GRUM

Team

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Introduction

Our goal is to make this web application as secure as possible in order to show and teach other companies and application owners how to better secure their products. This sample web application that we are building will be used to share, and host various files online.

Glossary of Terms

Admin - Has complete access to all files that are public
Moderator - Specific users with elevated permissions
Registered User- Any person that has created an account. Will be able to upload files.
New User- Will be forced to make an account in order to access any of the application resources.

System Architecture Overview

MVC Framework (Model, View, Controller)

- Model: The model is the data that is retrieved by the controller for populating the view.
- View: The view is the html code generated as requested.
- Controller: The controller maps web requests to web pages, which are populated with data necessary for display.

User Database (auth_user)

-Accesses Post, File, and Comment databases

- id - id of the user
- name - name of the user
- email - email address used for registration
- password - password used for login
- register_date - date account was created
- birthday - birthdate of user
- display_pic - display picture of user
- ip_address - list of whitelisted ip addresses for the account
- banned - whether or not the account is banned

Post Database (posts)

-Accesses User, File, and Comment databases

- id - id of the post
- upload_user - reference to user who made the post
- upload_file - reference to file associated with the post

- comment_list - list of references to all comments associated with the post

File Database (files)

-Accesses User and Post databases
- id - id of the file
- upload_user - reference to the user entry in user db
- file_name - name of the file
- file_tags - keywords for searching file
- upload_file - file that is uploaded
- upload_time - time of upload

Comment Database (comments)

-Accesses User and Post databases
- id - id of the comment
- commment_user - reference to the user entry in user db
- text - text
- likes - number of likes a comment has (can be used to sort)
- time - timestamp of comment (can be used to sort)
- replies - list of references to all replies (comments) associated with the comment
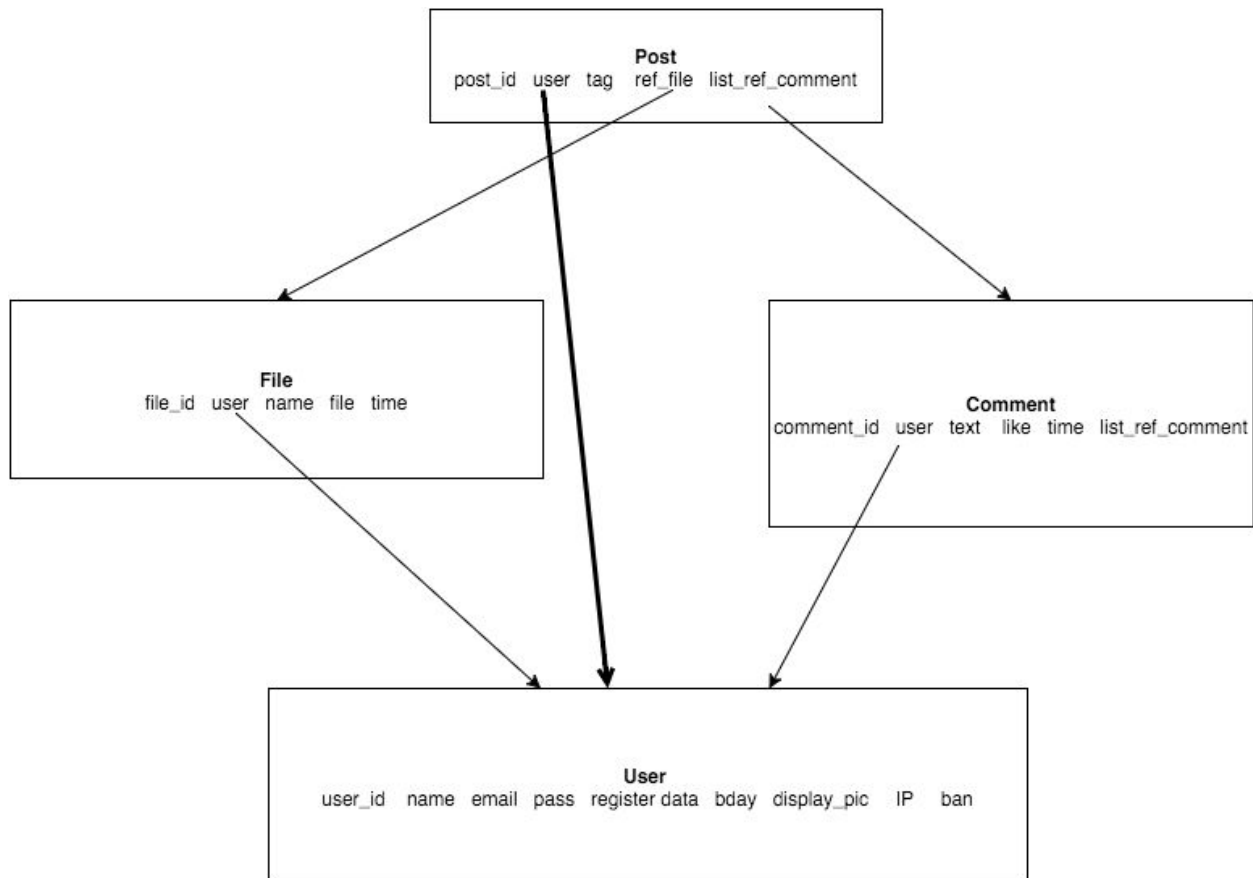
Groups and Permissions
- All users will be part of a rank group (Admin, Moderator, Member). These are mutually exclusive.
- Each user with be a part of his/her own group. Any other users added to this group will be a friend of the owner, and will have read access to posts that a user has shared privately with friends, and a user's detailed profile.

Requirements
1. As a guest, I am directed to a sign-in/log-in page.
2. As a guest, I am not allowed to post files.
3. As a new user, I must register a new account.
4. As a registered user, I can upload pictures to share.
5. As a registered user, I can upload videos to share.
6. As a registered user, I can change my password.
7. As a registered user, I can comment on other people's posts.
8. As a registered user, I can view public files.
9. As a registered user, I can view my own files.
10. As a registered user, I can view my friends' files.
11. As a registered user, I can search for files by tags.
12. As a registered user, I can add and remove friends/followers.
13. As a registered user, I can flag inappropriate content.
14. As a registered user, I can manage the visibility of my files.
15. As a registered user, I can modify my uploaded files.
16. As a registered user, I can set my display picture.
17. As a moderator, I can remove public uploaded files.
18. As an admin I can ban users.
19. As an admin I can modify and remove public uploaded files.

Access Ranks and Permissions

Public Posts	Member	Moderator	Admin
Read	Yes	Yes	Yes
Comment	Yes	Yes	Yes
Create	Yes	Yes	Yes
Delete	No	Yes	Yes
Modify	No	No	Yes

Private Posts	Owner	Friends	Others
Read	Yes	Yes	No
Comment	Yes	Yes	No
Delete	Yes	No	No
Modify	Yes	No	No

Appendices

Technologies

- Bootstrap
- Javascript
- SQLite
- web2py
- python 2
- HTML/CSS
- One-time pads
- Converse.js