VIDEO CHAT APP - DevOps

What is our GOAL for this CLASS?

In this class we learnt about DevOps and how using DevOps we can host our video chat application on a remote device.

What did we ACHIEVE in the class TODAY?

- DevOPS
- Deploy web app on Herouku

Which CONCEPTS/ CODING BLOCKS did we cover today?

- Understanding about DevOps Engineering
- Creating a master github repository
- Introduction to Heroku!
- Deploying your first Web Application!

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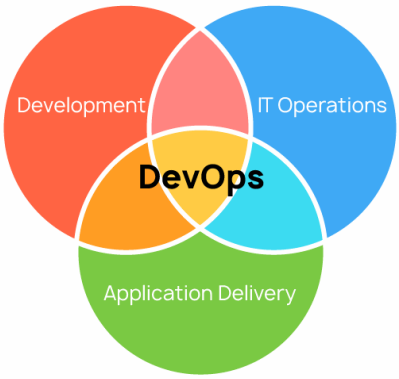


How did we DO the activities?

In the last class,we successfully implemented PeerJS, where we linked the functionality of our Rooms with Sockets, and also added users to a chatroom when the peers open the same page on the browser.TToday, we are going to host our video chat application on a remote device, or a remote server.

Activity:

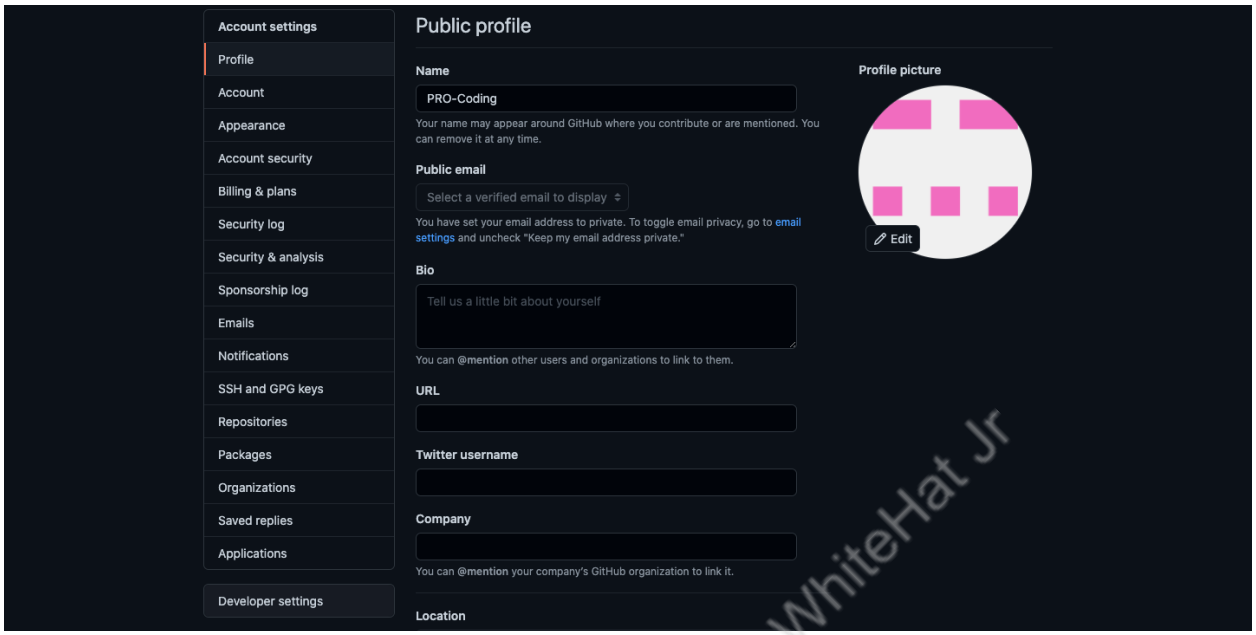
1. The code that we completed in C-217, Let's clone it and then unzip the files from it!

1. Now let's create a new github repository. Push the code into the repository.

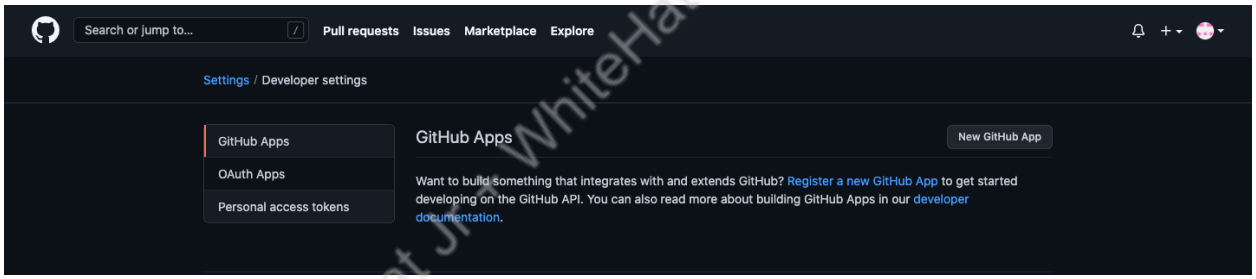
2. To create a personal token, we will first need to go to the settings.

3. In settings:

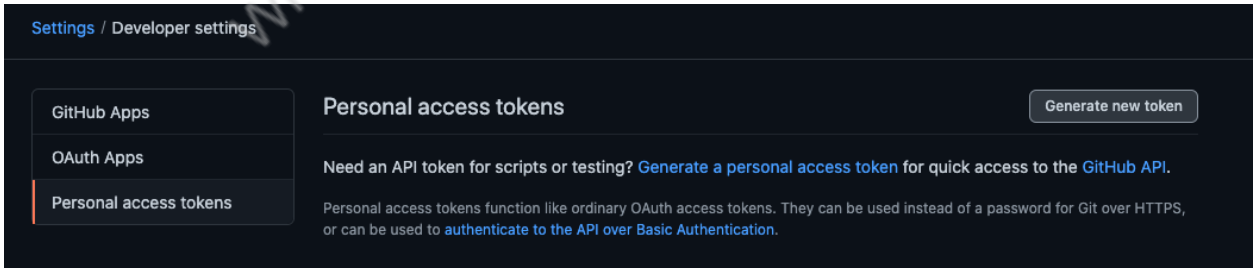
    - Go to Developer Setting.



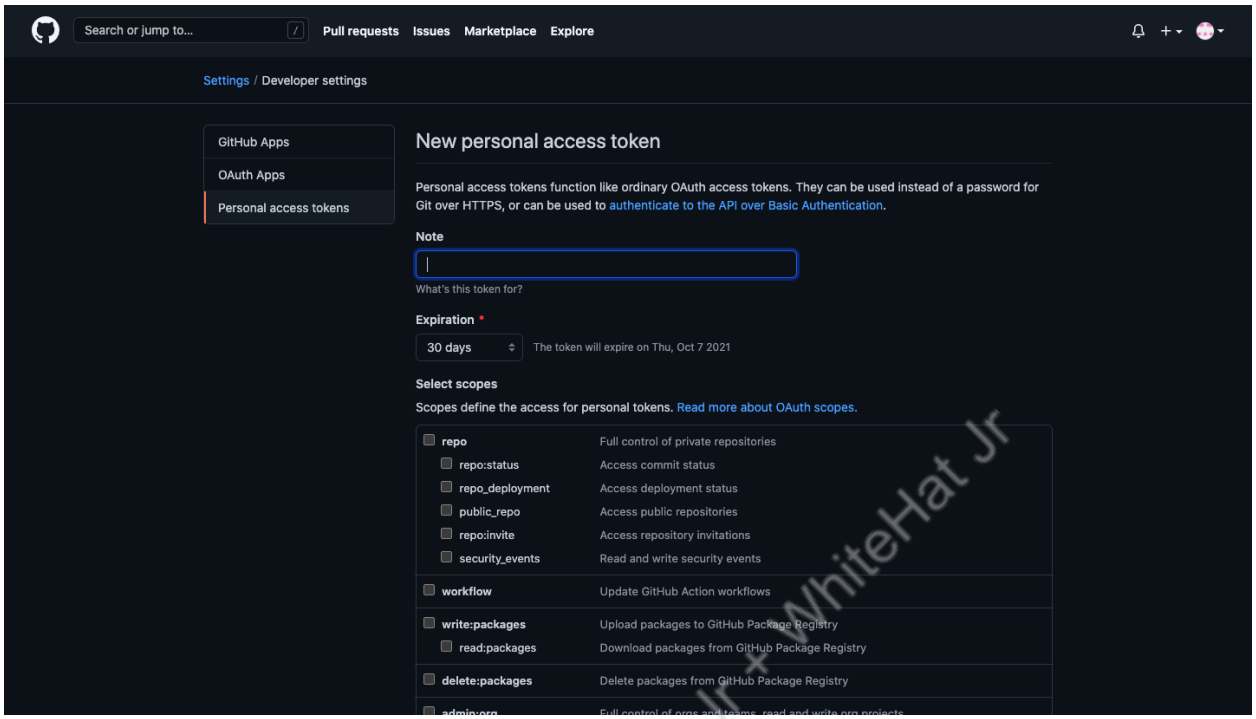
- Here, select the 3rd option, which is for ***Personal Access Token***.



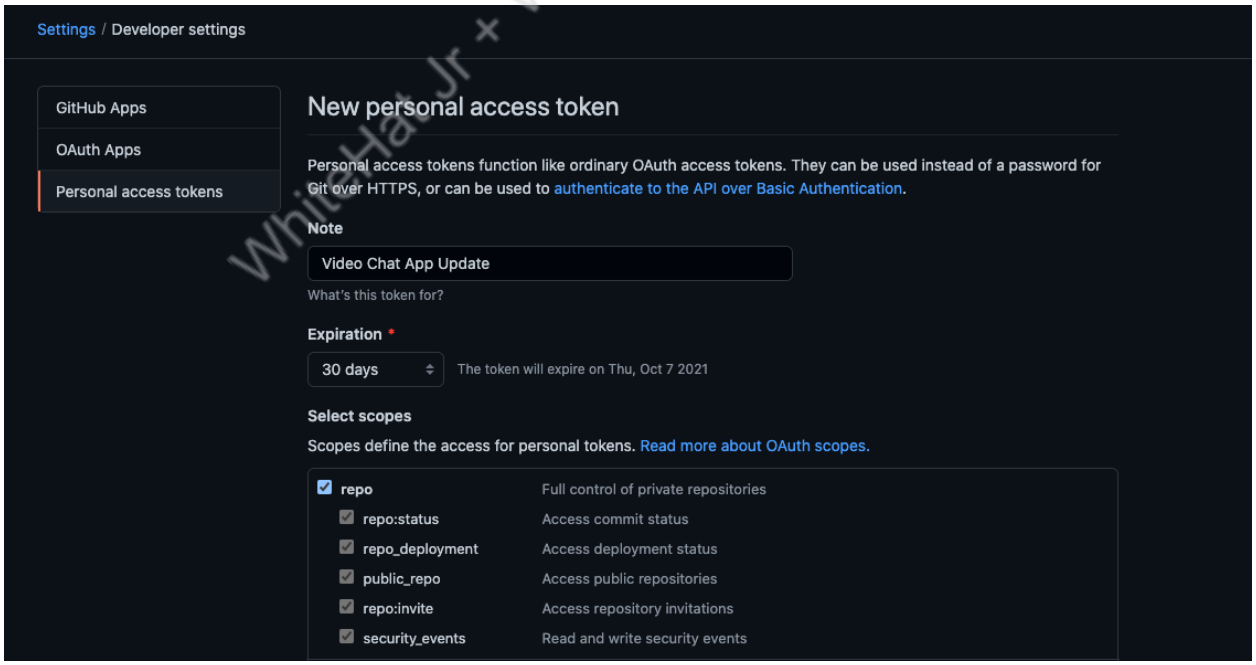
- Next, click on Generate Access Token.



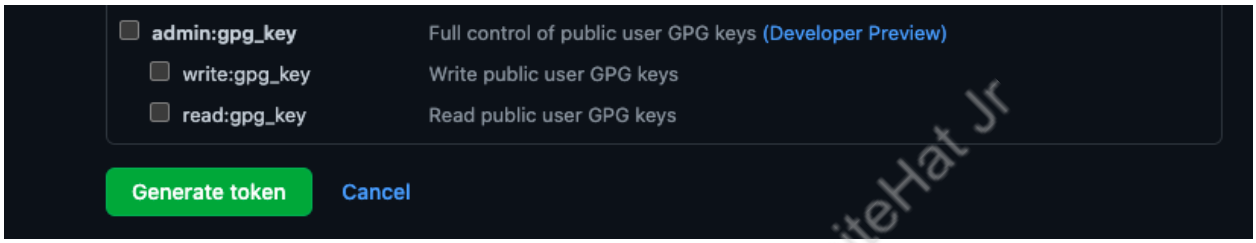
- You will see the following screen -



- Type anything in the **Note** section as per you like. It could be to update the video chat app! Also, select the ***repo*** and ***admin:repo_hook*** from the checkbox options.



- Finally, click on the ***generate token*** button and the token is generated!Copy the token that you see here! It will only be displayed once so be careful with it or the entire list of steps above would need to be repeated again.

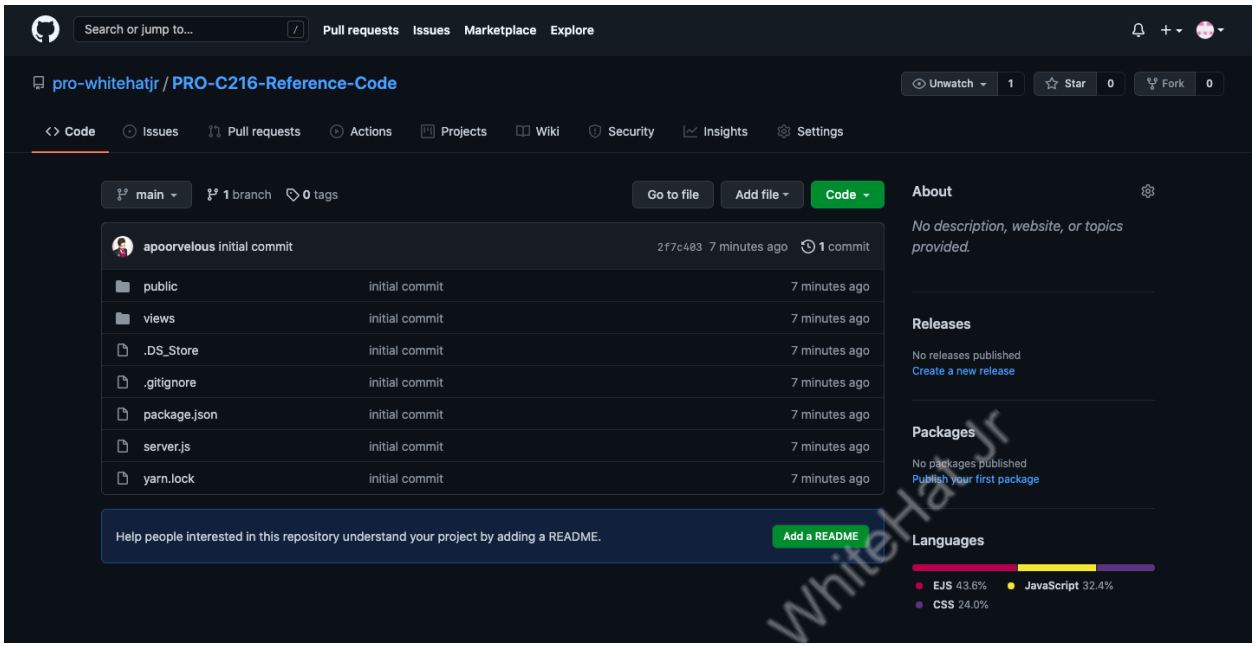


4. Next, open a ***cmd/terminal*** window and navigate to the project that you just unzipped.

```
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/pro-whitehatjr/PRO-C216-Reference-Code.git
git push -u origin main
```

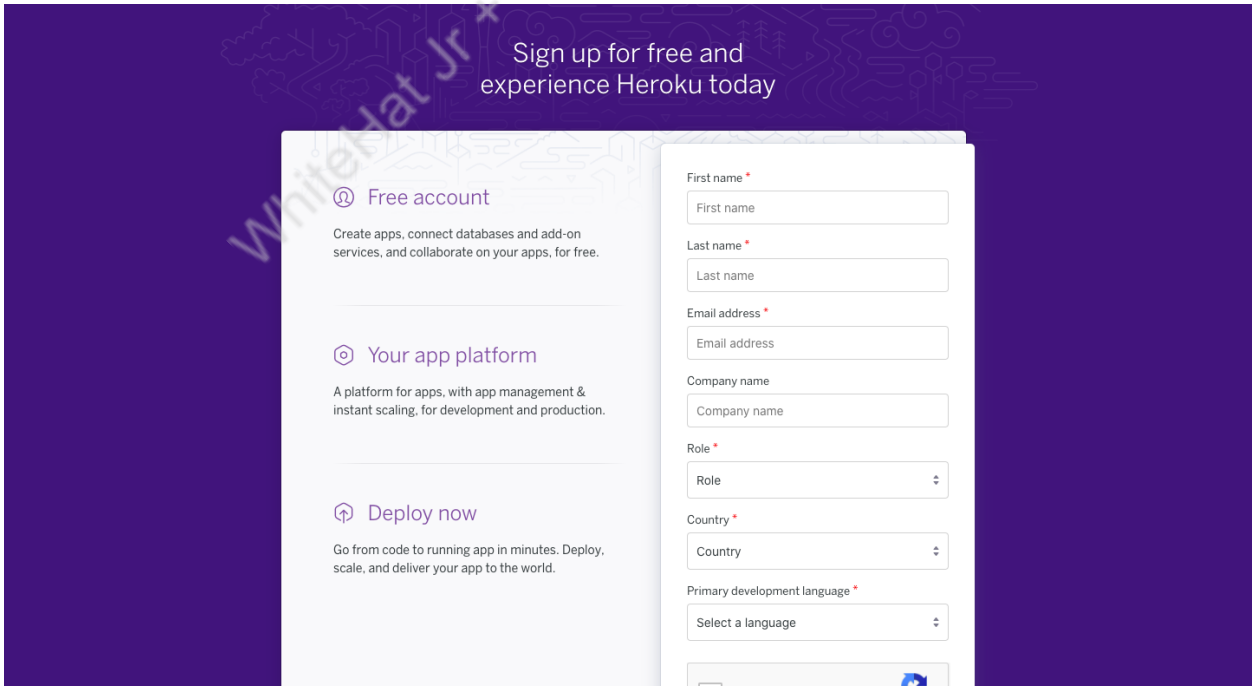
- On running the last command, which is ***git push -u origin main***, you ***may*** encounter an error!
  Run the following commands -
  git config --global user.name "Your Username"
  git config --global user.password "Personal Access Token"

5. Once this is done, run the ***git push -u origin main*** command again, and you will see the code pushed into your repository!

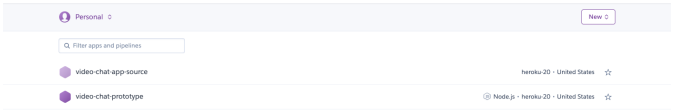


We can now use it to deploy our code into our remote device (or our remote server!)

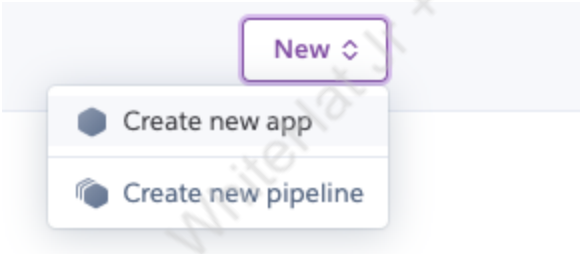
6. There is a platform known as ***Heroku***. It is a platform that offers remote devices to host/deploy applications, and these remote devices are known as **dyno**. Signin to Heroku.



7. Now, after logging into Heroku, you would see-



8. Click on the **New** button on the top right, and click on ***create a new app***.



9. Enter a name for your app and click on the **Create App** button!

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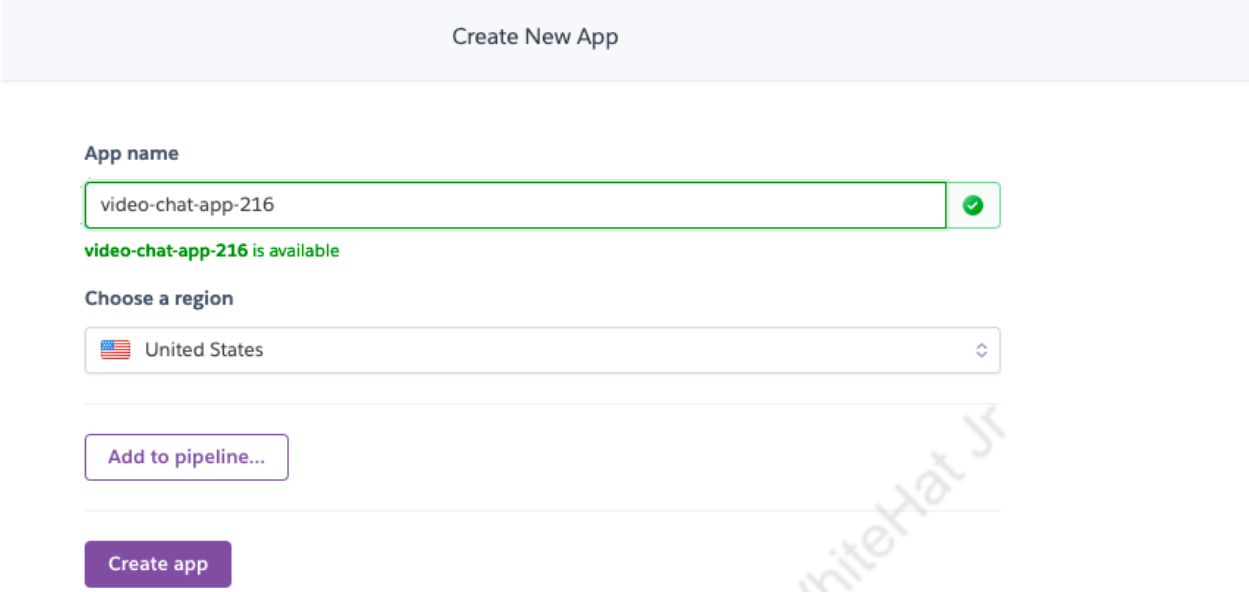
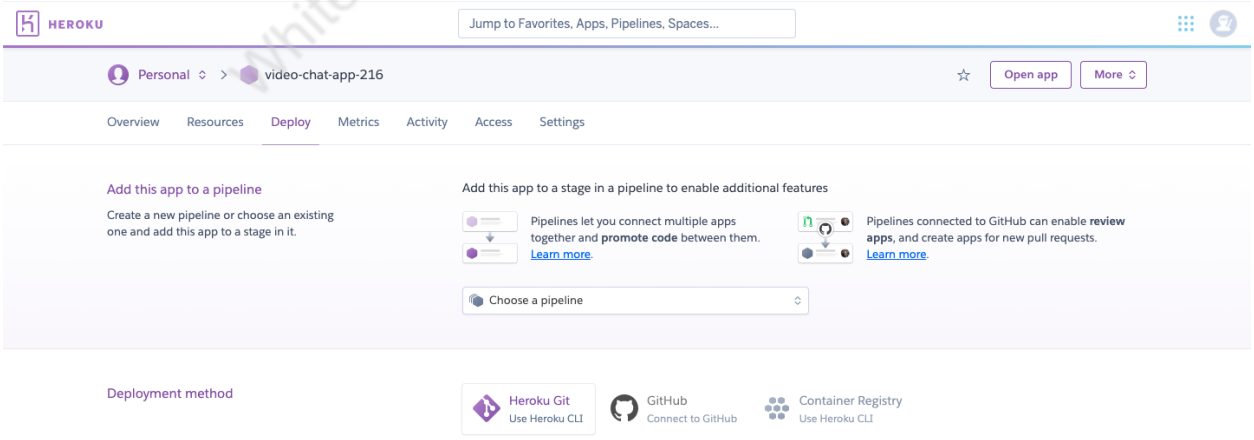
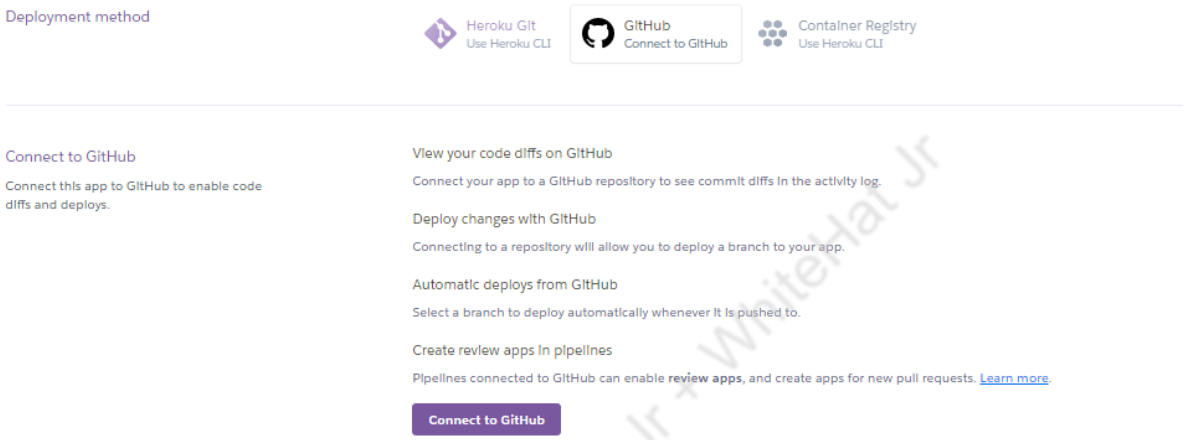


10. Once done, we will be prompted to the following screen -



11. Select **Github** from **Deployment methods**



12. Connect with Github and Authorize it -

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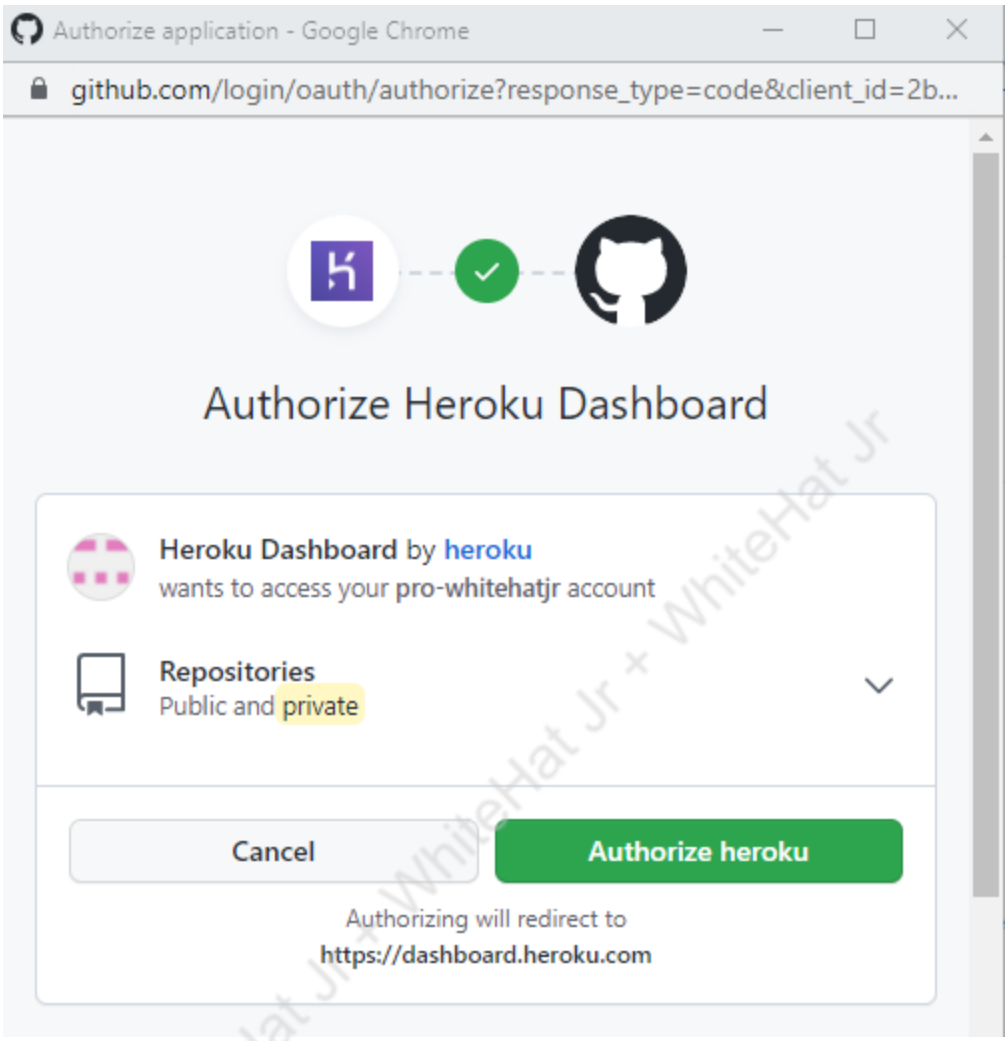
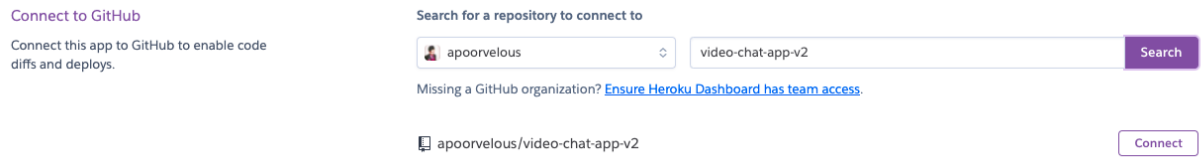
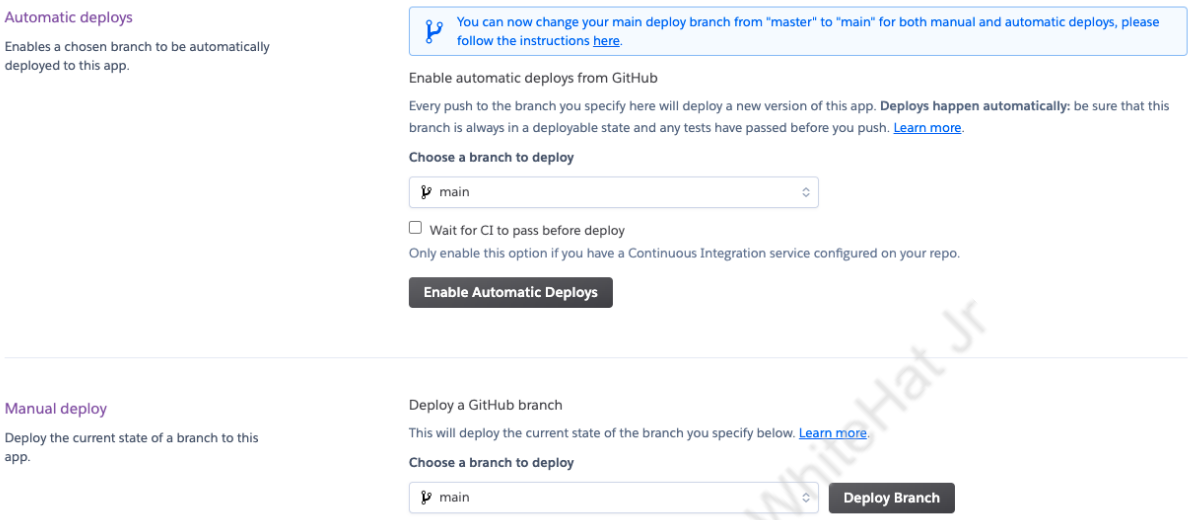


13. Search the repository name in which you pushed your code -

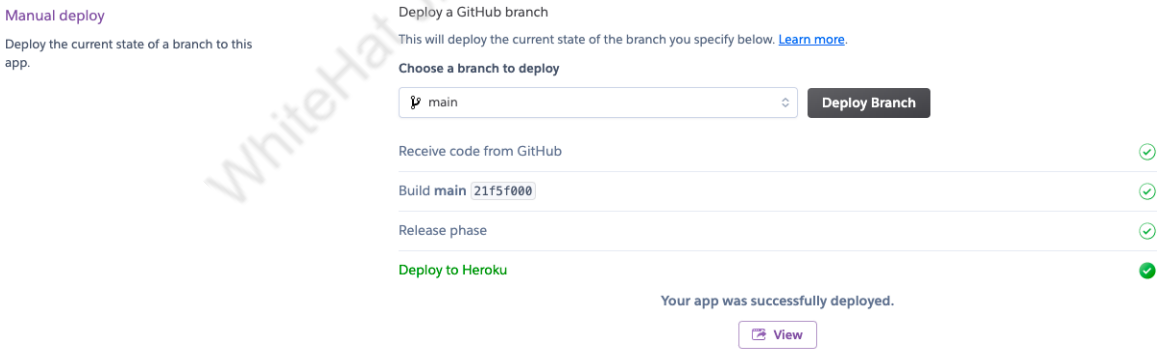


14. Connect the repository with Heroku



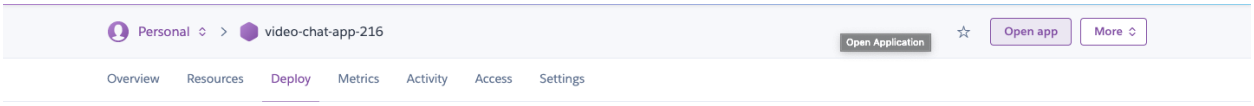
Awesome! Now, Heroku is linked to our Github Repository!

15. Click on **Deploy Branch** to deploy your code on Heroku.

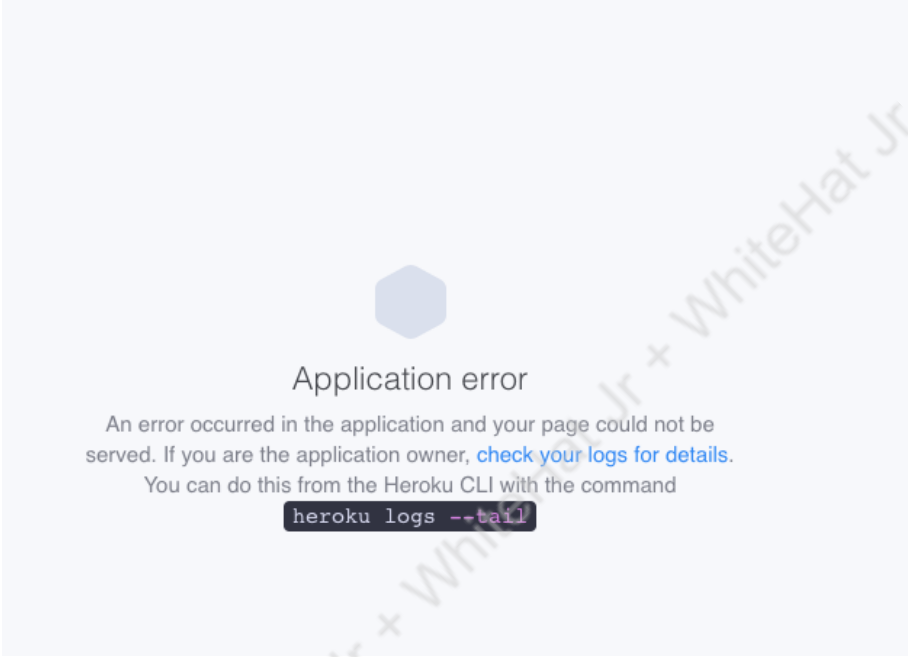


16. You'll notice it has already installed ***NodeJS*** and run ***yarn install*** on the remote device for you.

17. With this, our App is deployed. There is a button on the web page that says:



18. Let's click on ***Open App*** to see our App Deployed!



It shows an Application Error! It also gives us a command ***heroku logs --tail*** to investigate what the error was! Let's try and run that in ***cmd/terminal*** -

```
2021-09-07T12:08:36.514312+00:00 app[web.1]: > video-chat-app@1.0.0 start /app
2021-09-07T12:08:36.514312+00:00 app[web.1]: > node server.js
2021-09-07T12:08:36.514312+00:00 app[web.1]:
2021-09-07T12:09:33.558035+00:00 heroku[web.1]: Error R10 (Boot timeout) -> Web process failed to bind
 to $PORT within 60 seconds of launch
2021-09-07T12:09:33.606748+00:00 heroku[web.1]: Stopping process with SIGKILL
2021-09-07T12:09:33.688757+00:00 heroku[web.1]: Process exited with status 137
2021-09-07T12:09:34.042752+00:00 heroku[web.1]: State changed from starting to crashed
2021-09-07T12:09:34.071754+00:00 heroku[web.1]: State changed from crashed to starting
2021-09-07T12:09:36.097478+00:00 heroku[web.1]: Starting process with command `npm start`
2021-09-07T12:09:38.106544+00:00 app[web.1]:
2021-09-07T12:09:38.106556+00:00 app[web.1]: > video-chat-app@1.0.0 start /app
2021-09-07T12:09:38.106557+00:00 app[web.1]: > node server.js
2021-09-07T12:09:38.106557+00:00 app[web.1]:
2021-09-07T12:10:36.325565+00:00 heroku[web.1]: Error R10 (Boot timeout) -> Web process failed to bind
 to $PORT within 60 seconds of launch
2021-09-07T12:10:36.490875+00:00 heroku[web.1]: Stopping process with SIGKILL
2021-09-07T12:10:36.600111+00:00 heroku[web.1]: Process exited with status 137
2021-09-07T12:10:36.654706+00:00 heroku[web.1]: State changed from starting to crashed
2021-09-07T12:13:25.813781+00:00 heroku[router]: at=error code=H10 desc="App crashed" method=GET path=
"/" host=video-chat-app-216.herokuapp.com request_id=8f3e6bd2-b2c9-4f13-b852-770b2fa3f710 fwd="205.254
.164.98" dyno= connect= service= status=503 bytes= protocol=https
2021-09-07T12:13:26.400591+00:00 heroku[router]: at=error code=H10 desc="App crashed" method=GET path=
"/favicon.ico" host=video-chat-app-216.herokuapp.com request_id=1c6b54b9-ddc9-4c2b-82a1-1e968449d631 f
wd="205.254.164.98" dyno= connect= service= status=503 bytes= protocol=https
```

19. Here, one of the logs tells us that it was not able to bind with the port within 60 seconds! The reason behind this is that we run the app locally on port 3030, but Heroku uses a different port! To tackle this, let's make a small change into our ***server.js*** file -

```
server.listen(process.env.PORT || 3030);
```

20. Now, let's push this small change again with the following commands and deploy it on Heroku again-

    git add -A
    git commit -m "small change"
    git push

    And then -

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Manual deploy

Deploy the current state of a branch to this app.

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. Learn more.

Choose a branch to deploy

main | Deploy Branch

Receive code from GitHub

Build **main** `21f5f000`

Release phase

Deploy to Heroku

Your app was successfully deployed.

View

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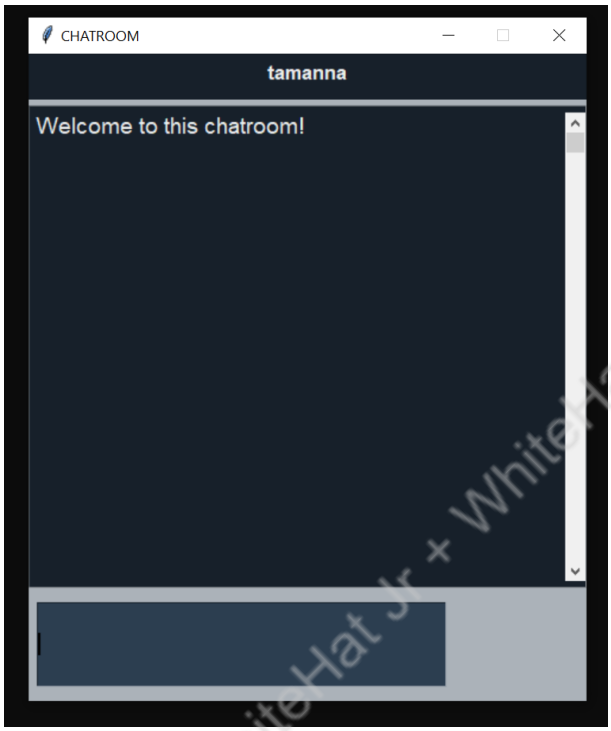
21. The chat window opens up and looks like -



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What's NEXT?

In the next class, we will complete the chat interface of this app and have a fully functional GUI based chat applications

Expand Your Knowledge:

Explore more about DevOps library here