

## Requirements

### REDIS ADDITION:

**Addition 1:** The problem is, when using a large dataset it can take a long time for users to get the details of their trip to load. We will be addressing this problem with Redis. In our project, we'll leverage Redis's Hash data structure to efficiently store trip details. Each trip will be uniquely identified by its trip ID, serving as the key, while the corresponding trip details will constitute the value. This approach is advantageous as it allows us to access trip details in constant time, ensuring swift retrieval regardless of the size of the dataset. Additionally, by utilizing Redis Hashes, we maintain a structured and organized storage format, facilitating seamless access and manipulation of trip information. This efficiency in data access can speed up load times when accessing your trip information.

**Addition 2:** In our project, addressing the challenge of rapidly delivering the "Most Viewed Properties" to users from a large dataset is critical for user experience. To conquer this, we intend to employ Redis's Sorted Set data structure. Each property will be mapped to a unique identifier, and its view count will act as the score within the Sorted Set. By leveraging the Sorted Set under the key "mostViewedProperties", we not only achieve constant time complexity for incrementing view counts but also for retrieving the set of properties sorted by popularity. This is instrumental in ensuring that even as the volume of data escalates, the time required for users to load the most viewed properties remains minimal. Redis's ability to handle sorted data efficiently will allow us to provide instantaneous access to the most viewed properties, enhancing the responsiveness of our application and enriching the user experience by presenting them with the most popular choices without delay.

### Nouns Verbs

#### Problem:

Many people love to travel, but finding the perfect accommodation can be a time-consuming and overwhelming task. Sifting through countless websites and comparing prices across various providers is tedious and often leads to information overload. Typically, one must also examine both the preferred location and reviews to find the perfect place to stay, which can lead to an excess of information.

#### Solution:

Visitors are greeted by a user-friendly website designed to streamline the accommodation search process, making it straightforward and non-intimidating. This platform aggregates data from a wide range of providers, including hotels, Airbnb, rentals, vacation homes, and other lodging

options tailored to user preferences. It offers a search feature where users can specify their accommodation preferences, such as budget, number of guests, travel dates, activities, and more. After applying these filters, users are presented with a curated list of potential stays. Selecting any option reveals a detailed page with photos, descriptions, reviews, amenities, and availability, all laid out for easy comprehension to assist in making a booking. To make a booking the user could make a payment with either PayPal, visa, or cryptocurrency. After spending time in the perfect accommodation, the user can come back and leave a review for the next user.

Nouns:	Verbs:
Accommodation	Aggregate
Users	Tailor (personalized)
Providers	Offer
Location	Accommodate
Reviews	Select
Prices	Present
Payment	Compare
Paypal	Assist
Visa	Leave (a review)
Cryptocurrency	
Activities	
Description	
Photos	
Reviews	
Amenities	

**Rules:**

Introducing an innovative travel site that simplifies the accommodation search process by:

- **Aggregate data from multiple providers:** Accessing a vast network of hotels, Airbnb rentals, vacation homes, and other accommodation options, eliminating the need to visit numerous websites.
- **Personalized recommendations:** Understanding your specific needs and preferences through a user-friendly interface. This could include budget, desired location, travel dates, desired amenities (pool, pet-friendliness, etc.), and preferred accommodation type (hotel, private room, entire home).
- **Offer intelligent search filters:** Refining your search based on specific criteria like price range, distance to landmarks, guest rating, property type, and unique offerings (e.g., breakfast included, spa access).
- **Present clear and concise information:** Display key details for each property in a user-friendly format, including high-quality photos, detailed descriptions, reviews, amenities, and availability.