**Flask ORM (SQLAlchemy) Database Models**

**Breakdown of included models**

|  |  |  |
| --- | --- | --- |
| **Table Name** | **Model Class** | **Notes** |
| **users** | **User** | **Includes fields like username, email, role, avatar\_url, etc. Has one-to-many relationships to posts, comments, likes, bookmarks, post\_views** |
| **posts** | **Post** | **Includes title, slug, content, is\_published, timestamps. Related to tags, comments, likes, bookmarks, post\_views. Has slug auto-generation helper** |
| **tags** | **Tag** | **Simple tag name model, many-to-many link to posts via PostTag** |
| **post\_tags** | **PostTag** | **Many-to-many bridge with composite PK (post\_id, tag\_id)** |
| **comments** | **Comment** | **Supports threaded replies via parent\_id. Related to posts, users, and likes** |
| **likes** | **Like** | **Supports liking either a post\_id or a comment\_id (only one allowed at a time). Enforced with a check constraint. Includes unique constraint on (user\_id, post\_id) and (user\_id, comment\_id)** |
| **bookmarks** | **Bookmark** | **Tracks bookmarks by users on posts. One bookmark per user-post enforced by a composite unique constraint** |
| **post\_views** | **PostView** | **Tracks detailed view logs per user/post/IP. Useful for analytics** |

**Relationships captured**

1. ***One-to-Many***

* User → Posts
* User → Comments
* User → Likes
* User → Bookmarks
* User → PostViews
* Post → Comments
* Post → Likes
* Post → Bookmarks (via bookmarked\_by)
* Post → PostViews (via views)

1. ***Many-to-Many***

* Post ↔ Tag (via PostTag)

1. ***Self-Referential***

* Comment → Replies (via parent\_id and backref='replies')

**ER Diagram**

