Data Modeling Demo

Summary

We are going to plan the data model for a basic social media app.

Features

- users can sign into the app with their email and password
- users can follow each other
- users can create posts with photos and/or text
- users can comment on posts
- users can join groups
- users can create posts within groups

Brainstorming

- Users:
  - user_id
  - password
  - email
  - first name
  - last name
  - bio
- Groups:
  - group_id
  - group name
  - group members
  - posts
- Posts:
  - post_id
  - photo
  - content
  - user who posted
- Comments:
  - comment_id
  - user who commented
  - post being commented on
- Who is following who
- Posts made by certain groups

Tables

Users Table:

- user_id
- user_password
- user_email
- first_name
- last_name
- user_bio

Groups Table:

- group_id
- group_name

Posts Table:

- post_id
- post_content
- post_image
- author_id

Comments Table:

- comment_id
- comment_text
- comment_author_id
- post_id

Follow Table:

- follow_id
- follower_id
- following_id

GroupPosts Table:

- group_post_id
- group_id
- post_id

GroupUsers Table:

- group_user_id
- group_id
- user_id

Relationships

- **One to One**
- **One to Many**
  - Post => Comments
  - User => Posts
  - Group => Posts
- **Many to Many**
  - Users ⇔ Groups
  - Following ⇔ Followers

SQL Table Set-Up

```
CREATE TABLE users (
  user_id SERIAL PRIMARY KEY,
  user_password VARCHAR(500),
  user_email VARCHAR(255),
  first_name VARCHAR(50),
  last_name VARCHAR(50),
  user_bio VARCHAR(255)
);

CREATE TABLE groups (
  group_id SERIAL PRIMARY KEY,
  group_name VARCHAR(50)
);

CREATE TABLE posts (
  post_id SERIAL PRIMARY KEY,
  post_content VARCHAR(1000),
  post_image VARCHAR(2000),
  author_id INT NOT NULL REFERENCES users(user_id)
);
```

```
CREATE TABLE comments (
  comment_id SERIAL PRIMARY KEY,
  comment_text VARCHAR(250),
  comment_author_id INT NOT NULL REFERENCES
users(user_id),
  post_id INT NOT NULL REFERENCES posts(post_id)
);

CREATE TABLE follows (
  follow_id SERIAL PRIMARY KEY,
  follower_id INT NOT NULL REFERENCES users(user_id),
  following_id INT NOT NULL REFERENCES users(user_id)
);

CREATE TABLE group_posts (
  group_post_id SERIAL PRIMARY KEY,
  group_id INT NOT NULL REFERENCES groups(group_id),
  post_id INT NOT NULL REFERENCES posts(post_id)
);

CREATE TABLE group_users (
  group_user_id SERIAL PRIMARY KEY,
  group_id INT NOT NULL REFERENCES groups(group_id),
  user_id INT NOT NULL REFERENCES users(user_id)
);
```