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DBMS : Project Topic

Problem Statement : Developing a Twitter Clone app

Github link : https://github.com/kushalnl7/DBMS_Twitter-Clone

Introduction : Developing a Twitter Clone app, which behaves like the actual twitter app with various functionalities and features for the user to tweet their personal views and also to watch what others are posting with the follow-unfollow feature for every user to see frequently what their friends are posting on their time-line. A simple application created using Flask and HTML/CSS/JS for basic design and functionality of the official Twitter app. It is deployed on AWS host, so, runs on dns server of AWS.

Fuctional requirments of the system :

1. Flask
2. HTML
3. CSS
4. JS
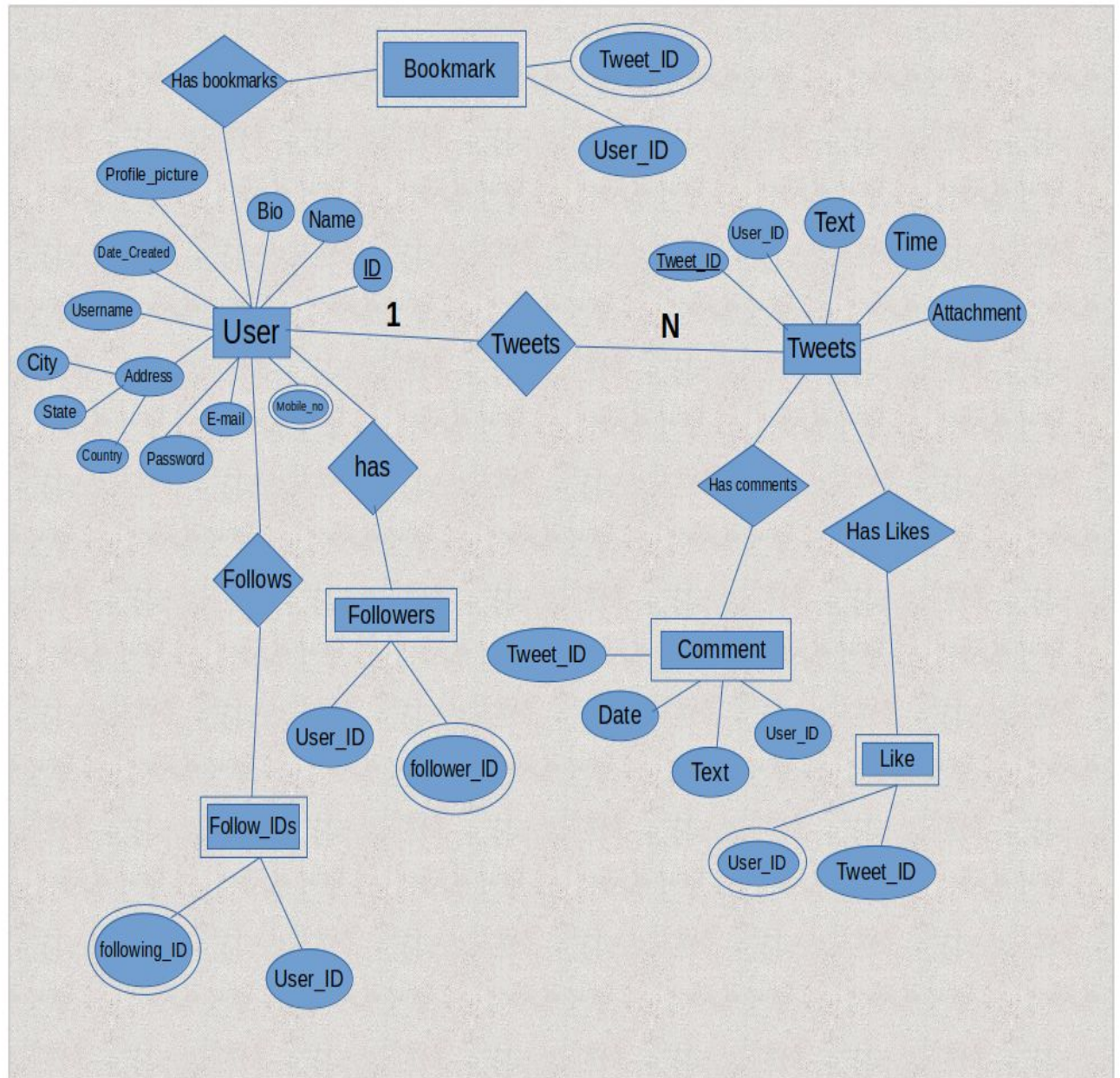5. Bootstrap
6. Mysql
7. Jquery
8. Linux

Normalization :

1. Each user can have multiple phone no. is users table, so, a table for mobile no. is separated. All other tables with multiple attributes have been seperated. So, we got every table with atomic values and of same data-type entry.
   Hence, given Relational Schema is in **1NF**.

2. In User table, candidate keys are {ID}, {Username} and {E-mail}. The proper subset of all the the candidate keys is Null. Hence, we would not encounter any partial dependency here.
   In Tweet table, candidate key is {Tweet_ID}.
   The proper subset the candidate key is Null. Hence, we would not encounter any partial dependency here also.
   Hence, as this relational schema is in 1NF and have no partial dependency, we can say that it is in **2NF**.

3. For 3NF, we need to check Transitive dependancy i.e. a mapping of Non-prime attribute to another Non-prime attribute should not occur. In all our tables, we never encounter such type of mapping. Hence, our relational schema is also in **3NF** form.

ER Diagram :

Relational Schema :

User
- ID(**PK**)
- Name
- Bio
- Profile_Picture
- Date_Created
- Username
- E-mail

Mobile
- User_ID (**FK**)
- Number

Bookmark
- Tweet_ID(**FK**)
- User_ID(**FK**)

Address
- User_ID(**FK**)
- City
- State
- Country

Comment
- Tweet_ID(**FK**)
- Text
- Date

Likes
- Tweet_ID(**FK**)
- User_ID(**FK**)

Tweet
- Tweet_ID(**PK**)
- User_ID(**FK**)
- Text
- Time
- Attachment

Following
- User_ID(**FK**)
- Following _ID(**FK**)

Followers
- User_ID(**FK**)
- Follower_ID(**FK**)