**1. User**

* **PK:** user\_id
* **Attributes:**
  + username (unique, not null)
  + email (unique, not null)
  + password\_hash (not null)
  + created\_at (timestamp)

**2. Recipe**

* **PK:** recipe\_id
* **Attributes:**
  + title (≤100 chars, not null)
  + ingredients (text, not null) ← 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 → User.user\_id
    - category\_id → Category.category\_id

**3. Rating**

* **PK:** rating\_id
* **Attributes:**
  + stars (1–5, not null)
  + rated\_at (timestamp, not null)
* **FKs:**
  + rater\_id → User.user\_id
  + recipe\_id → 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

Recepie\_Tak and Rating are tables which is created because of many-to-many relationships, without this tables we can’t indetify which user rates which recepie and which recepie has which tag, without this we will forget some informations.  
Everything is described on ER model:

