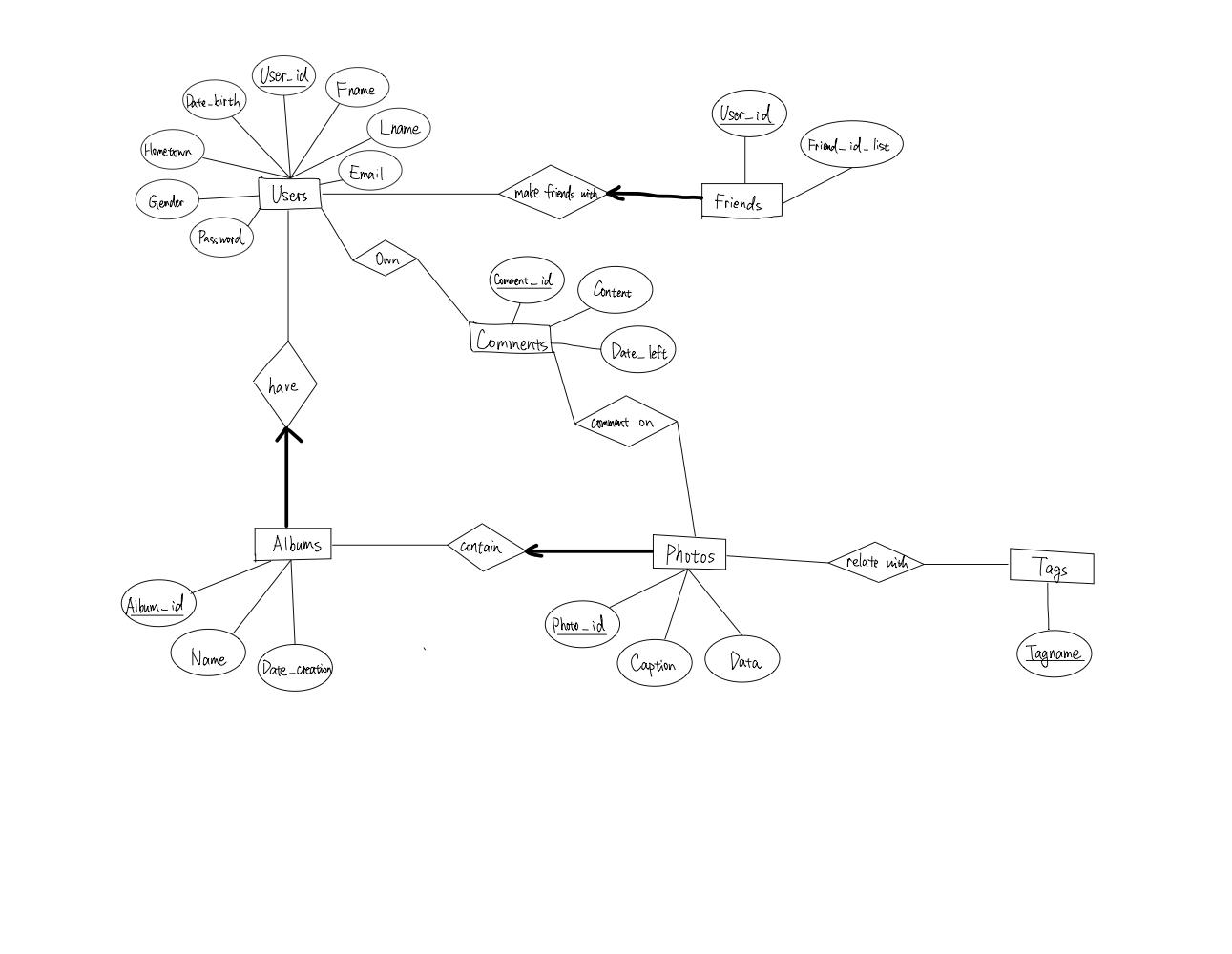
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CS460 PA1

* E/R diagram



* Relational schema

CREATE TABLE Users (User\_id CHAR(20) PRIMARY KEY,

Fname CHAR(50),

Lname CHAR(50),

Email VARCHAR(200),

Date\_birth DATE,

Hometown VARCHAR(100),

Gender CHAR(10),

Password VARCHAR(100));

CREATE TABLE have(

User\_id CHAR(20)

album\_id CHAR(20)

PRIMARY KEY ( User\_id, make\_album\_id),

FOREIGN KEY(User\_id) REFERENCES Users(User\_id);

FOREIGN KEY(album) REFERENCES album(album\_id));

CREATE TABLE make\_Friends\_with (

User\_id CHAR(20)

make\_friend\_id CHAR(20)

PRIMARY KEY ( User\_id, make\_friend\_id),

FOREIGN KEY(User\_id) REFERENCES Users(User\_id);

FOREIGN KEY(friends) REFERENCES Friends(User\_id));

CREATE TABLE contain(

photo\_id CHAR(20)

tag\_name CHAR(20)

PRIMARY KEY ( photo\_id, tag\_name),

FOREIGN KEY(photo\_id) REFERENCES photo(photo\_id);

FOREIGN KEY(tag\_name) REFERENCES tag(tag\_name));

CREATE TABLE relate\_to(

photo\_id CHAR(20)

album\_id CHAR(20)

PRIMARY KEY ( photo, make\_album\_id),

FOREIGN KEY(photo\_id) REFERENCES photo(photo\_id);

FOREIGN KEY(album) REFERENCES Album(album\_id));

CREATE TABLE comment\_on(

photo\_id CHAR(20)

comment\_id CHAR(20)

PRIMARY KEY ( photo\_id, comment\_id),

FOREIGN KEY(photo\_id) REFERENCES Photo(photo\_id);

FOREIGN KEY(comment\_id) REFERENCES Comment(comment\_id));

CREATE TABLE comment\_on(

user\_id CHAR(20)

comment\_id CHAR(20)

PRIMARY KEY ( user\_id, comment\_id),

FOREIGN KEY(user\_id) REFERENCES user(photo\_id);

FOREIGN KEY(comment\_id) REFERENCES Comment(comment\_id));

CREATE TABLE Friends (User\_id CHAR(20) PRIMARY KEY,

Friend\_id\_list ENUM,

FOREIGN KEY(User\_id) REFERENCES Users(User\_id));

CREATE TABLE Albums (Album\_id CHAR(20) PRIMARY KEY,

Name CHAR(100),

Owner\_id CHAR(20),

Date\_creation Date,

FOREIGN KEY(Owner\_id) REFERENCES Users(User\_id));

CREATE TABLE Photos (Photo\_id CHAR(20) PRIMARY KEY,

Album\_id CHAR(20),

Caption VARCHAR(200),

Data BLOB,

FOREIGN KEY(Album\_id) REFERENCES Albums(Album\_id));

CREATE TABLE Tags (Tagname VARCHAR(50) PRIMATRY KEY);

CREATE TABLE Comments (Comment\_id CHAR(29) PRIMARY KEY

Content TEXT,

Owner\_id CHAR(20),

Date\_left Date,

Photo\_id CHAR(20),

FOREIGN KEY(Owner\_id) REFERENCES Users(User\_id)

FOREIGN KEY(Photo\_id) REFERENCES Photos(Photo\_id));

* Assumptions

Here are some assumptions in our design. We assume that we create a unique id for each user, photo, and album. Each user has a weak entity called friend list. We assume the comments can be set for users or photos, so the comments can be linked with users or photos. What’s more, we assume the length of the e-mail address is no more than 200 characters and the length of comment content is no more than 65535 characters. Comment is linked with the user and the photo, what means the user’s comment belongs the photo. We also assume that the photo is bond with the album. We assume one photo belongs to one album. Thus, each photo is a weak entity. If an album is deleted, the photo will also be deleted.