University of Puerto Rico at Mayaguez
Electrical and Computer Engineering Department
ICOM5016 Database Systems
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Project Report Phase 2

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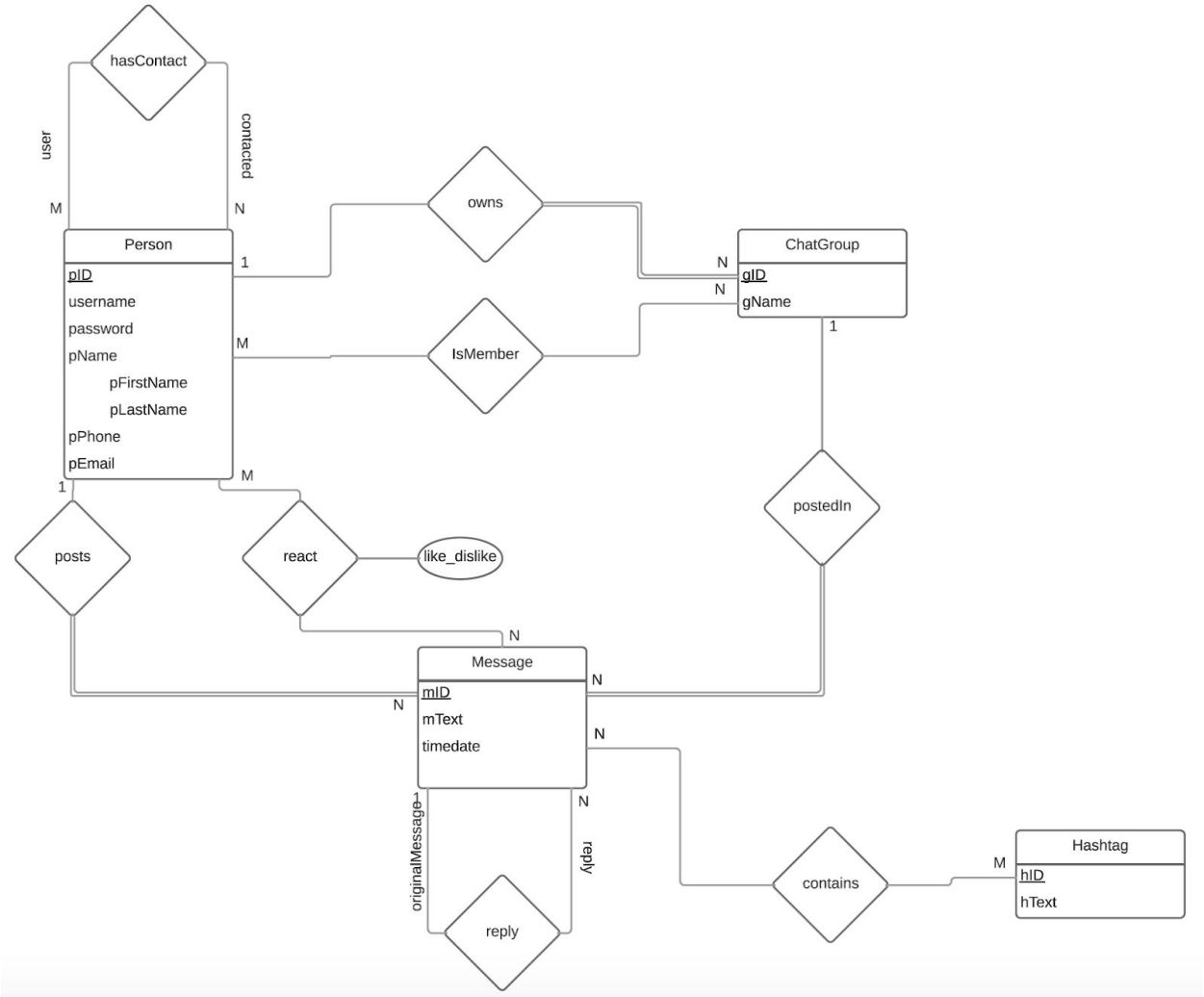
E-R Diagram:


hasContact
user
contacted
M
N
owns
Person
1
pID
username
password
pName
pFirstName
pLastName
pPhone
pEmail
M
IsMember
N
N
ChatGroup
gID
gName
1
1
M
postedIn
posts
react
like_dislike
N
Message
N
mID
mText
timedate
N
N
originalMessage
reply
reply
contains
M
Hashtag
hID
hText

Entity Descriptions:

1. Person – A application user, referrers to a person registered in the database.

   Person Attributes:

   - pID – Serial primary key and unique integer that corresponds to the person registered identification number.
   - username - Unique character sequence of length 8.
   - password - Unique alphanumeric sequence.
   - pName – Composition of two atomic variable char attributes pFirstName and pLastName that corresponds to the name of the registered person.
   - pPhone – A set of variable characters corresponding to the person cell phone number.
   - pEmail – A set of variable characters corresponding to the person email.

2. Message – A structure that contains a desired person content that could be text and/or multimedia
   - mID - Serial primary key and unique integer that corresponds to a message inside a specific Chat Group.
   - mText - A set of variable characters that conform the text of a message of up to 1000 characters.
3. ChatGroup - A entity that represents a chat group with all its corresponding attributes these are:
   - gID - The primary key of this entity
   - gName - The name of the chat group

Relationship Descriptions:

1. hasContact - This is a many to many relationship that occurs between the same entity, in this case that entity is Person. The roles that are labeled on the lines of this relationship are:
    User: This role represents the Person the contact belongs to
    Contacted: This role represents the person who is contacted by User
2. owns - A one to many relationship between the entities Chat Group and Person, it specifies that for each Chat Group created there must exist a Person that owns it
3. isMember - This is a many to many relationship which represents that many Persons can me members of many Chat Groups and many Chat Groups have many members
4. postedIn - A one to many relationship between the two entities Chat Group and Message, it specifies that each Chat Group must have a set of Message entities paired to it.
5. posts - This relationship is a one to many inclusive relationship that represents that one Person posts many Messages. It is inclusive on the many side because a message cannot exist without a Person.
6. react - This relationship is a many to many relationship between Person and Message. This particular relationship has a attribute called like_dislike. This attribute is true if the Message is liked and false if the message is disliked
7. Reply - A one to many relationship between the Message entity and itself, it specifies that each created Message entity can received many Message entities as responses.
    reply: This role represents the replied Message
    originalMessage: This role represents the original Message entity that is being replied to.