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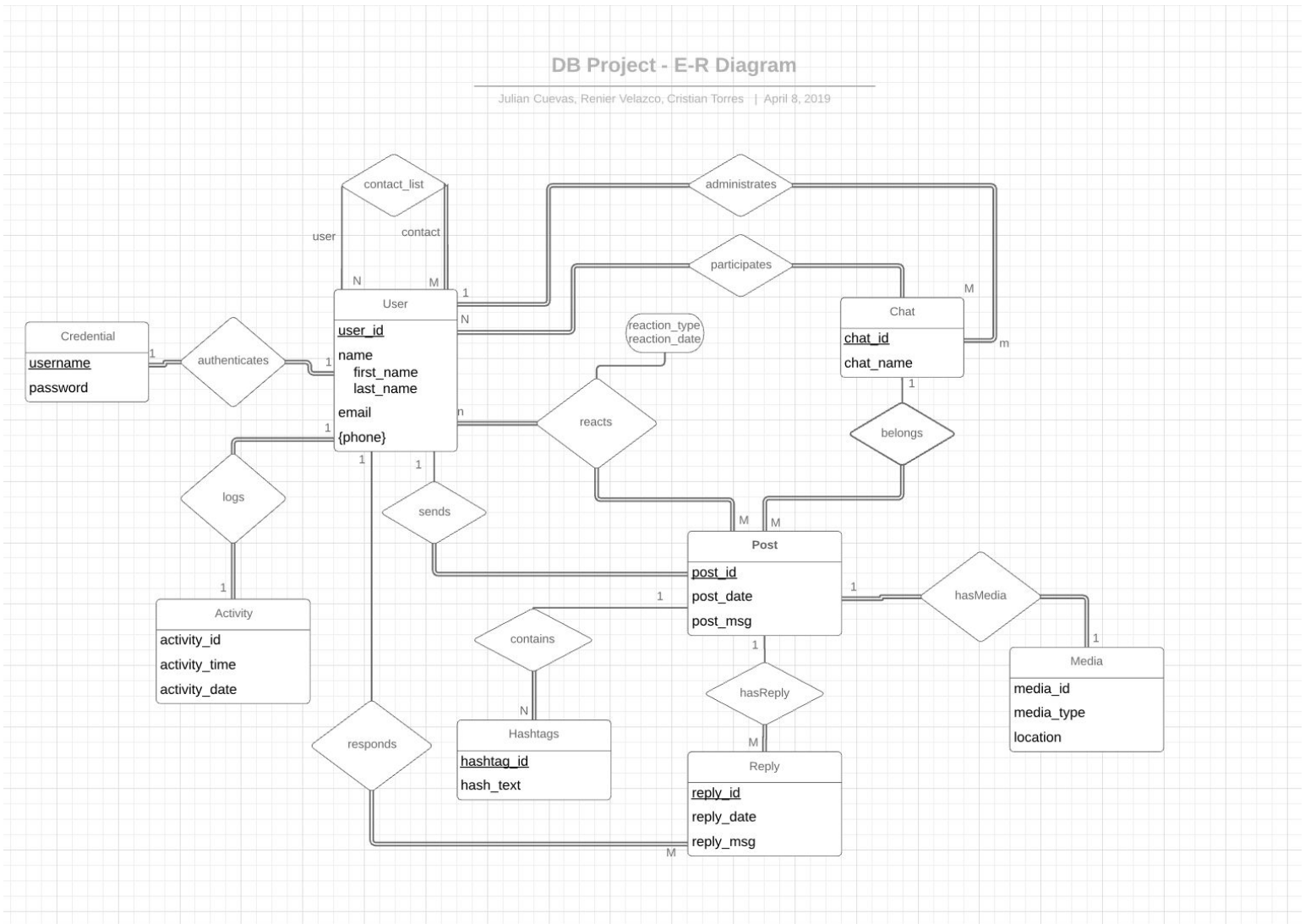
Photo Messaging Application

Pictochat

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I. ER Diagram

II. Entity-Relationship and Schema

Entities:

    A. Users - Users in the Pictochat application.

        1. Attributes:

            a) user_id: serial Primary Key

            b) first_name: varchar(20)

c) last_name: varchar(20

d) email: varchar(40)

e) phone: varchar(20)

B. Credentials – Hold login credential for accessing Pictochat application.

    1. Attributes:

        a) username: varchar(30) Primary Key

        b) password: chkpass

C. Activity - Contains the necessary information to determine user activity.

    1. Attributes:

        a) activity_id: serial Primary Key

        b) date: varchar(20)

D. Chats - Contains the information related to a chat group.

    1. Attributes:

        a) chat_id: serial Primary Key

        b) name: varchar(20)

E. Post - Post sent in a chat.

    1. Attributes:

        a) post_id: serial Primary Key

        b) post_msg: varchar(1000)

        c) post_date: varchar(50)

F. Medias - Manages the images of the Chat Group.

    1. Attributes:

        a) media_id: serial Primary Key

        b) media_type: varchar(20)

        c) location: varchar(100)

G. Reply - Contains the replies of the message.

    1. Attributes:

        a) reply_id: serial Primary Key

        b) reply_msg: varchar(1000)

        c) reply_date: varchar(20)

H. Hashtags - Contains the hashtags of the messages.
1. Attributes:
    a) hashtag_id: serial Primary Key
    b) hashtag_text: varchar(100)

Relations:
A. User Relations:
1. administrator
    a) Mapped to Chat. A user can be the administrator of many chats.
2. contact_list
    a) apped to User (self relation). A user can have many contacts (other users).
3. participates
    a) Mapped to Chat. A user can participate many differents group chats.
4. reaction
    a) A user is mapped to Posts. A user can react to many posts.
5. create
    a) A User is mapped to Reply. A user can create reply associate to a some Post.
6. sends
    a) Mapped to Post. A user can send a post.
7. responds
    a) Mapped to Reply. A user can post many replies.
8. logs
    a) Mapped to Activity. A user can log many activities.
9. authenticates
    a) Mapped to Credentials. A user's login is authenticated by one set of credentials.
B. Post Relations:
1. contains
    a) Mapped to Hashtag. The text on posts can contain Hashtags.
2. hasReply
    a) Mapped to Reply. A post can have replies.

            3. reacts
                a) Mapped to User. A post can have reactions by many users.
            4. hasMedia
                a) Mapped to Media. A post has one media object.
            5. belongs
                a) Mapped to Chat. A chat belongs to one specific chat.
            6. sends
                a) Mapped to User. A post can only have been sent by one user.
        C. Chat Relations:
            1. administrate
                a) Mapped to User. A chat has one administrator
            2. participates
                a) Mapped to User. A chat can have many participants
            3. belongs
                a) Mapped to Post. A chat can have many posts in it.

II.   Application Layout
    A. Login/Registration
    B. Home
    C. Chat
    D. Create Chat
    E. Contacts
    F. Dashboard

III.   REST Routes
    A. /Pictochat/users/register
        1. register()
            a) Registers a user in the database for login
    B. /Pictochat/users/login
        1. login()
            a) Logins a user by checking the credentials
    C. /Pictochat/users/logout
        1. logout()
            a) Logs a user out by clearing the session in flask.
    D. /Pictochat/users/all
        1. getAllUsers()
            a) Returns a list of all the users in the database.

E. /Pictochat/users/<int:user_id>
  1. getUserById(user_id)
     a) Returns the info of user with user_id
F. /Pictochat/users/username/<string:username>
  1. getUserByUsername(username)
     a) Returns the info of user with username
G. /Pictochat/post/<int:post_id>/likes
  1. getUsersWhoLikedPost(post_id)
     a) Returns users who liked post with post_id
H. /Pictochat/post/<int:post_id>/dislikes
  1. getUsersWhoDislikedPost(post_id)
     a) Returns users who disliked post with post_id
I. /Pictochat/chat/<int:chat_id>/users
  1. getUsersByChatID(chat_id)
     a) Returns users in chat with chat_id
J. /Pictochat/chat/<int:chat_id>/admin
  1. getAdminByChatID(chat_id)
     a) Returns admin of chat with chat_id
K. /Pictochat/credentials/all
  1. getCredentials()
     a) Returns all credentials in system
L. /Pictochat/credentials/user/<int:user_id>
  1. getUserCredentialByID(user_id)
     a) Returns credentials of user with user_id
M. /Pictochat/activity/all
  1. getAllActivities()
     a) Returns all activity logged in system
N. /Pictochat/activity/user/<int:user_id>
  1. getUserActivityByID(user_id)
     a) Returns all activity by user with user_id
O. /Pictochat/user/<int:user_id>/contacts
  1. getUserContactsByID(user_id)
     a) Returns contacts of user with user_id
P. /Pictochat/chats/new
  1. createChat()
     a) Creates a chat in the database

Q. /Pictochat/chats/all
   1. getAllChats()
      a) Returns all chats in system.
R. /Pictochat/chat/<int:chat_id>
   1. getChatByID(chat_id)
      a) Returns chat with chat_id
S. /Pictochat/chats/<int:user_id>
   1. getChatByUserID(user_id)
      a) Returns chats that user with user_id participates in
T. /Pictochat/chat/<int:chat_id>/posts
   1. getPostsByChatID(chat_id)
      a) Returns posts in chat with chat_id
U. /Pictochat/post/new
V. /Pictochat/posts/all
W. /Pictochat/post/react
X. /Pictochat/post/<int:post_id>/count/likes
Y. /Pictochat/post/<int:post_id>/count/dislikes
Z. /Pictochat/chat/addparticipants
AA.   /Pictochat/post/insertmedia
BB.   /Pictochat/post/<int:post_id>/media
CC.   /Pictochat/post/reply
DD.   /Pictochat/post/<int:post_id>/replies
EE.   /Pictochat/dashboard/hashtags
FF.   /Pictochat/dashboard/posts
GG.   /Pictochat/dashboard/replies
HH.   /Pictochat/dashboard/likes
II.   /Pictochat/dashboard/dislikes
JJ.   /Pictochat/dashboard/post/replies
KK.   /Pictochat/dashboard/post/likes
LL.   /Pictochat/dashboard/post/dislikes
MM. /Pictochat/dashboard/user/active