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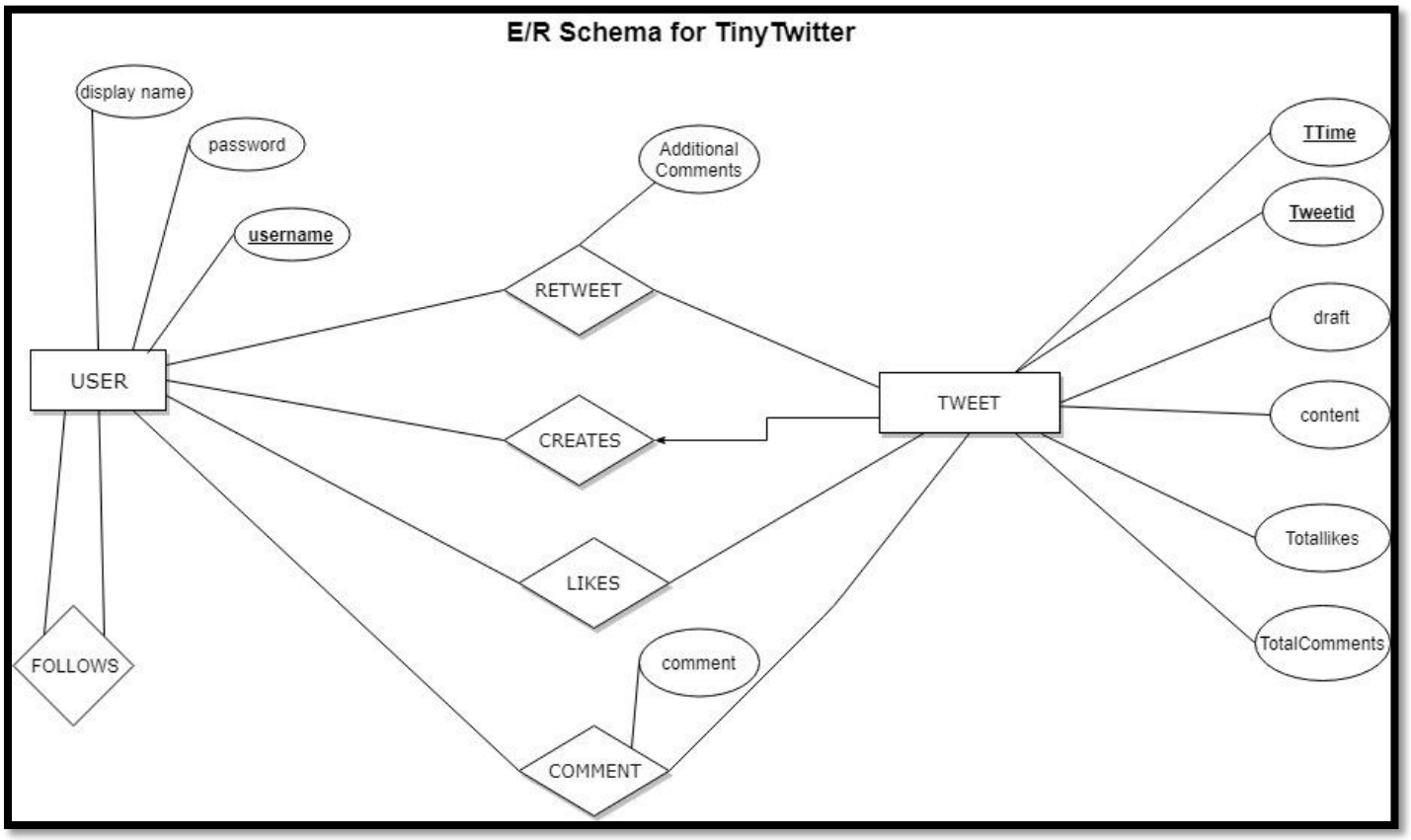
CSE 460

Tiny Twitter Report

In this report, the image below details my design for Tiny Twitter, beginning with the User entity, which contains three attributes as, described being the display name, password and username (email address). The primary key of this schema is the username since it is unique that only one user may use a specific email address. The second entity "Tweet" contains 6 attributes, TTime representing the time of the tweet, TweetId which is a design choice to differentiate the tweets given at a specific time by the same user, draft which is a string containing the information of saved drafts, contents, total likes and total comments. The relationships Follows, Retweet, Creates, Likes and Comments all represent actions that a user can complete concerning tweeting.



Original RD Schema:

User (username, password, displayname)
Tweet (TTime, TweetID, draft, content, Totallikes, TotalComments)
Retweet (username, TTime, TweetID, AdditionalComments)
Creates (username, TTime, TweetID)
Likes (username, TTime, TweetID)
Comment (username, TTime, TweetID, comment)
Follows (username)

The RD Schema as mentioned in the ER schema satisfies all the requirements of Tiny Twitter allowing users to Like Comment, Create, Follow and Retweet users tweets. It also satisfies the conditions by providing an attribute in the comment relationship, which stores information on the users comment. It stores information on the users drafts to allow facilitate saving of tweets. The Tweet entity unique to this design has a TweetID, which allows users to have a unique identifier for their tweets while still providing the constraints of having 140 characters, this confine is duplicated in the content to satisfy the Tweet Management aspect in 3.2. Facilitating the User relationship the schema allows for a relationship between users allowing multiple users to follow each other. Lastly, the User-Tweet relationship is managed by allowing users to view total likes and total comments as an attribute of a Tweet.

Advantages and Disadvantages:

The advantages of this system is easily understood it additionally uses Varchar to save on space and provides with unique differentiators for Tweets. This allows personnel to query tweets based on time that is essential if checking overall activity of the system. Having the draft function outside also allows any tweet to be saved as a draft, this includes retweets. The disadvantage to the design is that it becomes irrelevant storing information on Total likes and comments on drafted tweets as these will be intertwined. Another disadvantage is that attributes of Tweet will take up more space as it requires storing 6 pieces of information in each tuple. On the other hand, the drawbacks pale in comparison to its flexibility and saving on space.