**Entities:**

User

**Attributes:**

UserID (Primary Key)

Username

Email

Password (hashed)

Registration Date

Relationships:

Users can have multiple Search History entries.

City

**Attributes:**

CityID (Primary Key)

City Name

Relationships:

Cities can be included in the Search History.

Search History

**Attributes:**

HistoryID (Primary Key)

UserID (Foreign Key)

CityID (Foreign Key)

Search Date and Time

Relationships:

Belongs to a User.

Relates to a City.

Weather Data

**Attributes:**

DataID (Primary Key)

CityID (Foreign Key)

Date and Time

Temperature

Humidity

Wind Speed

UV Index

Relationships:

Associated with a City.

**Relationships:**

User-Search History Relationship:

Each User can have multiple Search History entries.

Each Search History entry is associated with one User.

City-Search History Relationship:

Cities can be included in the Search History.

Each Search History entry is related to one City.

**User-Weather Data Relationship:**

Each User may view weather data for different cities.

Weather Data is associated with the User through Search History.

**City-Weather Data Relationship**:

Weather Data is specific to a city.

Multiple sets of Weather Data can exist for the same city, each corresponding to a different date and time.

**Attributes for Normalization:**

In the User entity, attributes such as UserID, Username, Email, and Password should be recorded while considering normalization rules to ensure data consistency and eliminate duplicate user information.

In the City entity, the CityID and City Name attributes should be recorded to avoid redundant city data.

In the Search History entity, HistoryID, UserID, CityID, and Search Date and Time attributes should be recorded, ensuring a unique history entry for each user's search.

In the Weather Data entity, DataID, CityID, Date and Time, Temperature, Humidity, Wind Speed, and UV Index attributes should be recorded to maintain the integrity of weather data associated with cities and date/time.