CS 460 PA1 Report

Lida Karadimou

From my initial design I removed tables wrote, created, commenton, and belongs to as they were not needed (the relationship tables for which join of two tables connected by keys could be used for the functions to be implemented). In the tags table I included the picture id and a primary key (removed has table that was previously connecting tags to pictures). I added a contributions table to add a contribuítion each time it is made by a user (comment or upload). I assumed that a contribution is not removed if the user deletes a photo or album because we still want to be able to measure his activity and rank the people who have been the most active in the photoshare. I assumed however that if a user is deleted then the contribution is deleted (on delete cascade) - because then he is not comparable to other people.

Additional assumptions in photoshare included that user can like his own photo (even though he cannot comment on it).

CREATE TABLE Users

( firstname VARCHAR(11) NOT NULL,

lastname VARCHAR(11) NOT NULL,

dateofbirth DATE NOT NULL,

email varchar(255) UNIQUE NOT NULL,

password varchar(255) NOT NULL,

hometown VARCHAR(11),

gender BOOLEAN,

user\_id int4 AUTO\_INCREMENT,

CONSTRAINT users\_pk PRIMARY KEY (user\_id)

);

INSERT INTO Users (firstname, lastname, dateofbirth, email, password, hometown, gender) VALUES ('Anonymous', 'Anonymous', '1001-01-01' ,'anonymous','anonymous','anonymous','1');

#for the anonymous/unregistered user

CREATE TABLE Albums

(

album\_id int4 AUTO\_INCREMENT,

name VARCHAR(20) NOT NULL,

user\_id INT NOT NULL REFERENCES Users(user\_id),

CONSTRAINT album\_pk PRIMARY KEY (album\_id),

CONSTRAINT album\_fk FOREIGN KEY (user\_id) REFERENCES Users(user\_id) ON DELETE CASCADE

);

#INSERT INTO Albums (album\_id, name, user\_id) VALUES ('0000','test','1');

CREATE TABLE Pictures

(

picture\_id int4 AUTO\_INCREMENT,

user\_id int4,

imgdata LONGBLOB,

album\_id int4,

caption VARCHAR(255),

#INDEX upid\_idx (user\_id),

#tag\_text VARCHAR(30) REFERENCES Tags(tag\_text),

CONSTRAINT pictures\_pk PRIMARY KEY (picture\_id),

CONSTRAINT pictures\_fk2 FOREIGN KEY (album\_id) REFERENCES Albums(album\_id) ON DELETE CASCADE,

CONSTRAINT pictures\_fk1 FOREIGN KEY (user\_id) REFERENCES Users(user\_id) ON DELETE CASCADE

);

CREATE TABLE Tags

( tag\_id int4 AUTO\_INCREMENT,

picture\_id int4 NOT NULL,

text VARCHAR(30) NOT NULL,

CONSTRAINT tag\_pk PRIMARY KEY (tag\_id),

CONSTRAINT tag\_fk FOREIGN KEY (picture\_id) REFERENCES Pictures (picture\_id) ON DELETE CASCADE

);

CREATE TABLE Comments

(

comment\_id int4 AUTO\_INCREMENT,

text VARCHAR(150) NOT NULL,

user\_id INT NOT NULL,

picture\_id INT NOT NULL,

CONSTRAINT comments\_pk PRIMARY KEY (comment\_id),

CONSTRAINT comments\_fk1 FOREIGN KEY (picture\_id) REFERENCES Pictures(picture\_id) ON DELETE CASCADE,

CONSTRAINT comments\_fk2 FOREIGN KEY (user\_id) REFERENCES Users(user\_id) ON DELETE CASCADE

);

CREATE TABLE Friends

(

user\_id1 INT4 NOT NULL,

user\_id2 INT4 NOT NULL,

CONSTRAINT friends\_pk PRIMARY KEY (user\_id1, user\_id2),

CONSTRAINT friends\_fk1 FOREIGN KEY (user\_id1) REFERENCES Users(user\_id) ON DELETE CASCADE,

CONSTRAINT friends\_fk2 FOREIGN KEY (user\_id2) REFERENCES Users(user\_id) ON DELETE CASCADE

);

CREATE TABLE Likes

(

user\_id INT4 NOT NULL,

picture\_id INT4 NOT NULL,

CONSTRAINT likes\_pk PRIMARY KEY (user\_id, picture\_id)

);

CREATE TABLE Contributions

(

contribution\_id int4 AUTO\_INCREMENT,

user\_id int4 NOT NULL,

firstname VARCHAR(11) NOT NULL,

lastname VARCHAR(11) NOT NULL,

CONSTRAINT contr\_pk PRIMARY KEY (contribution\_id),

CONSTRAINT contr\_fk FOREIGN KEY (user\_id) REFERENCES Users (user\_id) ON DELETE CASCADE)