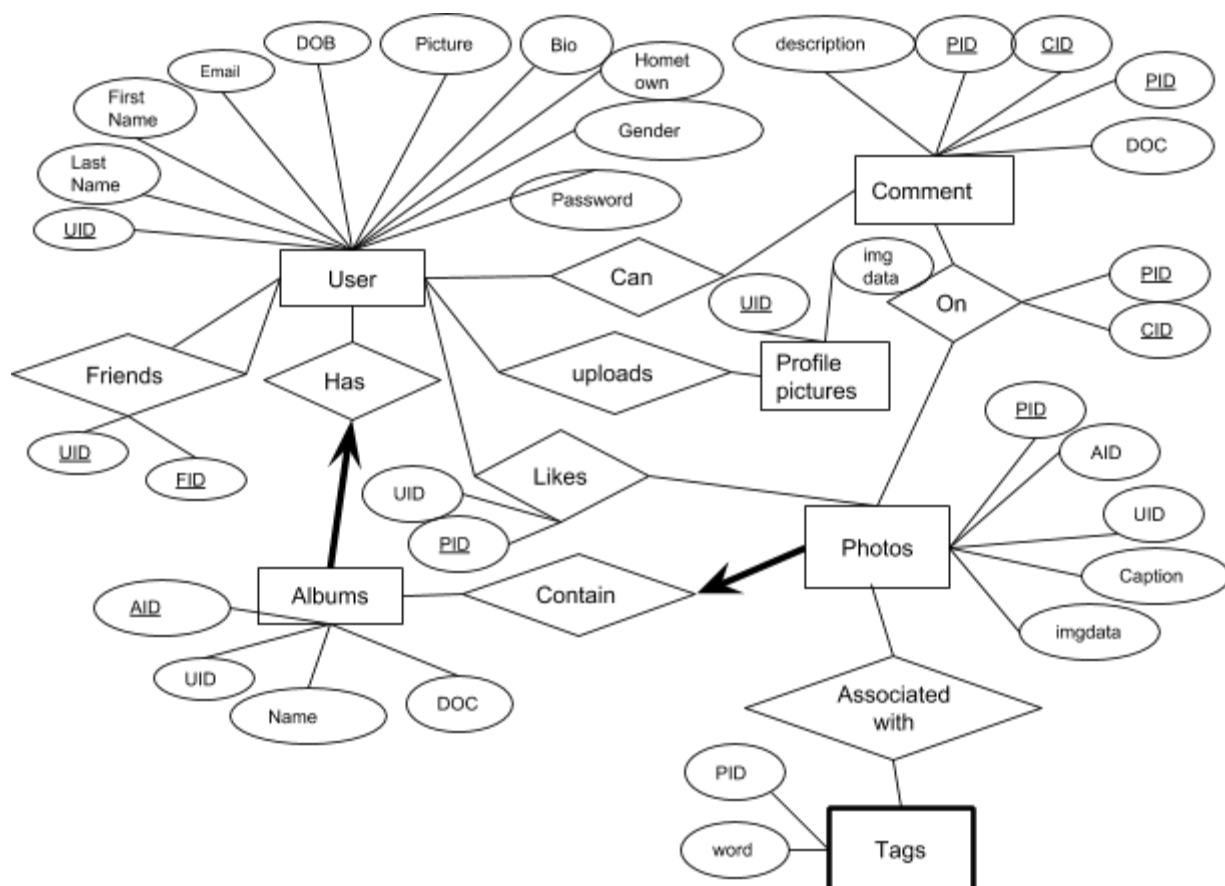


ER Diagram:



Additional Constraints/Assumptions:

- Entity of profile pictures with the pk being the uid and it being a foreign key from users
- Additional attributes in photos and comments
- Added attributes to the relationship between comments and photos

### Relational Schema:

```
CREATE DATABASE photoshare;
```

```
USE photoshare;
```

```
CREATE TABLE Users (  
    user_id int4 NOT NULL AUTO_INCREMENT,  
    fname varchar(255) NOT NULL,  
    lname varchar(255) NOT NULL,  
    email varchar(255) NOT NULL UNIQUE,  
    dob DATE NOT NULL ,  
    bio text,  
    picture longblob,  
    gender ENUM('female', 'male', ''),  
    hometown varchar(255),  
    password varchar(255) NOT NULL,  
    CONSTRAINT users_pk PRIMARY KEY (user_id)  
);
```

```
CREATE TABLE Albums  
(  
    album_id int4 AUTO_INCREMENT,  
    user_id int4,  
    album_name varchar(255) NOT NULL,  
    doc date NOT NULL,  
    caption varchar(255),  
    CONSTRAINT albums_pk PRIMARY KEY (album_id),  
    CONSTRAINT albums_fk FOREIGN KEY (user_id) REFERENCES Users(user_id)  
);
```

```
CREATE TABLE Pictures  
(  
    picture_id int4 AUTO_INCREMENT,  
    user_id int4,  
    album_id int4,  
    imgdata longblob ,  
    caption VARCHAR(255),  
    INDEX upid_idx (user_id),  
    CONSTRAINT pictures_pk PRIMARY KEY (picture_id),  
    CONSTRAINT pictures_fk FOREIGN KEY (album_id) REFERENCES Albums(album_id)  
);
```

CREATE TABLE Profile\_Pictures

```
(
    user_id int4 NOT NULL,
    imgdata longblob NOT NULL,
    CONSTRAINT profile_pk PRIMARY KEY (profile_picture_id),
    CONSTRAINT profile_fk FOREIGN KEY (user_id) REFERENCES Users(user_id)
);
```

CREATE TABLE Friends

```
(
    user_id int4,
    friend_id int4,
    CONSTRAINT friends_fk1 FOREIGN KEY (user_id) REFERENCES Users(user_id),
    CONSTRAINT friends_fk2 FOREIGN KEY (friend_id) REFERENCES Users(user_id),
    CONSTRAINT friends_pk PRIMARY KEY (user_id,friend_id)
);
```

CREATE TABLE Tags

```
(
    word varchar(255) NOT NULL,
    picture_id int NOT NULL,
    CONSTRAINT tags_fk FOREIGN KEY (picture_id) REFERENCES Pictures(picture_id)
);
```

CREATE TABLE Comment

```
(
    comment_id int4 NOT NULL AUTO_INCREMENT,
    description varchar(500),
    user_id int4,
    doc DATE,
    picture_id int4,
    CONSTRAINT comment_pk PRIMARY KEY (comment_id),
    CONSTRAINT comments_fk1 FOREIGN KEY (user_id) REFERENCES Users(user_id),
    CONSTRAINT comments_fk2 FOREIGN KEY (picture_id) REFERENCES Pictures(picture_id)
);
```

CREATE TABLE Comments\_on\_pictures

```
(
    comment_id int4,
    picture_id int4,
    CONSTRAINT comments_on_pictures_pk PRIMARY KEY (comment_id,picture_id),
    CONSTRAINT comments_on_pictures_fk1 FOREIGN KEY (comment_id) REFERENCES
Comment(comment_id),
```

```
        CONSTRAINT comments_on_pictures_fk2 FOREIGN KEY (picture_id) REFERENCES  
Pictures(picture_id)  
);
```

```
CREATE TABLE Likes
```

```
(  
    picture_id int,  
    user_id int,  
    CONSTRAINT likes_pk PRIMARY KEY (picture_id),  
    CONSTRAINT likes_fk1 FOREIGN KEY (picture_id) REFERENCES Pictures(picture_id),  
    CONSTRAINT likes_fk2 FOREIGN KEY (user_id) REFERENCES Users(user_id)  
);
```