.categoryID, Categories.category_name
32 FROM Activities
33 JOIN Categories
34 ON Activities.category_id = Categories.categoryID
35 WHERE Categories.category_name = 'Nature';
36
37 /* The database can generate a report on the most popular activities in each location based on the number of reviews
38 • SELECT c.city_Name, a.name_activity, COUNT(*) as num_reviews, AVG(rating) as avg_rating
39 FROM Cities c
40 JOIN Activities a ON c.coordinates = a.city_coordinates
41 JOIN Reviews r ON a.reviewID = r.reviewID
42 GROUP BY c.city_Name, a.name_activity
43 ORDER BY c.city_Name, num_reviews DESC, avg_rating DESC;
44
45
46 /*show all the cities with a climate "Sunny" ' */
47 • SELECT *
48 FROM Cities
49 WHERE climate = 'Humid continental';
50
51
```

Data:

Accommodation

	trip_id	trip_name	num_of_travel...	start_date	traveler_userna...	
▶	12345	Miami Beach Vacation	4	2023-06-15	347123	
	12346	Ski Trip	6	2023-12-20	347127	
	12347	Atlanta City Exploration	2	2023-07-01	347126	
	12348	National Park Adventure	3	2023-09-10	347129	
	12349	Cruise	8	2024-01-05	347125	
	12350	Hawaii Vacation	2	2024-01-05	347123	
	12351	Oskaloosa	2	2024-01-09	347123	
	12352	Cali Hiking Expedition	5	2023-08-15	347128	
	12353	New York New Life	5	2027-08-15	347123	
	12354	Road Trip	3	2023-10-01	347124	
	NULL	NULL	NULL	NULL	NULL	

Activities

	activityID	category_id	name_activity	city_coordinates	reviewID	
▶	1	6	Mount Rainier National Park	36.7468,-119.7726	58931	
	2	7	Smithsonian National Air and Space Museum	40.7128,-74.0060	74392	
	3	3	Golden Gate Bridge	37.7749,-122.4194	93678	
	4	2	Waikiki Beach	19.8968,-155.5828	83509	
	5	5	Disneyland	25.7617,-80.1918	16853	
	6	6	Yosemite National Park	43.0750,-107.2903	48217	
	7	7	The Metropolitan Museum of Art	40.7128,-74.0060	30146	
	8	6	Niagara Falls	40.7128,-74.0060	59274	
	9	2	Miami Beach	25.7617,-80.1918	48537	
	10	5	Universal Studios Hollywood	25.7617,-80.1918	26214	
	NULL	NULL	NULL	NULL	NULL	

Blog

	blog_url	date_publish...	blog_content	author	trip_id
▶	https://www.travelLog.com/atlanta-city-explorati...	2023-07-10	I just got back from a quick trip to Atlanta and ha...	347126	12347
	https://www.travelLog.com/cruise-blog	2024-02-01	I just got back from an amazing cruise with my f...	347125	12349
	https://www.travelLog.com/hawaii-vacation-blog	2024-02-01	I recently returned from an incredible vacation in...	347123	12350
	https://www.travelLog.com/miami-beach-vacatio...	2023-07-01	I just got back from an amazing vacation in Mia...	347123	12345
	https://www.travelLog.com/national-park-advent...	2023-09-20	I recently went on a hiking and camping trip in a...	347129	12348
	https://www.travelLog.com/oskaloosa-blog	2024-01-15	I recently visited Oskaloosa, a small town in low...	347123	12351
	https://www.travelLog.com/ski-trip-blog	2024-01-15	I recently went on a ski trip with some friends an...	347127	12346

## Categories

	categoryID	category_name	
▶	1	Adventure	
	2	Beaches	
	3	City Tours	
	4	Cultural	
	5	Family	
	6	Nature	
	7	Historical	
	8	Luxury	
	9	Wildlife	
	10	Other	

## Countries

	country_name	continent	currency	
▶	Australia	Oceania	Australian Dollar	
	Brazil	South America	Brazilian Real	
	Canada	North America	Canadian Dollar	
	France	Europe	Euro	
	Germany	Europe	Euro	
	Japan	Asia	Yen	
	Spain	Europe	Euro	
	United States	North America	US Dollar	

## Cities

	coordinates	city_Name	climate	country_name	
▶	19.8968,-155.5828	Hawaii	Tropical rainforest	United States	
	25.7617,-80.1918	Miami	Tropical monsoon	United States	
	33.7490,-84.3880	Atlanta	Humid subtropical	United States	
	35.6895,139.6917	Tokyo	Humid subtropical	Japan	
	36.7468,-119.7726	Fresno	Mediterranean	United States	
	37.7749,-122.4194	San Francisco	Mediterranean	United States	
	40.4168,-3.7038	Madrid	Mediterranean	Spain	
	40.7128,-74.0060	New York	Humid subtropical	United States	
	41.2960,-92.6430	Oskaloosa	Humid continental	United States	
	43.0750,-107.2903	Wyoming	Humid continental	United States	
	48.8566,2.3522	Paris	Temperate oceanic	France	



## Reviews

	reviewID	rating	feedback	reviewerID	
▶	16853	4	overpriced items	347123	
	26214	2	Disappointing, would not go back.	347123	
	30146	5	highly recommended!	347123	
	48217	5	Great experience, highly recommended!	347123	
	48537	5	Absolutely amazing, exceeded all expectations!	347123	
	58931	5	Absolutely amazing, exceeded all expectations!	347129	
	59274	3	Good service, but the food could be better.	347125	
	74392	3	bad customer service.	347123	
	83509	4	Nice atmosphere and friendly staff.	347127	
	93678	4	great place to go with kids!	347123	
	NULL	NULL	NULL	NULL	

## Transportation

	vinNumber	name	type	
▶	1FTSW31P54EB39476	Ford F-350	Pickup	
	1GNEK13Z83R298984	Chevrolet Suburban	SUV	
	1N4AL3AP4FN373209	Nissan Altima	Sedan	
	4S4BT62C847101153	Subaru Outback	Station wagon	
	5FNRL6H79HB059814	Honda Odyssey	Minivan	
	N137G	Cessna 172	plane	
	N23123355	Amtrak 355	train	
	N31224357	Amtrak 357	train	
	N766JG	Boeing 737	plane	
	N777UA	Boeing 777	plane	
	N8033J	Piper PA-28	plane	
	N904FR	Airbus A320	jet	

## Traveler

	username_id	password	traveler_name	age	experience_level	email	phone_number	privacy
▶	347123	1M2nS0bXa	Julia Amor	21	Intermediate	amorjulia123h@gmail.com	123-456-7890	NULL
	347124	3ZqLm5dF#b	Sarah Lee	27	Beginner	sarah.lee@email.com	555-555-1212	NULL
	347125	rT0yY9gG1	Michael Chen	40	Expert	michael.chen@email.com	999-999-9999	NULL
	347126	jS0yY9gB1	Amy Wilson	24	Beginner	amy.wilson@email.com	111-222-3333	NULL
	347127	3M2anS0bDq	David Kim	29	Intermediate	david.kim@email.com	444-444-4444	NULL
	347128	4vS0nJ1M!b	Linda Nguyen	32	Intermediate	linda.nguyen@email.com	555-666-7777	NULL
	347129	tD3sF1nL!a	Jason Patel	28	Beginner	jason.patel@email.com	888-888-8888	NULL

## Trips

	trip_id	trip_name	num_of_travel...	start_date	traveler_userna...	
▶	12345	Miami Beach Vacation	4	2023-06-15	347123	
	12346	Ski Trip	6	2023-12-20	347127	
	12347	Atlanta City Exploration	2	2023-07-01	347126	
	12348	National Park Adventure	3	2023-09-10	347129	
	12349	Cruise	8	2024-01-05	347125	
	12350	Hawaii Vacation	2	2024-01-05	347123	
	12351	Oskaloosa	2	2024-01-09	347123	
	12352	Cali Hiking Expedition	5	2023-08-15	347128	
	12353	New York New Life	5	2027-08-15	347123	
	12354	Road Trip	3	2023-10-01	347124	
	NULL	NULL	NULL	NULL	NULL	

### create.sql File:

```
create database travellog;
use travellog;
```

```
CREATE TABLE Accommodation (
  propertyID INT PRIMARY KEY,
  name VARCHAR(255),
  type VARCHAR(50),
  address VARCHAR(255),
  price DECIMAL(10,2),
  coordinates VARCHAR(20)
);
```

```
CREATE TABLE Categories (
  categoryID INT PRIMARY KEY,
  category_name VARCHAR(50)
);
```

```
CREATE TABLE Countries (
  country_name VARCHAR(50) PRIMARY KEY,
  continent VARCHAR(15),
  currency VARCHAR(50)
);
```

```
CREATE TABLE Cities (
  coordinates VARCHAR(20) PRIMARY KEY,
  city_Name VARCHAR(50),
  climate VARCHAR(50),
  country_name VARCHAR(50),
  FOREIGN KEY (country_name) REFERENCES Countries(country_name)
);
```



```

CREATE TABLE Traveler (
  username_id INT PRIMARY KEY,
  password VARCHAR(20) CHECK (LENGTH(password) >= 8 AND password REGEXP
'^(?=[a-z])(?=[A-Z])(?=.*[0-9])'),
  traveler_name VARCHAR(20),
  age INT,
  experience_level VARCHAR(20),
  email VARCHAR(255),
  phone_number VARCHAR(20),
  privacy VARCHAR(10) CHECK (privacy IN ('private', 'public'))
);

```

```

CREATE TABLE Reviews (
  reviewID INT PRIMARY KEY,
  rating INT,
  feedback VARCHAR(250),
  reviewerID INT,
  FOREIGN KEY (reviewerID) REFERENCES Traveler(username_id)
);

```

```

CREATE TABLE Activities (
  activityID INT AUTO_INCREMENT PRIMARY KEY,
  category_id INT,
  name_activity VARCHAR(255),
  city_coordinates VARCHAR(20),
  reviewID INT,
  FOREIGN KEY (category_id) REFERENCES Categories(categoryID),
  FOREIGN KEY (city_coordinates) REFERENCES Cities(coordinates),
  FOREIGN KEY (reviewID) REFERENCES Reviews(reviewID)
);

```

```

CREATE TABLE Trip (
  trip_id INT PRIMARY KEY,
  trip_name VARCHAR(200),
  num_of_travelers INT,
  start_date DATE,
  traveler_username INT,
  FOREIGN KEY (traveler_username) REFERENCES Traveler(username_id)
);

```

```

CREATE TABLE Blog (
  blog_url VARCHAR(255) PRIMARY KEY,
  date_published DATE,
  blog_content TEXT,
  author INT,

```

```

trip_id INT,
FOREIGN KEY (author) REFERENCES Traveler(username_id),
FOREIGN KEY (trip_id) REFERENCES Trip(trip_id)
);

```

```

CREATE TABLE Transportation (
    vinNumber VARCHAR(200) PRIMARY KEY,
    name VARCHAR(50),
    type VARCHAR(50)
);

```

```

CREATE TABLE Travel (
    city_coordinates VARCHAR(20),
    transport_vinNumber VARCHAR(200),
    distance FLOAT,
    travel_time TIME,
    PRIMARY KEY (city_coordinates, transport_vinNumber),
    FOREIGN KEY (city_coordinates) REFERENCES Cities(coordinates),
    FOREIGN KEY (transport_vinNumber) REFERENCES Transportation(vinNumber)
);

```

### *insert.sql file*

```

INSERT INTO Accommodation (propertyID, name, type, address, price, coordinates)
VALUES
    (4857, 'Hilton Atlanta', 'hotel', '255 Courtland St NE, Atlanta, GA 30303, United States', 256.00,
    '33.7490,-84.3880'),
    (8345, 'Mariat Miami', 'hotel', '1633 N Bayshore Dr, Miami, FL 33132, United States', 145.00,
    '25.7617,-80.1918'),
    (4563, 'Malaekahana Beach Campground', 'camp', '56-335 Kamehameha Hwy, Kahuku, HI 96731',
    19.90, '21.5993,-157.9043'),
    (7356, 'Hilton Fresno', 'hotel', '2233 Ventura St, Fresno, CA 93721, United States', 543.00,
    '36.7468,-119.7726'),
    (75664, 'Small Cabin', 'cabin', '5485 Camp St, Oskaloosa, IA 52577', 95.00, '41.2960,-92.6430'),
    (7643, 'The Westin St. Francis', 'hotel', '335 Powell St, San Francisco, CA 94102, United States',
    1100.00, '37.7749,-122.4194'),
    (29887, 'The Plaza Hotel', 'hotel', '768 5th Ave, New York, NY 10019, United States', 323.00,
    '40.7644,-73.9741'),
    (609, 'The Tokyo Station Hotel', 'hotel', '1-9-1 Marunouchi, Chiyoda-ku, Tokyo, 100-0005, Japan',
    105.00, '35.6828,139.7646'),
    (700102, 'The Ritz Madrid', 'hotel', 'Plaza de la Lealtad, 5, 28014 Madrid, Spain', 600.00,
    '40.4154,-3.6966'),
    (754009, 'Four Seasons Hotel George V, Paris', 'hotel', '31 Avenue George V, 75008 Paris, France',
    764.00, '48.8721,2.2993');

```

```

INSERT INTO Traveler(username_id, password, traveler_name, age, experience_level, email,
phone_number)
VALUES

```

```

('347123', '1M2nS0bXa', 'Julia Amor', 21, 'Intermediate', 'amorjulia123h@gmail.com',
'123-456-7890'),
('347124', '3ZqLm5dF#b', 'Sarah Lee', 27, 'Beginner', 'sarah.lee@email.com',
'555-555-1212'),
('347125', 'rT0yY9gG1', 'Michael Chen', 40, 'Expert', 'michael.chen@email.com',
'999-999-9999'),
('347126', 'jS0yY9gB1', 'Amy Wilson', 24, 'Beginner', 'amy.wilson@email.com',
'111-222-3333'),
('347127', '3M2anS0bDq', 'David Kim', 29, 'Intermediate', 'david.kim@email.com',
'444-444-4444'),
('347128', '4vS0nJ1Mab', 'Linda Nguyen', 32, 'Intermediate', 'linda.nguyen@email.com',
'555-666-7777'),
('347129', 'tD3sF1nL!a', 'Jason Patel', 28, 'Beginner', 'jason.patel@email.com',
'888-888-8888');

```

```

INSERT INTO Trip(trip_id, trip_name, num_of_travelers, start_date, traveler_username)
VALUES
(12345, 'Miami Beach Vacation', 4, '2023-06-15', '347123'),
(12346, 'Ski Trip', 6, '2023-12-20', '347127'),
(12347, 'Atlanta City Exploration', 2, '2023-07-01', '347126'),
(12348, 'National Park Adventure', 3, '2023-09-10', '347129'),
(12349, 'Cruise', 8, '2024-01-05', '347125'),
(12350, 'Hawaii Vacation', 2, '2024-01-05', '347123'),
(12351, 'Oskaloosa', 2, '2024-01-09', '347123'),
(12352, 'Cali Hiking Expedition', 5, '2023-08-15', '347128'),
(12353, 'New York New Life', 5, '2027-08-15', '347123'),
(12354, 'Road Trip', 3, '2023-10-01', '347124');

```

```

INSERT INTO blog (blog_url, date_published, blog_content, author)
VALUES
('https://www.travelLog.com/miami-beach-vacation-blog', '2023-07-01',
'I just got back from an amazing vacation in Miami Beach! The sun,
sand, and ocean were absolutely perfect. We stayed at a beautiful
resort right on the beach and spent our days lounging in the sun and
swimming in the crystal clear water. One of the highlights of the trip
was trying all the amazing seafood restaurants in the area. I highly
recommend Miami Beach as a vacation destination for anyone looking for
a fun and relaxing getaway.', 347123),
('https://www.travelLog.com/ski-trip-blog', '2024-01-15', 'I recently
went on a ski trip with some friends and had an incredible time! We
hit the slopes every day and even went night skiing a few times. One
of the best parts of the trip was staying in a cozy cabin with a
fireplace and hot tub. We also tried some delicious local cuisine and
visited a few nearby towns for some shopping and sightseeing. Overall,
it was an amazing winter getaway and I highly recommend it to any ski
enthusiasts out there!', 347127),
('https://www.travelLog.com/atlanta-city-exploration-blog',
'2023-07-10', 'I just got back from a quick trip to Atlanta and had a
great time exploring the city! We visited some amazing museums and

```

cultural attractions, including the Georgia Aquarium and the Martin Luther King Jr. National Historic Site. We also tried some delicious Southern cuisine and even got to see a Braves game. Atlanta is definitely worth a visit for anyone interested in history, culture, and good food!', 347126),  
('https://www.travelLog.com/national-park-adventure-blog', '2023-09-20', 'I recently went on a hiking and camping trip in a national park and it was an incredible adventure! We hiked to some breathtaking vistas, saw some amazing wildlife, and even got to stargaze at night. It was a great opportunity to disconnect from technology and spend time in nature. If you are looking for an outdoor adventure, I highly recommend a trip to a national park!', 347129),  
('https://www.travelLog.com/cruise-blog', '2024-02-01', 'I just got back from an amazing cruise with my family and it was the vacation of a lifetime! We visited several different countries and got to experience different cultures and cuisines. The ship itself was a floating oasis with tons of activities and entertainment options. One of my favorite parts of the trip was spending time at the pool and watching the sunset from the deck.', 347125),  
('https://www.travelLog.com/hawaii-vacation-blog', '2024-02-01', 'I recently returned from an incredible vacation in Hawaii! The beaches were stunning, the weather was perfect, and the people were so friendly and welcoming. We did some snorkeling, hiking, and even took a helicopter tour to see the island from above. I highly recommend a trip to Hawaii for anyone looking for a tropical paradise!', 347123),  
('https://www.travelLog.com/oskaloosa-blog', '2024-01-15', 'I recently visited Oskaloosa, a small town in Iowa, and had a great time exploring its historic downtown and charming local businesses. We also visited a nearby state park for some hiking and wildlife viewing.', 347123);

UPDATE blog

SET trip\_id =

CASE

WHEN blog\_url = 'https://www.travelLog.com/miami-beach-vacation-blog' THEN 12345  
WHEN blog\_url = 'https://www.travelLog.com/ski-trip-blog' THEN 12346  
WHEN blog\_url = 'https://www.travelLog.com/atlanta-city-exploration-blog' THEN 12347  
WHEN blog\_url = 'https://www.travelLog.com/national-park-adventure-blog' THEN 12348  
WHEN blog\_url = 'https://www.travelLog.com/cruise-blog' THEN 12349  
WHEN blog\_url = 'https://www.travelLog.com/hawaii-vacation-blog' THEN 12350  
WHEN blog\_url = 'https://www.travelLog.com/oskaloosa-blog' THEN 12351  
WHEN blog\_url = 'https://www.travelLog.com/cali-hiking-expedition-blog' THEN 12352  
WHEN blog\_url = 'https://www.travelLog.com/new-york-new-life-blog' THEN 12353  
WHEN blog\_url = 'https://www.travelLog.com/road-trip-blog' THEN 12354

END;

INSERT INTO Reviews (reviewID, rating, reviewerID, feedback)

VALUES

(48217, 5, 347123, 'Great experience, highly recommended!'),  
(30146, 5, 347123, 'highly recommended!'),

```
(93678, 4, 347123, 'great place to go with kids!'),  
(59274, 3, 347125, 'Good service, but the food could be better.'),  
(83509, 4, 347127, 'Nice atmosphere and friendly staff.'),  
(26214, 2, 347123, 'Disappointing, wouldn't go back.'),  
(74392, 3, 347123, 'bad customer service.'),  
(16853, 4, 347123, 'overpriced items'),  
(58931, 5, 347129, 'Absolutely amazing, exceeded all expectations!'),  
(48537, 5, 347123, 'Absolutely amazing, exceeded all expectations!');
```

```
INSERT INTO categories (categoryId, category_name)  
VALUES
```

```
(1, 'Adventure'),  
(2, 'Beaches'),  
(3, 'City Tours'),  
(4, 'Cultural'),  
(5, 'Family'),  
(6, 'Nature'),  
(7, 'Historical'),  
(8, 'Luxury'),  
(9, 'Wildlife'),  
(10, 'Other');
```

```
INSERT INTO Countries (country_name, continent, currency)  
VALUES
```

```
('Japan', 'Asia', 'Yen'),  
('United States', 'North America', 'US Dollar'),  
('Canada', 'North America', 'Canadian Dollar'),  
('Brazil', 'South America', 'Brazilian Real'),  
('France', 'Europe', 'Euro'),  
('Germany', 'Europe', 'Euro'),  
('Spain', 'Europe', 'Euro'),  
('Australia', 'Oceania', 'Australian Dollar');
```

```
INSERT INTO Cities (coordinates, city_Name, climate, country_name)  
VALUES
```

```
('35.6895,139.6917', 'Tokyo', 'Humid subtropical', 'Japan'),  
('40.4168,-3.7038', 'Madrid', 'Mediterranean', 'Spain'),  
('48.8566,2.3522', 'Paris', 'Temperate oceanic', 'France'),  
( '33.7490,-84.3880', 'Atlanta', 'Humid subtropical', 'United States'),  
( '25.7617,-80.1918', 'Miami', 'Tropical monsoon', 'United States'),  
( '19.8968,-155.5828', 'Hawaii', 'Tropical rainforest', 'United States'),  
( '36.7468,-119.7726', 'Fresno', 'Mediterranean', 'United States'),  
( '41.2960,-92.6430', 'Oskaloosa', 'Humid continental', 'United States'),  
( '37.7749,-122.4194', 'San Francisco', 'Mediterranean', 'United States'),  
( '40.7128,-74.0060', 'New York', 'Humid subtropical', 'United States'),  
( '43.0750,-107.2903', 'Wyoming', 'Humid continental', 'United States');
```

```
INSERT INTO Activities (activityID, category_id, name_activity, city_coordinates, reviewID)
VALUES
```

```
(001, 6, 'Mount Rainier National Park', '36.7468,-119.7726', 58931),
(002, 7, 'Smithsonian National Air and Space Museum', '40.7128,-74.0060', 74392),
(003, 3, 'Golden Gate Bridge', '37.7749,-122.4194', 93678),
(004, 2, 'Waikiki Beach', '19.8968,-155.5828', 83509),
(005, 5, 'Disneyland', '25.7617,-80.1918', 16853),
(006, 6, 'Yosemite National Park', '43.0750,-107.2903', 48217),
(007, 7, 'The Metropolitan Museum of Art', '40.7128,-74.0060', 30146),
(008, 6, 'Niagara Falls', '40.7128,-74.0060', 59274),
(009, 2, 'Miami Beach', '25.7617,-80.1918', 48537),
(010, 5, 'Universal Studios Hollywood', '25.7617,-80.1918', 26214);
```

```
INSERT INTO Transportation (vinNumber, name, type)
```

```
VALUES
```

```
('1GNEK13Z83R298984', 'Chevrolet Suburban', 'SUV'),
('1N4AL3AP4FN373209', 'Nissan Altima', 'Sedan'),
('1FTSW31P54EB39476', 'Ford F-350', 'Pickup'),
('5FNRL6H79HB059814', 'Honda Odyssey', 'Minivan'),
('4S4BT62C847101153', 'Subaru Outback', 'Station wagon'),
('N137G', 'Cessna 172', 'plane'),
('N8033J', 'Piper PA-28', 'plane'),
('N766JG', 'Boeing 737', 'plane'),
('N777UA', 'Boeing 777', 'plane'),
('N904FR', 'Airbus A320', 'jet'),
('N23123355', 'Amtrak 355', 'train'),
('N31224357', 'Amtrak 357', 'train');
```