

TOPIC - SOCIAL MEDIA WEB APP

Introduction

Our mini project is based on the topic Social Media Web App. This Python project aims at connecting different people around the world together to share thoughts, morals or pictures. Django Web App framework of Python is used to create this project.

Software used

- Python v3.7.2
- PyCharm Community (Updated)
- Visual Studio Code (Updated)

Packages used

- Django v2.1.5
- Django AllAuth v0.38.0
- Django Crispy Forms v1.7.2
- Django REST Framework v3.9.1
- Pillow v5.4.1

Code

1. Create a virtual Environment for the Project with PyCharm
2. Activate the virtual environment
3. Install all necessary packages via pip command.
4. Create Django Project with **django-admin startproject socialmedia** command.
5. Rename socialmedia to src and change directory in cmd to src and create hashtags, posts, user_registration using **python manage.py startapp hashtags** ; **python manage.py startapp posts** ; **python manage.py startapp user_registration** commands.
6. Add all apps in the list of INSTALLED_APPS, along with social media apps, Django crispy forms and Django REST Framework in settings.py file under socialmedia folder
7. Configure ALLOWED_HOSTS; templates directory; AllAuth settings from AllAuth Documentation; Media URL and ROOT; Static URL and ROOT; Django crispy form template and necessary settings for sending Email in settings.py file under socialmedia folder.
8. We created a superuser by **python manage.py createsuperuser** command. And ran the server with **python manage.py runserver** command.
9. Go to 127.0.0.1:8000 in the browser, it'll redirect you to the login page at [/accounts/login/](#), user should enter his username and password associated with his account, else user can login/signup with his social account. If user doesn't have an account the user can create an account by going to the sign-up page at [/accounts/signup/](#).
10. After Sign up, user is sent a mail to his entered Email address for verification of his Email. After verification of users email, user is allowed to login into the web app.
11. If user forgot his password, then user can ask for a password reset mail at Forgot password link on the login page and enter the primary Email address associated with his account to get the password reset mail.
12. After login, user can access his Settings, Profile page and Sign-Out under his profile picture at the topmost right corner. If logged in user is a super user, then Admin Panel is displayed.
13. User can update his First name, Last name in the General Tab; user can update his Location(optional) and Profile Image(optional) in the Profile Tab; User can add or remove email address or change primary email address in the Account Tab. User can change his password in the Change Password Tab (Displayed if password is set); User can set password for his account in the Set Password Tab (Displayed if password is not set and user uses other

- social accounts to login); User can connect or disconnect other social accounts with his account in the Connections Tab; User can delete his account with all his info and posts in the Delete Account Tab.
14. User can head towards the Posts link in the navbar to check his posts and the posts of the users he is following.
 15. User can type a message in the message box(not optional) of minimum 500 characters and choose an image(optional) for that post and click on the Post button. The post gets added to the top in the post feed.
 16. User can add #hashtags and @username in the post.
 17. User can click on @username in post to view that users profile.
 18. User can click on #hashtags, to view all related #hashtags from all users.
 19. User can update the post by clicking on the 3 horizontal dots at the topmost right corner of the post and click on Update, a pop-up box will appear, user and update the content(optional) or the image(optional) and click on Update button.
 20. User can delete the post by clicking on the 3 horizontal dots at the topmost right corner of the post and click on Delete, a pop-up box will appear, user has to click on the Delete button to delete the post.
 21. User can click on the time created/updated and it'll show that post on a new page.
 22. User can click on the owner of the post to view his profile page.
 23. At a time only 5 Posts are fetched, to view more posts, user has to click on the Load more posts option to fetch next five posts and so on.
 24. User can click on the like button, to like or dislike a post and the count of likes will increase or decrease accordingly.
 25. User can search for any specific post or user on the Search box available on the navbar and it'll filter within seconds without pressing enter key.
 26. User can view his profile by moving to the topmost right corner and clicking on My Profile under his profile picture.
 27. User can view all his posted content and photos on his profile page.
 28. User can view his followers usernames by clicking on Followers and follow/unfollow other users.
 29. User can remove his followers by clicking on the cross(X) symbol, in the Followers pop-up.
 30. User can view which users he is following by clicking on Following and follow/unfollow other users.
 31. Users can follow or unfollow other users, without page reload.
 32. Follow button is present for all users, except the current user logged in.
 33. If feed is empty, then No Posts currently found is displayed.

Results

This mini project has the functionalities of a user Sign-up with Email account verification, sent via mail. User can Sign-up using other Social media networks like Google, Github, BitBucket and Twitter and select a username. If user has not verified the Email, then user is not allowed to login or use the account. After user has verified the Email, the user is allowed to login into the account. User can also login from other Social Networks connected to the users account. User can ask for a password reset mail, incase if user has forgot the password.

User can go in the settings page after login and update his name, location, profile image, connect or remove emails associated with the account and verify those Email accounts with a verification mail; make an email primary for sending the password reset mail; connect or disconnect other Social media networks with the account; delete user account with all it's activities; change password or set password(if social login is used and password is not set) . Users can post text content, along with image on this web app; users can update the text content or image in the post; users can delete the post; users can view the post on a separate page. Users can view the how many minutes/hours/days/weeks/months ago the post was created or updated User can view only the post feeds of the users, whom the user follows, along with the current user post feeds. User can like and unlike a post feed. Users can follow and unfollow other users; users can view others profile and view that user followers and whom that user is following. User can search for a all types of post feed in the search bar, regardless of whom the current user is following.

Snapshots

1. Sign-Up page (user-dms24):

Welcome - Signup

DMS Posts Search...

Sign in Sign up

Sign Up

Already have an account? Then please [sign in](#).

Please sign in with one of your existing third party accounts, or a account and sign in below:

[Sign in with Bitbucket](#)
[Sign in with GitHub](#)
[Sign in with Google](#)
[Sign in with Twitter](#)

OR

First name	Last name
Dominic	Silveira

E-mail	Username
dominicsilveira289@gmail.com	dms24

Required. Enter a valid email address. Required. 150 characters or fewer. Letters, digits and @/./+/~/_ only.

Password	Confirm Password
*****	*****

Your password can't be too similar to your other personal information.
Your password must contain at least 8 characters.
Your password can't be a commonly used password.
Your password can't be entirely numeric.

Enter the same password as before, for verification.

Location	Image
Location	Browse

[Sign Up >](#)

2. Email sent for verification after Sign-Up or if user has not yet verified his Email (user-dms24):

Welcome - Verify Your E-mail Ad X +

DMS Posts Search...

Sign in Sign up

Verify Your E-mail Address

We have sent an e-mail to you for verification. Follow the link provided to finalize the signup process. Please contact us if you do not receive it within a few minutes.

3. Verification Email Sent from dms24081999@gmail.com configured in settings.py file under socialmedia folder (user-dms24).

The screenshot shows an email message in a client interface. The subject is "[127.0.0.1:8000] Please Confirm Your E-mail Address". The sender is "dms24081999 <dms24081999@gmail.com>". The recipient is "me". The message was sent at "6:53pm". The "from:" field is "dms24081999@gmail.com" and the "to:" field is "dominicsilveira289 <dominicsilveira289@gmail.com>". The body of the email contains a greeting, a confirmation message, a link for account verification, and a closing message.

[127.0.0.1:8000] Please Confirm Your E-mail Address

Inbox x star

D dms24081999 <dms24081999@gmail.com>
to: me
6:53pm
from: dms24081999@gmail.com
to: dominicsilveira289 <dominicsilveira289@gmail.com>

Hello from 127.0.0.1:8000!

You're receiving this e-mail because user dms24 has given yours as an e-mail address to connect their account.

To confirm this is correct, go to http://127.0.0.1:8000/accounts/confirm-email/MTc1hGO3f7TPdo-yPyD7eYQUjL_75qGl0xfo

Thank you from 127.0.0.1:8000!
127.0.0.1:8000

Reply Forward

4. Confirm Email address page from verification link (user-dms24):

The screenshot shows a web browser window with a URL bar containing "127.0.0.1:8000/accounts/confirm-email/MTc1hGO3f7TPdo-yPyD7eYQUjL_75qGl0xfo/". The page title is "Verify Your E-mail Address". The header includes "DMS Posts Search..." and "Sign in Sign up". The main content area displays a "Confirm E-mail Address" form with instructions to confirm the email address and a "Confirm" button.

Welcome - Verify Your E-mail Address + New Tab

127.0.0.1:8000/accounts/confirm-email/MTc1hGO3f7TPdo-yPyD7eYQUjL_75qGl0xfo/

DMS Posts Search... Sign in Sign up

Confirm E-mail Address

Please confirm that dominicsilveira289@gmail.com is an e-mail address for user dms24.

Confirm

5. Sign-In Page (user-dms24):

Welcome - Sign In

127.0.0.1:8000/accounts/login/

DMS Posts Search...

[Sign in](#) [Sign up](#)

Sign In

Please sign in with one of your existing third party accounts. Or, [sign up](#) for a 127.0.0.1:8000 account and sign in below:

[Sign in with Bitbucket](#)

[Sign in with GitHub](#)

[Sign in with Google](#)

[Sign in with Twitter](#)

OR

(% include "components/errors/error_box_type1.html" with
errors=form.non_field_errors
error_print=form.non_field_errors|striptags %)

Username: dms24 Password: *****

Remember Me

[Sign in](#) [Forgot Password?](#)

6. Forgot Password page (user-dms24):

Welcome - Password Reset

127.0.0.1:8000/accounts/password/reset/

DMS Posts Search...

[Sign in](#) [Sign up](#)

Password Reset

Forgotten your password? Enter your e-mail address below, and we'll send you an e-mail allowing you to reset it.

E-mail: dominicsilveira289@gmail.com

[Reset My Password](#)

Please contact us if you have any trouble resetting your password.

7. Password Reset mail sent (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/accounts/password/reset/done/. The page title is "Welcome - Password Reset". At the top, there are navigation icons and a search bar with placeholder text "search...". On the right, there are "Sign in" and "Sign up" buttons. The main content area has a heading "Password Reset" and a message: "We have sent you an e-mail. Please contact us if you do not receive it within a few minutes."

8. Password Reset mail received (user-dms24):

The screenshot shows an email client interface with the subject "[127.0.0.1:8000] Password Reset E-mail". The email is from "dms24081999 <dms24081999@gmail.com>" and was sent at "6:58pm". The recipient is "me". The message body starts with "Hello from 127.0.0.1:8000!". It informs the user that they are receiving this email because someone requested a password reset and provides a link to reset the password: <http://127.0.0.1:8000/accounts/password/reset/key/h-55j-148735db37a1670f3f15>. It also states that the user can ignore the email if they did not request a password reset. The message ends with "In case you forgot, your username is dms24." and "Thank you for using 127.0.0.1:8000! 127.0.0.1:8000".

9. Changing password with password reset link (user-dms24):

Welcome - Password Reset Welcome - Change Password

127.0.0.1:8000/accounts/password/reset/key/h-set-password/

DMS Posts Search...

Sign in Sign up

Change Password

New Password

New Password (again)

Change Password

10. Authenticating Google account without any Web app (user-dms):



Sign in with Google

Choose an account to continue to **Django-Auth-MySite**

Dominic Michael Silveira
dms24081999@gmail.com

Use another account

To continue, Google will share your name, email address, and profile picture with Django-Auth-MySite.

English (United States) ▾ Help Privacy Terms

11. Signing up for a Web app account after authenticating with Google account (user-dms):

Welcome - Signup X +

127.0.0.1:8000/accounts/social/signup/#

Apps Bookmarks Downloads Google Analytics fo... SEITA_18-19 - Goo... NEW: Reply to Email... Ubuntu

DMS Posts Search... Sign in Sign up

Sign Up

You are about to use your Google account to login to 127.0.0.1:8000.
As a final step, please complete the following form:

E-mail

Username

Sign Up >

12. Set Password, if user uses other social media to sign-in into the Web app (user-dms):

dms - Set Password X +

127.0.0.1:8000/accounts/password/set/

Apps Bookmarks Downloads Google Analytics fo... SEITA_18-19 - Goo... NEW: Reply to Email... Ubuntu

DMS Posts Search... Profile

Settings

General
Profile
Account
Set Password
Connections
Delete Account

Set Password

Password

Password (again)

Set Password

13. Admin Panel access displayed to super-users only (user-admin):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/post/. The title bar says "DMS Posts". A search bar is present. On the right, a user menu for "admin" is open, showing options: My Profile, Create Post, Settings, Admin Panel (which is highlighted), and Sign out.

Post 1:
admin
 19 hours, 2 minutes ago
 Hello
 0 likes

Post 2:
admin
 19 hours, 21 minutes ago
 #Hello @dms24
 1 like

14. Post Feed page (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/post/. The title bar says "dms24 - Posts List". A search bar is present. On the right, a user menu for "dms24" is open, showing options: My Profile, Create Post, Settings, and Sign out.

No Posts currently found!

15. User profile page (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/profile/dms24/. The page has a dark header bar with tabs for 'dms24 - Profile' and '127.0.0.1:8000/profile/dms24/'. Below the header is a navigation bar with 'DMS' and 'Posts' buttons, and a search bar containing 'search...'. The main content area features a circular profile picture of a person with the name 'dms24' overlaid. Below the profile picture are two buttons: 'Following: 0' and 'Followers: 0'. A section titled 'Posts' displays the message 'No Posts currently found!'. The background of the page is light gray.

16. General Tab Page (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/settings/dms24/update/. The page has a dark header bar with tabs for 'dms24 - Update Profile' and '127.0.0.1:8000/settings/dms24/update/'. Below the header is a navigation bar with 'DMS' and 'Posts' buttons, and a search bar containing 'search...'. The main content area is titled 'Settings'. On the left, there is a vertical sidebar with a 'General' tab selected, and other tabs for 'Profile', 'Account', 'Change Password', 'Connections', and 'Delete Account'. The right side of the page contains form fields for 'First name' (value: 'Dominic') and 'Last name' (value: 'Silveira'), with a blue 'Update User' button below them. The background of the page is white.

17. Profile Tab Page (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/settings/id/17/update/. The page title is "dms24 - Update Profile". The main content area is titled "Settings" and contains a sidebar menu with options: General, Profile (which is selected and highlighted in blue), Account, Change Password, Connections, and Delete Account. On the right, there is a "Location" field set to "Mumbai", a circular profile picture placeholder with a helicopter icon, a "Browse" button, and a "Update Profile" button.

18. Account Tab Page (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/accounts/email/. The page title is "dms24 - Account". The main content area is titled "Settings" and contains a sidebar menu with options: General, Profile, Account (which is selected and highlighted in blue), Change Password, Connections, and Delete Account. On the right, there is a section titled "E-mail Addresses" showing one email address: dominicsilveira289@gmail.com (Verified Primary). There are buttons for "Make Primary", "Re-send Verification", and "Remove". Below this is a "Add E-mail Address" form with an "E-mail" field containing "dms24081999@gmail.com" and a "Add E-mail" button.

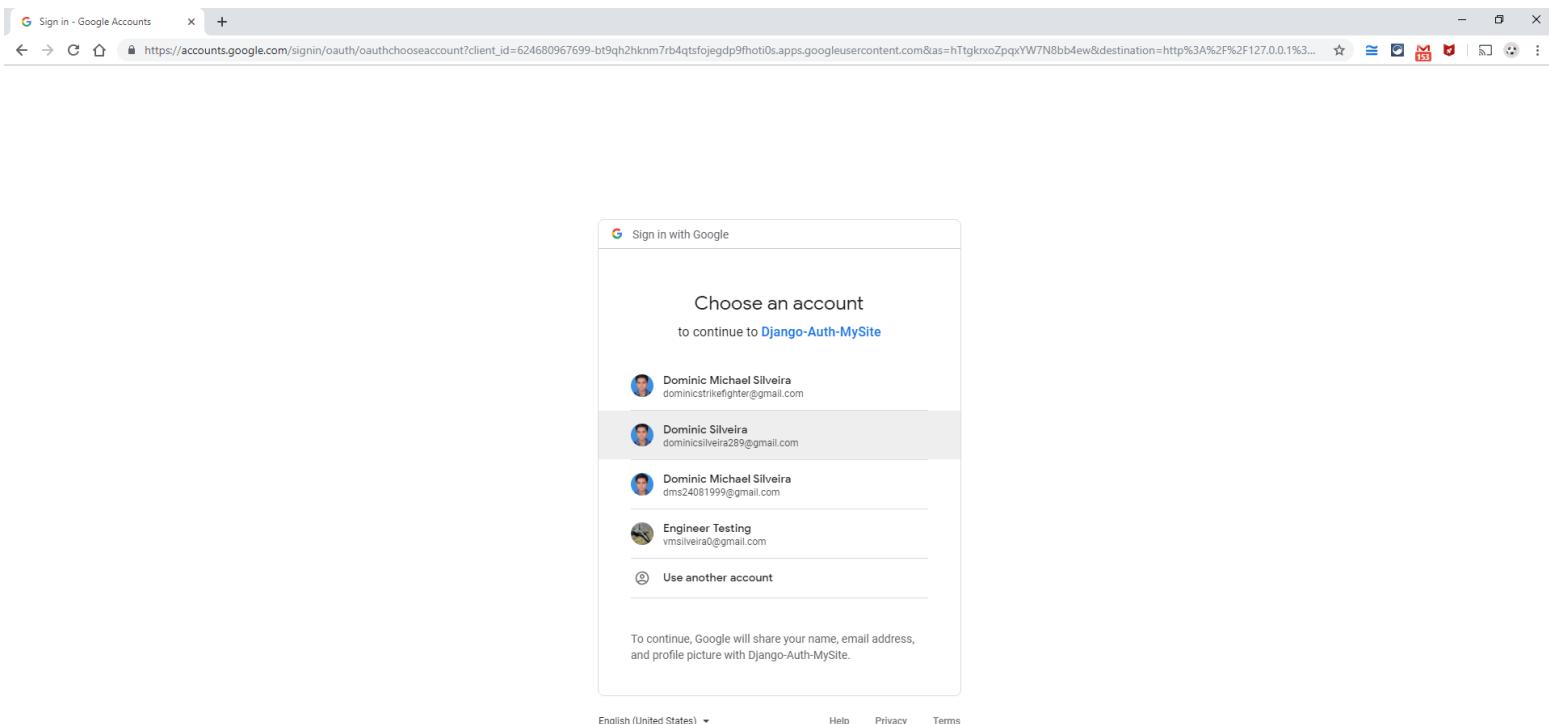
19. Change Password Tab Page (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/accounts/password/change/. The title bar says "dms24 - Change Password". The page is titled "Settings" and features a sidebar with tabs: General, Profile, Account, Change Password (which is highlighted in blue), Connections, and Delete Account. The main content area is titled "Change Password" and contains three input fields: "Current Password" (containing "*****"), "New Password" (containing "*****"), and "New Password (again)" (containing "*****"). Below these fields is a blue "Change Password" button.

20. Connections Tab Page (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/accounts/social/connections/. The title bar says "dms24 - Account Connections". The page is titled "Settings" and features a sidebar with tabs: General, Profile, Account, Change Password, Connections (which is highlighted in blue), and Delete Account. The main content area is titled "Account Connections" and contains the text "You currently have no social network accounts connected to this account." Below this, there is a section titled "Add a 3rd Party Account" with four buttons: "Sign in with Bitbucket" (blue), "Sign in with GitHub" (black), "Sign in with Google" (red), and "Sign in with Twitter" (light blue).

21. Adding and authenticating Google Account with an already existing Web app account (user-dms24):



22. Connection added to an already existing Google Account (user-dms24):

The screenshot shows the 'Account Connections' page in the Django Admin. The left sidebar has a 'Connections' tab selected. The main area displays the 'Account Connections' section with the heading 'You can sign in to your account using any of the following third party accounts:' followed by a list of connected accounts:

- Google: Dominic Silveira (highlighted in red)

Below this is a 'Remove' button. Further down, there is a section titled 'Add a 3rd Party Account' with the following options:

- Sign in with Bitbucket
- Sign in with GitHub
- Sign in with Google (highlighted in red)
- Sign in with Twitter

23. Delete Account Tab Page (user-dms24):

The screenshot shows a browser window with the URL 127.0.0.1:8000/settings/dms24/delete/. The page title is "dms24 - Update Profile". The main content is titled "Settings" and contains a sidebar with links: General, Profile, Account, Change Password, Connections, and Delete Account (which is highlighted with a blue background). A central modal dialog box is displayed with the heading "Delete Account?" and a blue "Confirm Delete" button.

24. Creating a Post with #hashtags and @username and minimum 500 characters in content of Post (user-dms24):

The screenshot shows a browser window with the URL 127.0.0.1:8000/post/. The page title is "dms24 - Posts List". The main content area shows a post creation form. The text input field contains "@admin #Hello world". Below the text area is a large image of a snowy landscape with helicopters. The image has a caption "4OixDgE.jpg" and buttons for "Browse" and "X". At the bottom of the form is a blue "Post" button. Below the form, a recent post by user "dms24" is visible, which was posted "0 minutes ago" with the content "#hello @dms". The post has 0 likes.

25. Page with all #hello (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/tags>Hello/. The page title is "#Hello". There are two visible posts:

- admin** posted 16 minutes ago: "#Hello @dms and @dms24". It has 1 like.
- dms24** posted 18 minutes ago: "@admin #Hello world". It includes a large image of a snowy landscape with military helicopters and a building on a hill. It has 1 like.

26. Liking post and viewing post on separate page by clicking on the time the post was created/updated (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/post/92/. The page title is "Posts". The same post from user **dms24** is displayed, showing it has been liked twice. The image is identical to the one in the previous screenshot.

27. User profile with users post (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/profile/dms24/. The page title is "dms24 - Profile". The user has 1 follower and 2 posts. One post is visible, featuring a photo of a helicopter flying over a snowy, rocky terrain with a castle-like structure in the background. The post was made 8 minutes ago and includes hashtags #hello @admin #world. It has 2 likes.

28. Following pop-up (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/profile/dms24/. A "Following" modal dialog is open, showing the user "dms" is being followed. The user profile for "dms24" is visible in the background, showing one post. The post features a photo of a helicopter in a snowy landscape, made 29 minutes ago with hashtags @admin #Hello world, and 2 likes.

29. Followers pop-up (user-dms24):

The screenshot shows a web browser window with the URL 127.0.0.1:8000/profile/dms24/. A modal window titled "Followers" is displayed, listing two users: "admin" and "dms". The "admin" entry has a "Follow" button, while the "dms" entry has a "Following" button. Below the modal, a post from user "dms24" is shown, which was posted 29 minutes ago and includes the hashtags "#admin" and "#Hello world". The post features a black and white photograph of a helicopter flying over a snowy, desolate landscape.

30. After removing a follower dms, by clicking on cross(X) button and following admin (user-dms24):

This screenshot shows the same web browser window after changes have been made. The "Followers" modal now displays "admin" as "Following" and "dms" as "Followed". Below the modal, the same post from user "dms24" is visible, showing the same content and photograph as in the previous screenshot.

31. Search for the word admin in posts and users (user-dms24):

Screenshot of a web browser showing the search results for 'admin'. The search bar at the top contains 'admin'. Below it, there are two search results:

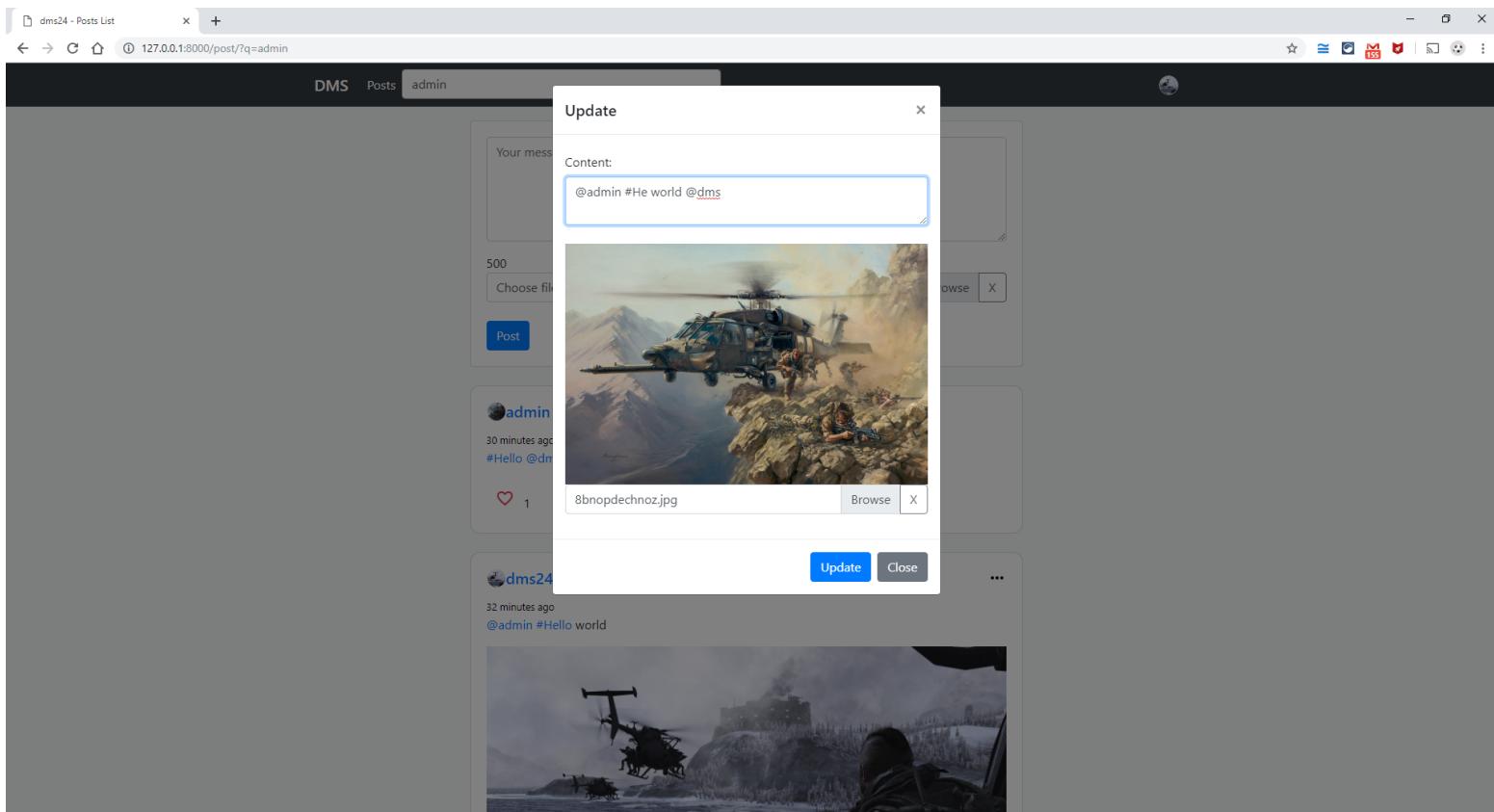
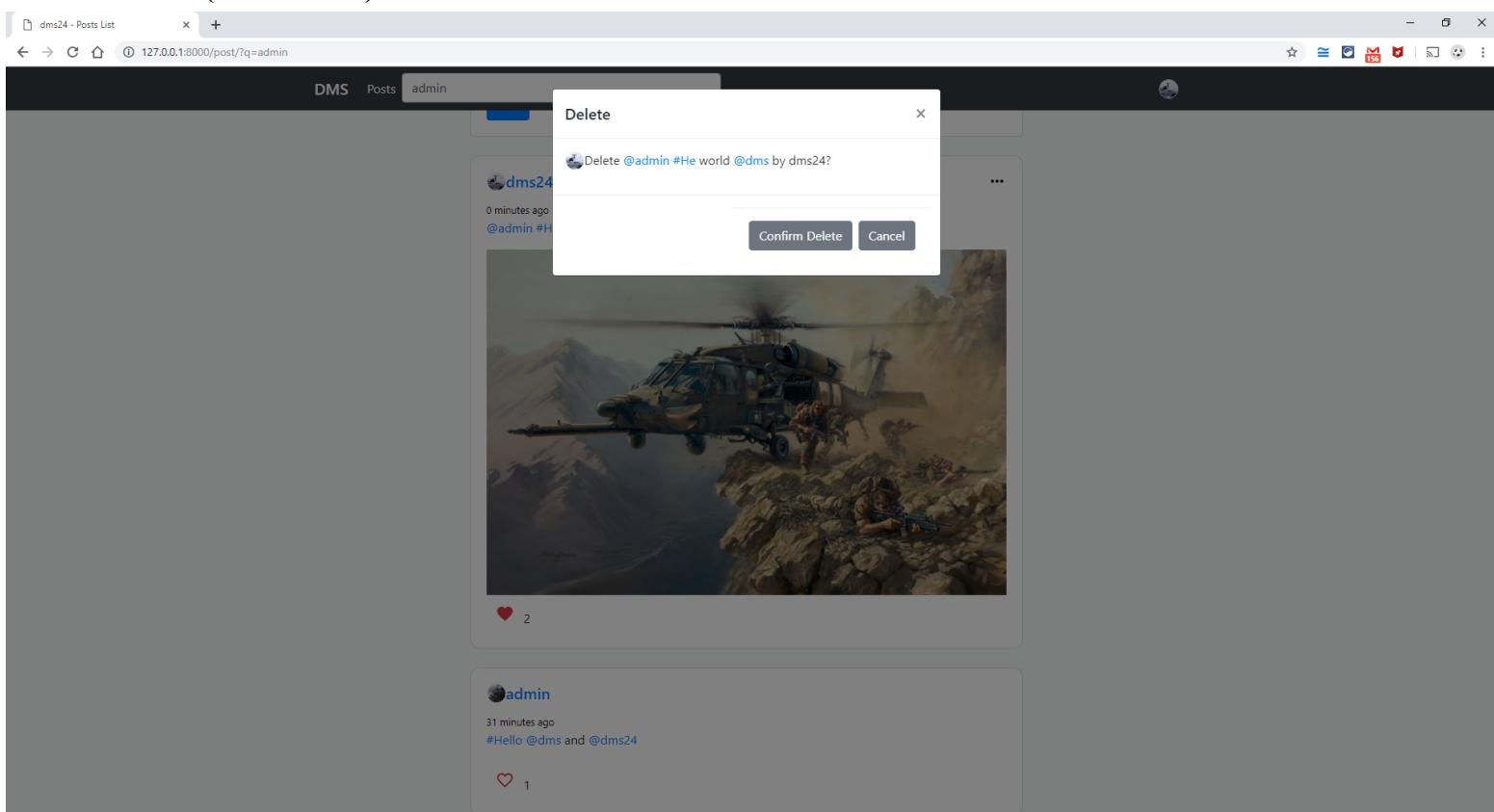
- admin** (30 minutes ago) posted '#Hello @dms and @dms24'. It has 1 like.
- dms24** (32 minutes ago) posted '@admin #Hello world' with a photo of a snowy landscape and military helicopters. It has 2 likes.

32. Post with options to update and delete (user-dms24):

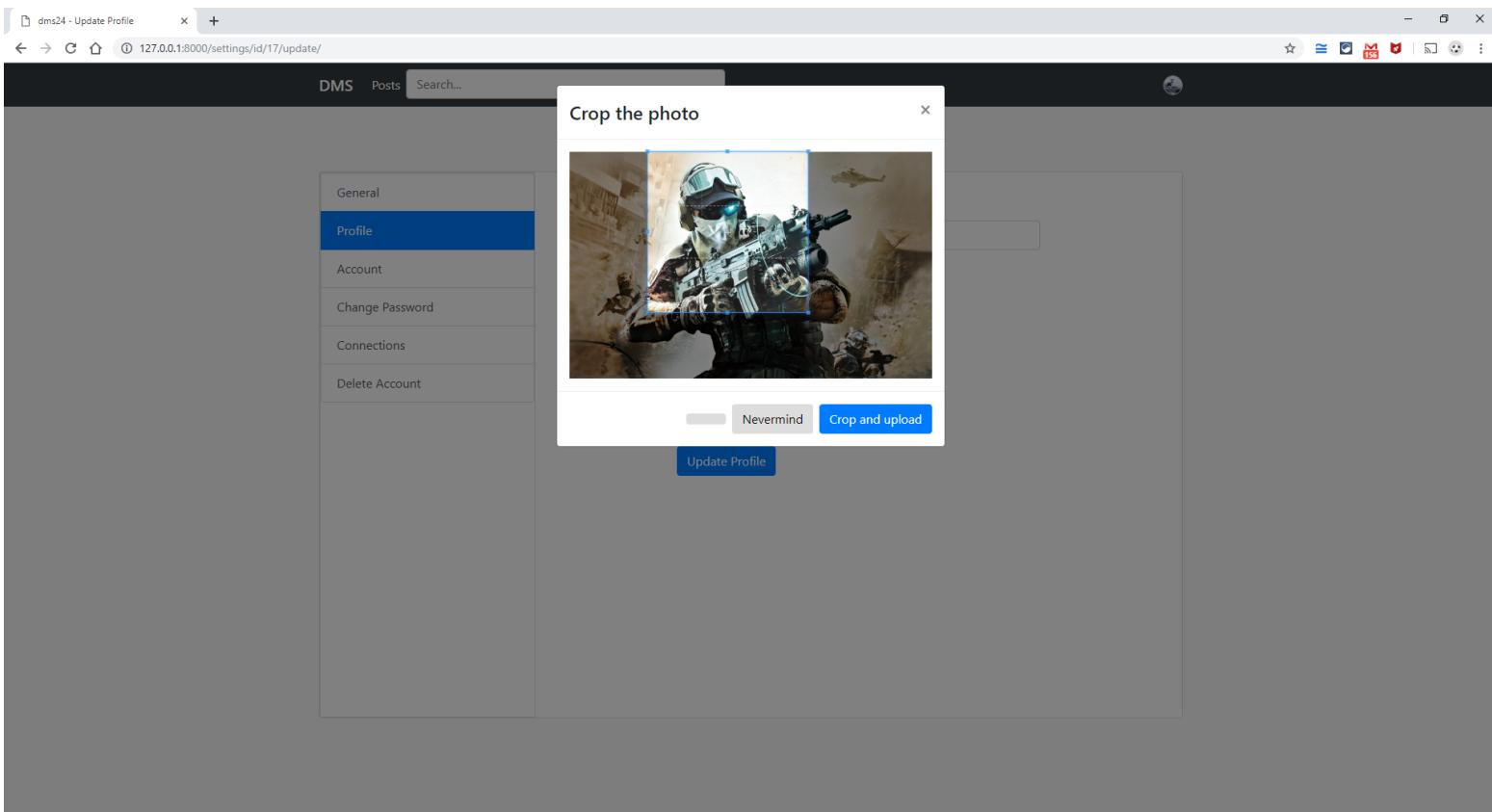
Screenshot of a web browser showing a post by user 'admin' with update and delete options. The post content is identical to the one in question 31.

The post by **admin** (30 minutes ago) posted '#Hello @dms and @dms24' has 1 like.

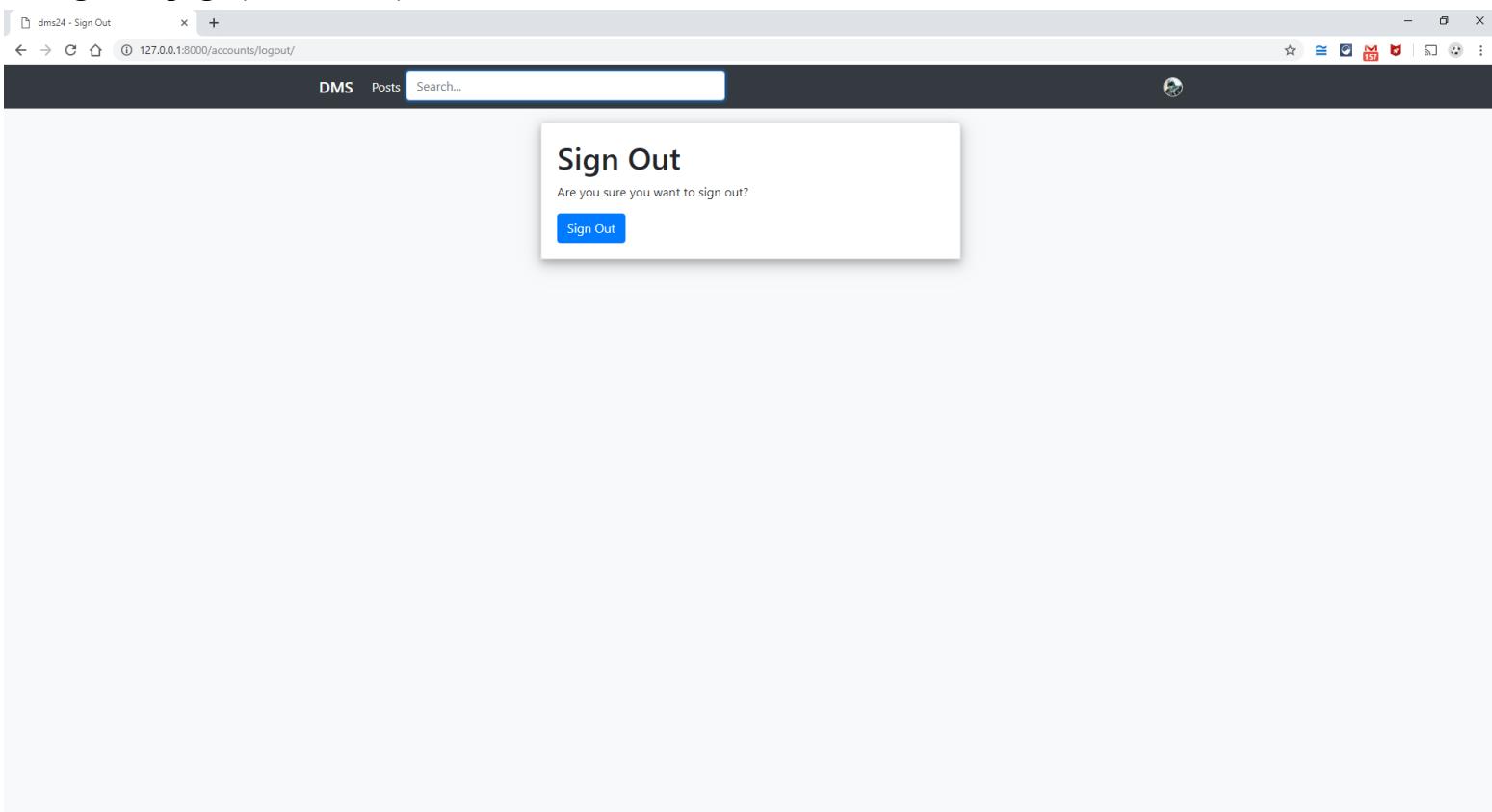
The post by **dms24** (32 minutes ago) posted '@admin #Hello world' with a photo of a snowy landscape and military helicopters. A context menu is open over this post, showing 'Update' and 'Delete' options.

33. Update Post (user-dms24):**34. Delete Post (user-dms24):**

35. Crop and update/upload Profile Image (user-dms24):



36. Sign-out page (user-dms24):



Conclusion

This mini project can help to connect users from all around the globe to share their thoughts and pictures. In this project we implemented the concepts of functions, classes in Python; models, forms, generic views, admin, urls, mixins in Django; serializers, pagination, API view in Django REST API; HTML, CSS, Javascript as frontend and AJAX using Javascript to communicate with the API in backend of the web app.

Future Scope

This mini project can be deployed and hosted from Heroku server, to help connect users from all around the globe to share their thoughts and pictures. Users can meet new people and learn the way of communicating with others. Users can share their knowledge and skills on this web app.

References

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Max Goodridge <https://www.youtube.com/channel/UCAx4nmhI7S1RcPiaG-Uw0tg>

JustDjango <https://www.youtube.com/channel/UCRM1gWNTDx0SHIqUJygD-kQ>

The Dumbfounds <https://www.youtube.com/channel/UC33uwXXDrI5TxG4IXnjS28g>

[https://simpleisbetterthancomplex.com/](http://simpleisbetterthancomplex.com/)

[https://stackoverflow.com/](http://stackoverflow.com/)