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FACULTY OF SCIENCE AND TECHNOLOGY  
  
ACADEMIC YEAR 2019  
SEMESTER 2  
  
 COMP3161 “Introduction to Database Management System”

Group Members:

Kevel Campbell - 620076557

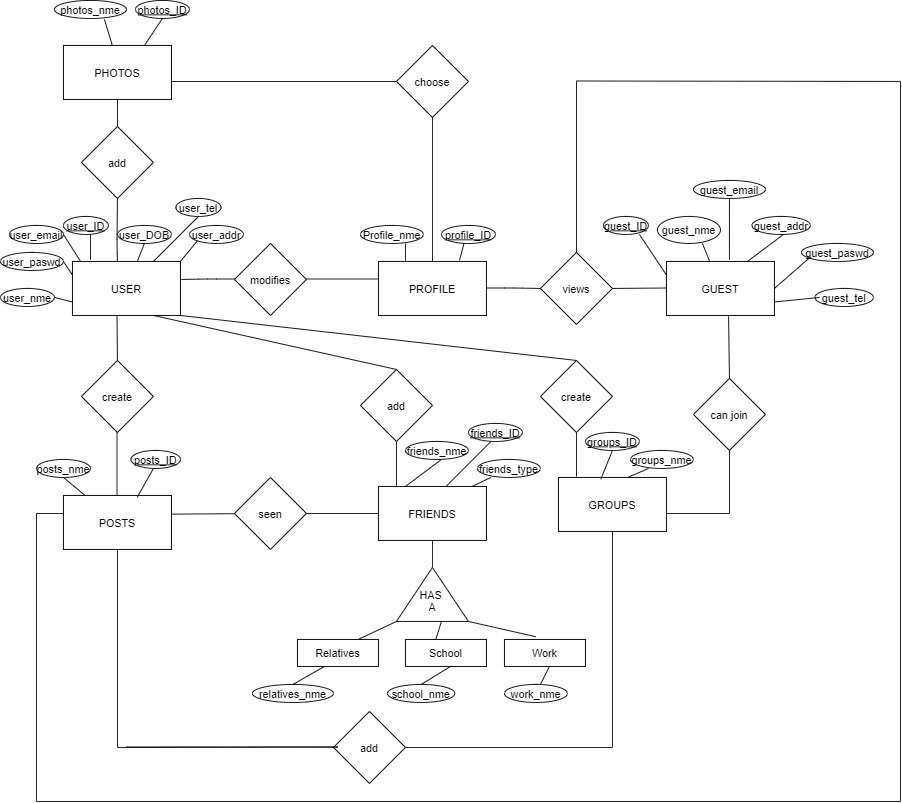
Akeem Purrier – 620087903

Sania Spence – 620096421

Delano Tracey- 620109589

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**Social Networking ER-Diagram**



**Un – Normalised Tables**

User (user\_ID, user\_DOB, user\_nme, user\_paswd, user\_email, user\_addr, user\_tel).

Photos (photos\_ID, photo\_nme).

Profile (profile\_ID, profile\_nme).

Guest (guest\_ID, guest\_nme, guest\_email, guest\_addr, guest\_paswd, guest\_tel).

Posts (posts\_ID, posts\_nme).

Friends (friends\_ID, friends\_nme, friends\_type).

Relatives (friends\_ID, relatives\_nme).

School (friends\_ID, school\_nme).

Work (friends\_ID, work\_nme).

**Normalised Tables**

Users (user\_id, user\_fname, user\_lname, user\_dob, user\_paswd, user\_addr)

Emails (user\_id, user\_email)

Telephones (user\_id, user\_tel)

Profiles ( user\_id, ,profile\_desciption,profile\_photo)

Photos (photo\_id, user\_id ,photo\_nme, photo\_image,photo\_datetime)

Posts (posts\_id, user\_id , post\_text,datetime)

Groups (group\_id, user\_id,group\_nme,group\_description) note: user\_id would be the creator’s user\_id

GroupMembers(group\_id,user\_id,member\_status) note: member\_type either being creator, content creator or member

GroupPosts(group\_id,post\_id)

Friends (user\_id,friend\_id,friend\_type)

Comment (comment\_id,user\_id,post\_id ,comment\_text,comment\_datetime)

Guest (guest\_ID, guest\_nme, guest\_email, guest\_addr, gueszt\_paswd, guest\_tel).

GroupPhotos(photo\_id,group\_id)

PhotoComments(comment\_id,Photo\_id)

**Data Dictionary**

**User**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| User\_id, | Number |  | Unique record of a user | 48723 |
| User\_dob | Date/ Time |  | Date of birth of a user | 4/01/1980 |
| User\_fnme | String |  | First name of a user | John |
| Uuser\_lnme | String |  | Last name of a user | Brown |
| User\_paswd | Auto Number |  | Password for a user | Jdfh834&gr |
| User\_addr | String |  | Address of a user | 4 Orange Street, New Jersey |

**Email**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| User\_id | Number |  | Unique record of a user | 78745 |
| User\_email | Auto Number |  | Email address of a user | johnbrown@gmail.com |

**Telephone**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| User\_id | Number |  | Unique record of a user | 62362 |
| User\_tel | Number |  | Telephone number of a user | 87472 |

**Photos**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| Photo\_id | Number |  | Unique record of a photo | 72363 |
| user\_fname | String |  | First name of a user | John |
| user\_lname | String |  | Last name of a user | Brown |
| Photo\_nme | String |  | Name of the photo uploaded | Awesome |
| Photo\_image | Image |  | Actual photo that was uploaded | Awesome.jpeg |
| photo\_datetime | Date/ Time |  | Date of a particular photo | 2/03/2019 |
| User\_id | Number |  | Unique record of a user | 62572 |

**Profile**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| user\_id | Number |  | Unique record of a user | 8535 |
| user\_fname | String |  | First name of a user | Mary |
| user\_lname | String |  | Last name of a user | Jane |
| Profile\_description | String |  | Information about a particular user | Hello MyBook. |
| Profile\_photo | Image |  | Photo for a user’s profile | Hello.jpeg |

**Posts**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| Posts\_id | Number |  | Unique record of a post | 46372 |
| User\_id | Number |  | Unique record of a user | 48727 |
| User\_fname | String |  | First name of a user | Tom |
| User\_lname | String |  | Last name of a user | Henry |
| Post\_text\_datetime | Date/ Time |  | Date of a particular post text | 5/04/2019 |

**Guests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| Guest\_id | Number |  | Unique record of a guest | 362462 |
| Guest\_fnme | String |  | First name of a guest | Mary |
| Guest\_lnme | String |  | Last name of a guest | Jane |
| Guest\_email | Auto Number |  | Email address of a guest | maryjane@yahoo.com |
| Guest\_addr | String |  | Address of a guest | 58 Linton Ave, New York |
| Guest\_paswd | Auto Number |  | Password for a guest | Filedb48 |
| Guest\_tel | Number |  | Telephone number of a guest | 1-876-123-4567 |

**Groups**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| Group\_id | Number |  | Unique record of a group | 8172 |
| User\_id | Number |  | Unique record of a user | 47834 |
| Group\_nme | String |  | Name of particular group | Database Hard talk |
| Group\_description | String |  | Information about a particular group | Database Hard Talk is where we discuss pressing matter as it relates to world of database. |

**GroupMembers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| Group\_id | Number |  | Unique record of a group | 9274 |
| User\_id | Number |  | Unique record of a user | 83452 |
| Member\_status | String |  | Status of a particular member | Admin |

**GroupPosts**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| Group\_id | Number |  | Unique record of a group | 7529 |
| Post\_id | Number |  | Unique record of a post | 9356 |

**Friends**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| User\_id | Number |  | Unique record of a user | 2945 |
| Friend\_id | Number |  | Unique record of a friend | 8573 |
| Friend\_type | String |  | Type of friend to the user | Relative |

**Comment**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Field Size** | **Description** | **Example** |
| comment\_id | Number |  | Unique record of a comment | 85 |
| user\_id | Number |  | Unique record of a user | 7482 |
| post\_id | Number |  | Unique record of a post | 8573 |
| user\_fname | String |  | First name of a user | John |
| user\_lname | String |  | Last name of a user | Brown |
| comment\_text | String |  | The actual comment made by the user | Hey, I’m new to MyBook |
| comment\_datetime | Date/ Time |  | Date and Time when a comment was made | 3/09/2019 |

User Population Script

#!/usr/bin/python

from \_\_future\_\_ import print\_function

from flask import Flask, request

from faker import Factory

from random import randint, choice, sample

import mysql.connector

from mysql.connector import Error

import hashlib

fake = Factory.create('en\_US')

cnxn = mysql.connector.connect(host='localhost',

database='comp3161finalproject',

user='root',

password='')

print ("GENERATING THE USERS FOR THE DATABASE!!")

cursor = cnxn.cursor()

count = 0

for i in range (500000):

user\_fname = fake.first\_name()

user\_lname = fake.last\_name()

user\_dob = fake.date\_of\_birth()

user\_password = fake.password(length = 12)

user\_addr = fake.address()

cursor.execute("INSERT INTO Users VALUES (%s, %s, %s, %s, %s)", (user\_fname, user\_lname, user\_dob, user\_password, user\_addr))

cnxn.commit()

count +=1

print ("DONE CREATING USERS")

print ("")