

1. User

- **PK:** user_id
- **Attributes:**
 - username (unique, not null)
 - email (unique, not null)
 - password_hash (not null)
 - role (USER or MODERATOR)
 - created_at (timestamp)

2. Recipe

- **PK:** recipe_id
- **Attributes:**
 - title (≤ 100 chars, not null)
 - ingredients (text, not null) \leftarrow stored as multi-line text
 - instructions (text, not null)
 - prep_time_minutes (integer, not null)
 - cook_time_minutes (integer, not null)
 - image_path (string, not null)
 - upload_date (timestamp, not null)
 - status (string, not null, default "APPROVED")
 - **Derived:** average_rating (float, nullable)
 - **FKs:**
 - uploader_id \rightarrow User.user_id
 - category_id \rightarrow Category.category_id

3. Rating

- **PK:** rating_id
- **Attributes:**
 - stars (1–5, not null)
 - rated_at (timestamp, not null)
- **FKs:**
 - rater_id \rightarrow User.user_id
 - recipe_id \rightarrow Recipe.recipe_id
- **Constraint:** unique(rater_id, recipe_id)

4. Category

- **PK:** category_id
- **Attributes:**
 - name (unique, not null)

5. Tag

- **PK:** tag_id
- **Attributes:**
 - name (unique, not null)

6. Recipe_Tag (associative)

- **PK:** composite (recipe_id, tag_id)
- **FKs:**
 - recipe_id → Recipe.recipe_id
 - tag_id → Tag.tag_id

Recipe_Tag and Rating are tables which are created because of many-to-many relationships, without these tables we can't identify which user rates which recipe and which recipe has which tag, without these we will forget some information.

Everything is described on ER model:

