Key Milestone 3: DBMS Lab Project – SQL Implementation

# Database Metadata

| **Schema** | **Name** | **Type** | **Owner** | **Persistence** | **Access Method** | **Size** |
| --- | --- | --- | --- | --- | --- | --- |
| public | categories | table | postgres | permanent | heap | 8192 bytes |
| public | categories\_category\_id\_seq | sequence | postgres | permanent | — | 8192 bytes |
| public | comments | table | postgres | permanent | heap | 8192 bytes |
| public | comments\_comment\_id\_seq | sequence | postgres | permanent | — | 8192 bytes |
| public | follows | table | postgres | permanent | heap | 0 bytes |
| public | likes | table | postgres | permanent | heap | 0 bytes |
| public | likes\_like\_id\_seq | sequence | postgres | permanent | — | 8192 bytes |
| public | post\_categories | table | postgres | permanent | heap | 0 bytes |
| public | post\_tags | table | postgres | permanent | heap | 0 bytes |
| public | posts | table | postgres | permanent | heap | 8192 bytes |
| public | posts\_post\_id\_seq | sequence | postgres | permanent | — | 8192 bytes |
| public | tags | table | postgres | permanent | heap | 0 bytes |
| public | tags\_tag\_id\_seq | sequence | postgres | permanent | — | 8192 bytes |
| public | users | table | postgres | permanent | heap | 8192 bytes |
| public | users\_user\_id\_seq | sequence | postgres | permanent | — | 8192 bytes |

# Table Metadata

## categories

* **Columns:**
  + category\_id: integer, not null, default: nextval('categories\_category\_id\_seq')
  + name: varchar(100), not null
  + description: text
* **Indexes:**
  + Primary Key: category\_id
  + Unique: name
* **Referenced By:**
  + post\_categories(category\_id) (ON DELETE CASCADE)

## comments

* **Columns:**
  + comment\_id: integer, not null, default: nextval('comments\_comment\_id\_seq')
  + post\_id: integer
  + user\_id: integer
  + content: text, not null
  + created\_at: timestamp, default: CURRENT\_TIMESTAMP
* **Indexes:**
  + Primary Key: comment\_id
* **Foreign Keys:**
  + post\_id → posts(post\_id) (ON DELETE CASCADE)
  + user\_id → users(user\_id) (ON DELETE CASCADE)

## follows

* **Columns:**
  + follower\_id: integer, not null
  + followed\_id: integer, not null
  + created\_at: timestamp, default: CURRENT\_TIMESTAMP
* **Indexes:**
  + Primary Key: (follower\_id, followed\_id)
* **Foreign Keys:**
  + follower\_id → users(user\_id) (ON DELETE CASCADE)
  + followed\_id → users(user\_id) (ON DELETE CASCADE)

## likes

* **Columns:**
  + like\_id: integer, not null, default: nextval('likes\_like\_id\_seq')
  + user\_id: integer
  + post\_id: integer
  + created\_at: timestamp, default: CURRENT\_TIMESTAMP
* **Indexes:**
  + Primary Key: like\_id
  + Unique: (user\_id, post\_id)
* **Foreign Keys:**
  + post\_id → posts(post\_id) (ON DELETE CASCADE)
  + user\_id → users(user\_id) (ON DELETE CASCADE)

## post\_categories

* **Columns:**
  + post\_id: integer, not null
  + category\_id: integer, not null
* **Indexes:**
  + Primary Key: (post\_id, category\_id)
* **Foreign Keys:**
  + post\_id → posts(post\_id) (ON DELETE CASCADE)
  + category\_id → categories(category\_id) (ON DELETE CASCADE)

## post\_tags

* **Columns:**
  + post\_id: integer, not null
  + tag\_id: integer, not null
* **Indexes:**
  + Primary Key: (post\_id, tag\_id)
* **Foreign Keys:**
  + post\_id → posts(post\_id) (ON DELETE CASCADE)
  + tag\_id → tags(tag\_id) (ON DELETE CASCADE)

## posts

* **Columns:**
  + post\_id: integer, not null, default: nextval('posts\_post\_id\_seq')
  + user\_id: integer
  + title: varchar(255)
  + content: text
  + created\_at: timestamp, default: CURRENT\_TIMESTAMP
  + updated\_at: timestamp, default: CURRENT\_TIMESTAMP
* **Indexes:**
  + Primary Key: post\_id
* **Foreign Keys:**
  + user\_id → users(user\_id) (ON DELETE CASCADE)
* **Referenced By:**
  + comments(post\_id)
  + likes(post\_id)
  + post\_categories(post\_id)
  + post\_tags(post\_id)

## tags

* **Columns:**
  + tag\_id: integer, not null, default: nextval('tags\_tag\_id\_seq')
  + name: varchar(50), not null
* **Indexes:**
  + Primary Key: tag\_id
  + Unique: name
* **Referenced By:**
  + post\_tags(tag\_id) (ON DELETE CASCADE)

## users

* **Columns:**
  + user\_id: integer, not null, default: nextval('users\_user\_id\_seq')
  + name: varchar(100)
  + email: varchar(100), not null
  + password: text, not null
  + bio: text
  + created\_at: timestamp, default: CURRENT\_TIMESTAMP
  + updated\_at: timestamp, default: CURRENT\_TIMESTAMP
* **Indexes:**
  + Primary Key: user\_id
* **Referenced By:**
  + comments(user\_id)
  + likes(user\_id)
  + follows(follower\_id, followed\_id)
  + posts(user\_id)