

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

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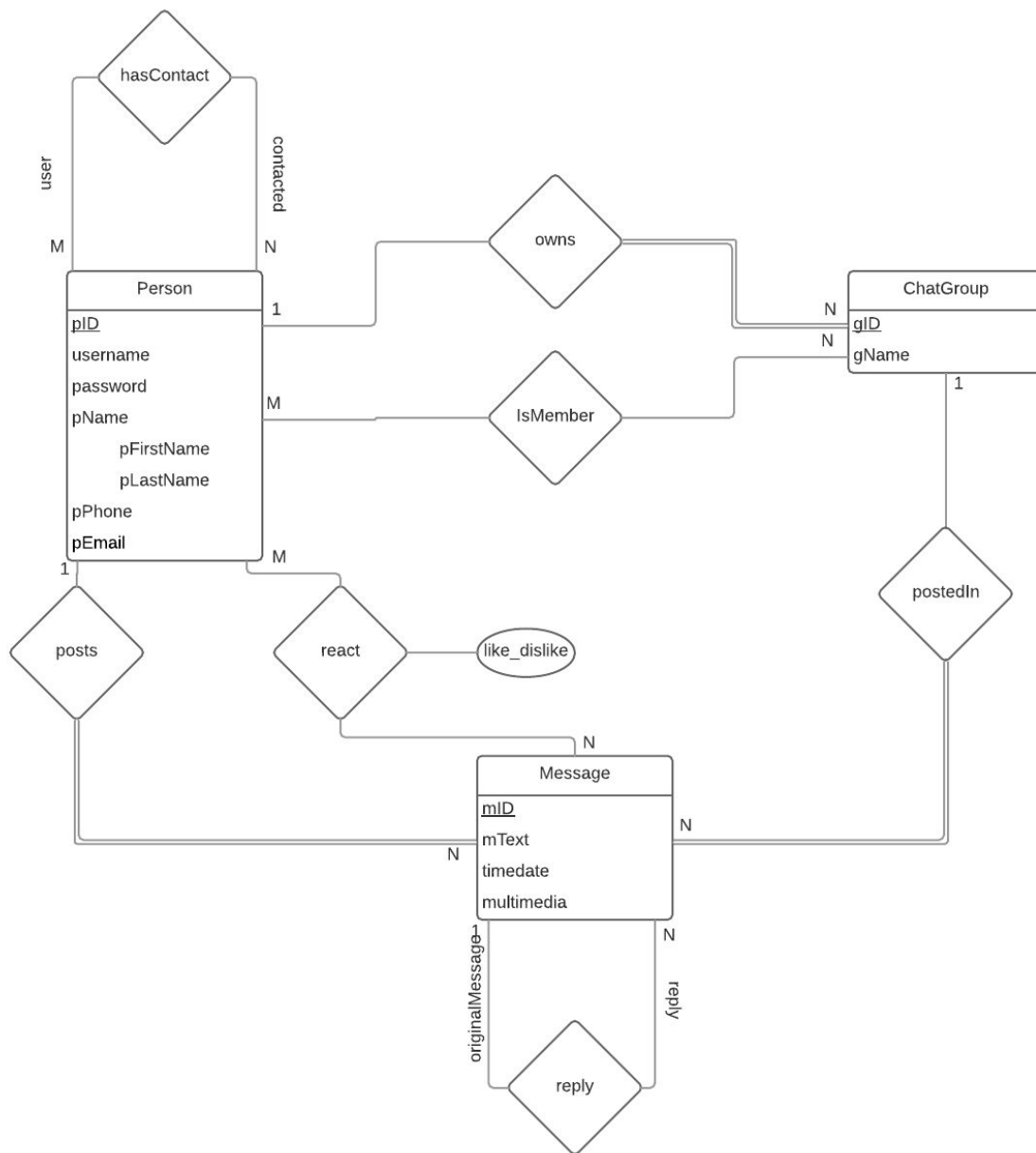
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E-R Diagram:



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.
 - Timedate- The time and date a message was sent.
 - Multimedia- Pictures or videos that are part of a message.
 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 be 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 receive 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.