

Entity: User

- **Primary Key:** user_id
- **Attributes:**
 - full_name: The full name of the user.
 - username: The username chosen by the user for identification.
 - email: The user's email address for communication.
 - date_of_birth: The user's date of birth.
 - phone_number: The user's contact phone number.
 - is_active: A flag indicating if the user's account is active (boolean: true or false).
 - is_staff: A flag indicating if the user has staff privileges (boolean).
 - is_superuser: A flag indicating if the user has superuser privileges (boolean).
 - joined_at: The timestamp when the user joined.
 - updated_at: The timestamp when the user's profile was last updated.
 - last_login: The timestamp of the user's last login.

Entity: Address

- **Primary Key:** address_id
- **Attributes:**
 - user_id: Foreign key referencing the user to whom this address belongs.
 - street_address: The street address or building number of the location.
 - city: The city where the address is located.
 - state: The state or province of the address.
 - postal_code: The postal or ZIP code associated with the address.
 - country: The country where the address is situated.

Relationship: One-to-Many (User to Address)

- A user can have multiple addresses (e.g., home, work, etc.).
- An address belongs to exactly one user.

Entity: Profile

- **Primary Key:** profile_id
- **Attributes:**
 - user_id: Foreign key referencing the user to whom this profile belongs.
 - bio: A brief description or bio of the user.
 - avatar: The user's profile picture or avatar.
 - updated_at: The timestamp when the profile was last updated.

Relationship: One-to-One (User to Profile)

- Each user has exactly one profile.

- A profile belongs to exactly one user.

Entity: Notification

- **Primary Key:** notification_id
- **Attributes:**
 - user_id: Foreign key referencing the user to whom this notification is associated.
 - is_read: A flag indicating if the notification has been read (boolean: true or false).
 - timestamp: The timestamp when the notification was created.

Relationship: One-to-Many (User to Notifications)

- A user can have multiple notifications.
- Each notification belongs to exactly one user.

Entity: Activity

- **Primary Key:** activity_id
- **Attributes:**
 - user_id: Foreign key referencing the user who performed the activity.
 - activity_type: The type or description of the activity.
 - timestamp: The timestamp when the activity occurred.

Relationship: One-to-Many (User to Activities)

- A user can have multiple activities.
- Each activity belongs to exactly one user.

This design allows for the representation of users and their corresponding addresses. The "User" entity contains information about the user's personal details and account-related attributes. The "Address" entity is associated with users through the "user_id" foreign key, allowing multiple addresses to be linked to a single user. This could be useful for scenarios where users need to have different delivery addresses or places of residence associated with their accounts. The "user_id" in the "Address" entity serves as a reference to the "user_id" in the "User" entity, establishing the relationship between the two entities.

The "Profile" entity stores additional user information like the user's bio and avatar. The "Notification" entity represents notifications that are associated with users, with attributes to indicate whether they have been read and when they were created. The "Activity" entity captures various activities performed by users, such as posting content or interacting with the system, along with timestamps.

These relationships and entities collectively provide a richer representation of user-related data, enabling the storage of user profiles, notifications, and activity history.