**Database -**

**1. Primary Keys**

- A Primary Key uniquely identifies a row in a table.

- In your DB:

    - user.id is the primary key for users

    - item.id is the primary key for items

    - trade.id, transaction.id, partnership.id, ongoing_transaction.id — all have unique primary keys

**2. Foreign Keys**

| Table | Foreign Key | Refers To |
|---|---|---|
| item.owner_id | user.id | Who owns the item |
| trade.proposer_id | user.id | Who proposed the trade |
| trade.offered_item_id | item.id | Item being offered |
| trade.requested_item_id | item.id | Item being requested |
| transaction.trade_id | trade.id | Which trade it's for |
| ongoing_transaction.transaction_id | transaction.id | In-progress confirmation |
| partnership.user_id, partner_id | user.id | Many-to-many user relationships |

## 3. Relationship

| Relationship | Exaplanation |
| --- | --- |
| One-to-Many | A user can have many items. Each item belongs to one user |
| Many-to-Many (via partnership) | Users can have multiple partners using the partnership table |
| One-to-One | Each trade has exactly one transaction, and each transaction relates to one trade |
| One-to-One (Ongoing Transaction) | Optional extra layer to track ongoing validation with full 16-digit code |