Entities:

User - User was modeled in order to capture the users who make comments/posts. The u\_name is the unique username chosen by the user and it is the Primary Key, while date started account is also info stored in the account page.

Posts – The post has 4 attributes, a p\_id that functions as the primary key, time\_posted which records the time the post was made, the score to keep track of upvotes/downvotes, and the content which records whatever was in the post be it text or a link.

Comments – The comment entity has 4 attributes, c\_id and time\_posted, score, and content all exist for the same reason they did in the post entity

Subreddit – The subreddit entity exists to reflect that the fact that individual posts are owned by a certain subreddit. The only info in the subreddit is the name which is its primary key.

Relationships/Constraints:

Makes – The makes relationship exists to express that a user will make posts. This has an at most one constraint going from posts to makes because a post can be made by only one person and any post must have an author.

Writes – The writes relationship exists to reflect that users make comments. This relationship has an at most one constraint going from comments to writes because a comment can be made by only one person and any comment must have an author.

Contains – Contains was modeled as a relationship to express how comments are tied to certain posts. There is an exactly one constraint going from posts to contains because each comment can only be tied to one post.

Owns – Owns expresses the fact that each post is in a certain subreddit. The exactly one constraint reflects that a post must be in some subreddit and cannot be in two subreddits simultaneously

Moderated\_by – This expresses that a subreddit has some collection of moderators who are a subset of normal users. Since there is no distinction between users and moderators outside of that subreddit it seemed unnecessary to create a separate entity for moderators. The at least one constraint is used because a subreddit can have an unlimited number of moderators but subreddits are shut down if they don’t have moderators.

Subscribed – This expresses that individual users are subscribed to a subreddit, but a subreddit does not require anyone to be subscribed in order for it to exist.

Related\_to – This relationship expresses that comments are related to other comments based on being a “parent” comment and a “child” comment. This is included because there needs to be a way to keep track of how comments are related in order to have reddit conversations be viewed as threads as opposed to something like wall posts.