Database Structure for the Commonwealth Bank Twitter (or X) account

Tables:

1. Users
    - user_id – This is Primary Key and will be used as Unique Identifier for Users. Type: INT NOT NULL AUTO_INCREMENT
    - user_name – This will store the unique username. Type: VARCHAR(30)
    - name – This will contain name for the Display Name. Type: VARCHAR(50)
    - email – This will store Email Address. Type: VARCHAR(40)
    - created_at – This will store the date and time when the account is registered. Type: DATETIME
    - password – This will store hash password for the user login. Type: VARCHAR(60)
    - birth_date – This will contain user's birth date. Type: DATE
    - bio – This will used as description. Type: VARCHAR(300)
    - website – This will store user's URL. Type: VARCHAR(100)
    - location – This will contain User's location. Type: VARCHAR(80)
    - following – This will contain total numbers of following. Type: INT
    - followers – This will contain total numbers of followers. Type: INT

2. Posts
    - post_id – Primary Key for the posts and will be Unique Identifier for the post. Type: INT NOT NULL AUTO_INCREMENT
    - created_at – This will contain date and time when the post is generated. Type: DATETIME
    - user_id – This will contain id for author. Type: INT
    - content – This will contain the text for the posts. Type: VARCHAR(255)
    - repost_count – This will store total number of reposts. Type: INT
    - like_count – This will store total number of likes. Type: INT

3. Reposts
    - repost_id – This will be Primary key and Unique Identifier for reposts. Type: INT NOT NULL AUTO_INCREMENT
    - created_at – This will store the date and time when user reposted. Type: DATETIME
    - user_id – This will store ID for the user who reposted. Type: INT
    - content – This will store the text which user added while reposting. Type: VARCHAR(255)
4. Replies
    - reply_id – This will serve as Primary Key and Unique Identifier for replies. Type: INT NOT NULL AUTO_INCREMENT
    - created_at – This will store date and time for replies. Type: DATETIME
    - user_id – This will store the ID for the user who replied. Type: INT
    - post_id – This will store the tweet where user replied. Type: INT
    - content – This will store the text, Type: VARCHAR(255)

5. Mentions
    - mention_id – This will be Unique Identifier and Primary Key for mentions. Type: INT NOT NULL AUTO_INCREMENT
    - user_id – ID for the user mentioned. Type: INT
    - post_id – This will store the ID for the tweet where user mentioned. Type: INT

6. Communities
    - community_id - This will be Unique Identifier and Primary Key for communities. Type: INT NOT NULL AUTO_INCREMENT
    - name – This will store the name for the community. Type: VARCHAR(20)
    - created_at – This will store date and time when community created. Type: DATETIME
    - user_id – ID for the user who created the community. Type: INT
    - description – This will store the description of the community. Type: VARCHAR(255)

Entity-Relationship (ER) Model

1. **Users -> Posts**: One user can create Many posts. [Users.user_id -> Posts.user_id]
2. **Users -> Reposts**: One user can repost Many reposts. [Users.user_id -> Reposts.user_id]
3. **Users -> Replies**: One user can have Many replies. [Users.user_id -> Replies.user_id]
4. **Posts -> Replies**: One post can have Many replies. [Posts.post_id -> Replies.post_id]
5. **Users -> Mentions**: One user can be mentioned Many times. [Users.user_id -> Mentions.user_id]
6. **Users -> Communties**: One user can create Many communties. [Users.user_id -> Communities.user_id]
7. **Posts -> Mentions**: One post can mention Many users. [Posts.post_id -> Mentions.post_id]