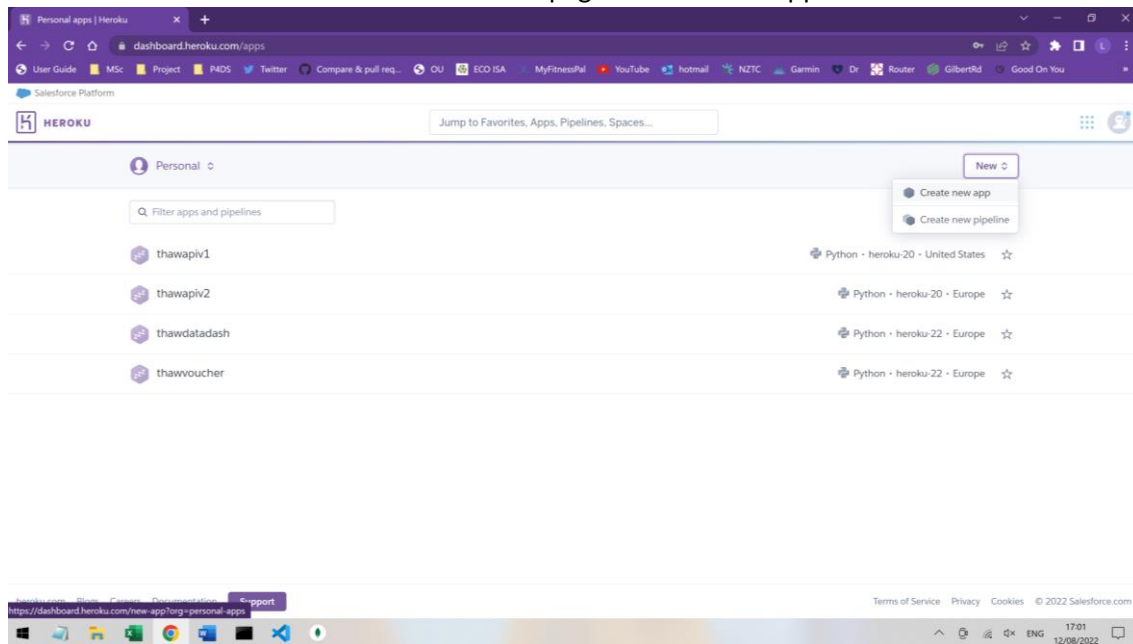


Hosting and Deploying the API on Heroku

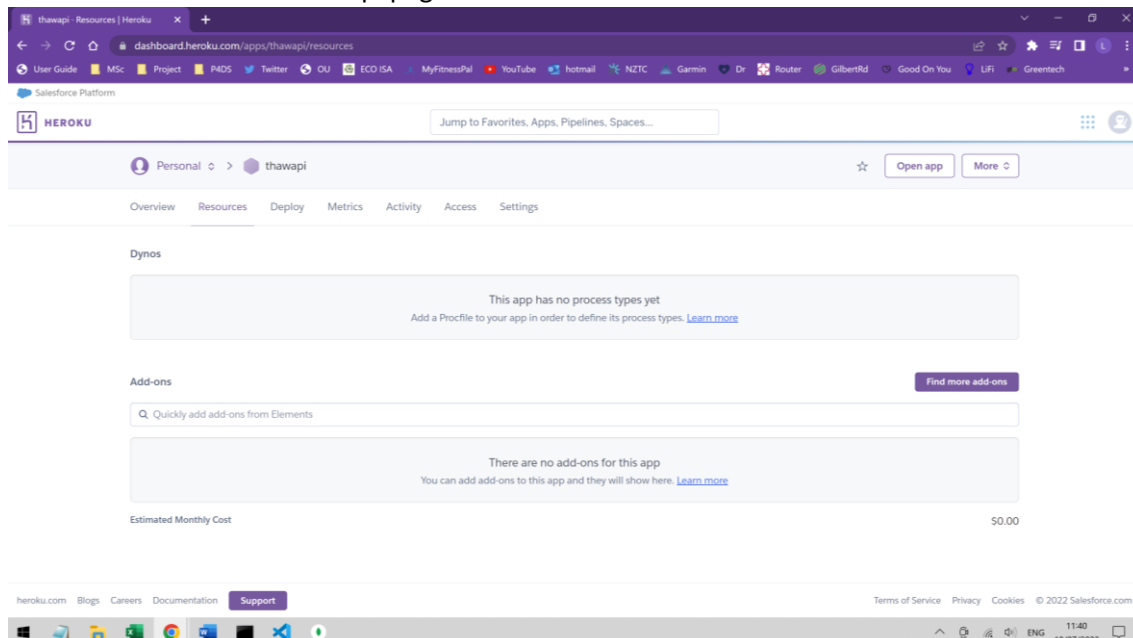
1. Via the Website

First attempt for deploying the Flask app used the same method for creating app as used for the Streamlit app. For deploying Streamlit follow these instructions.

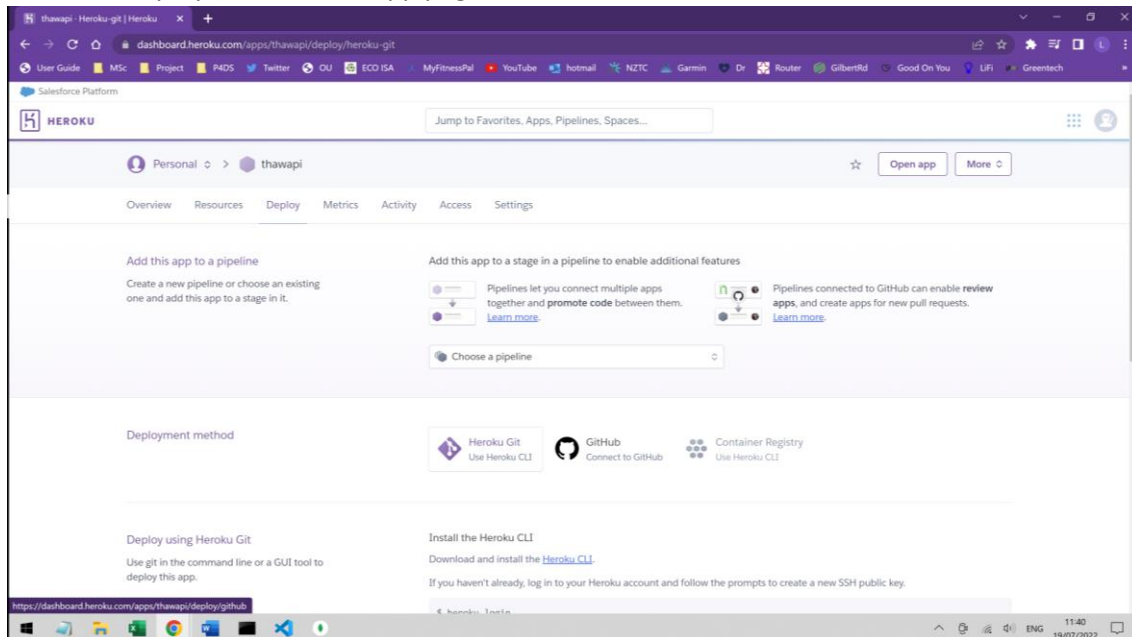
Create a Heroku account and from the home page create a new app:



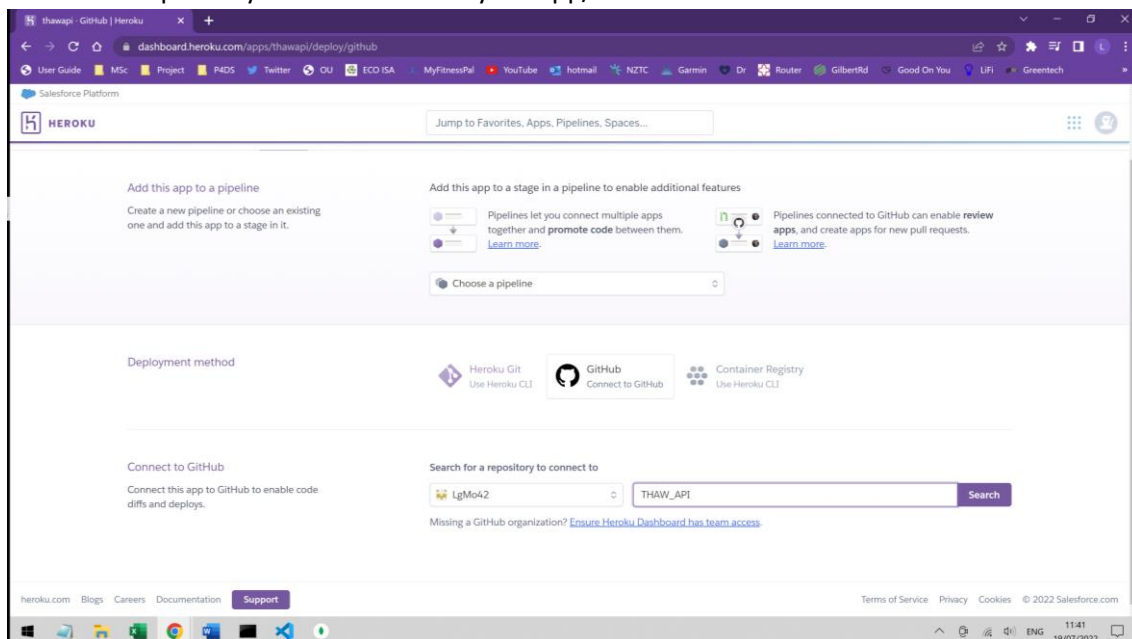
Here is shown the new thawapi page:



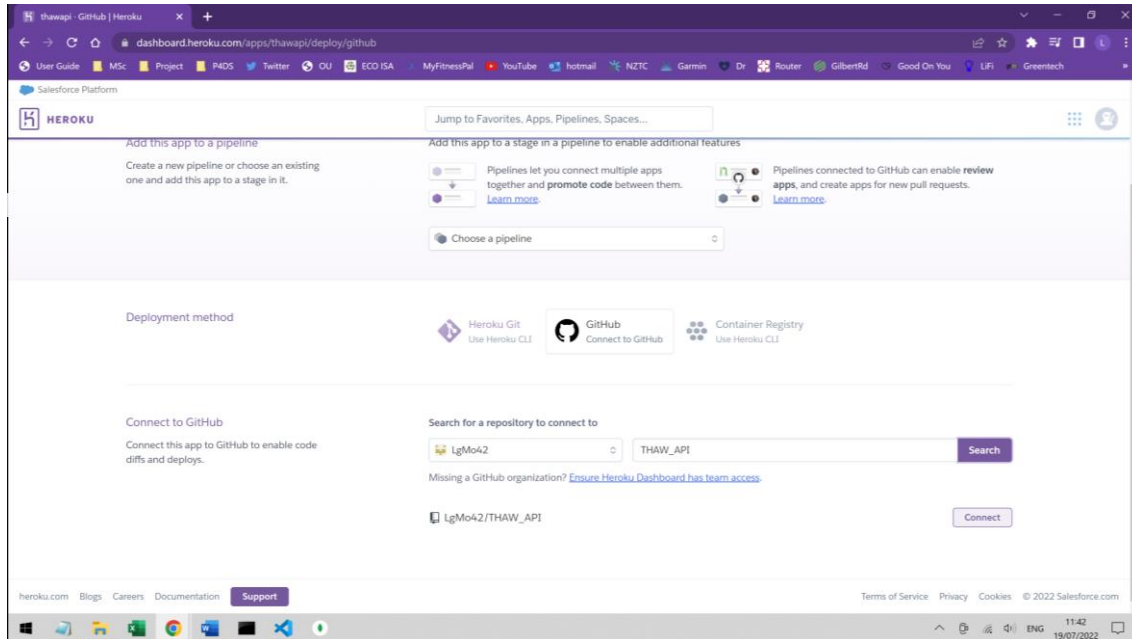
From the Deploy menu on the app page connected to GitHub:



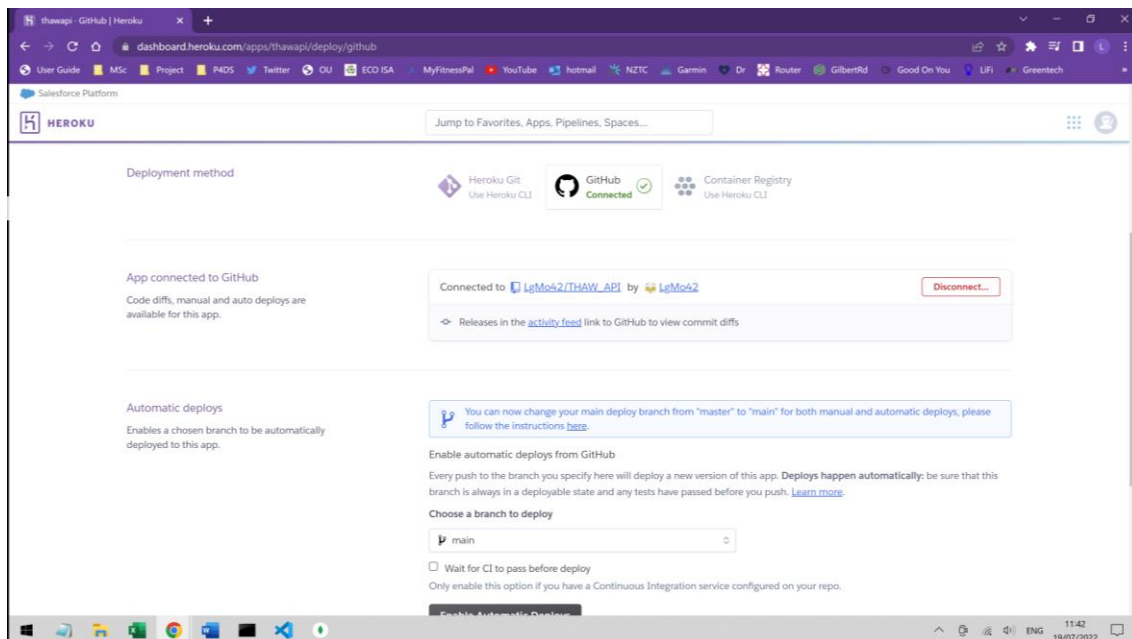
Search for repository with the code for your app/API:



Connect to the repository:



Connected!



From Setting page reveal config vars:

The image displays two screenshots of the Heroku dashboard for an application named 'thawapi'.

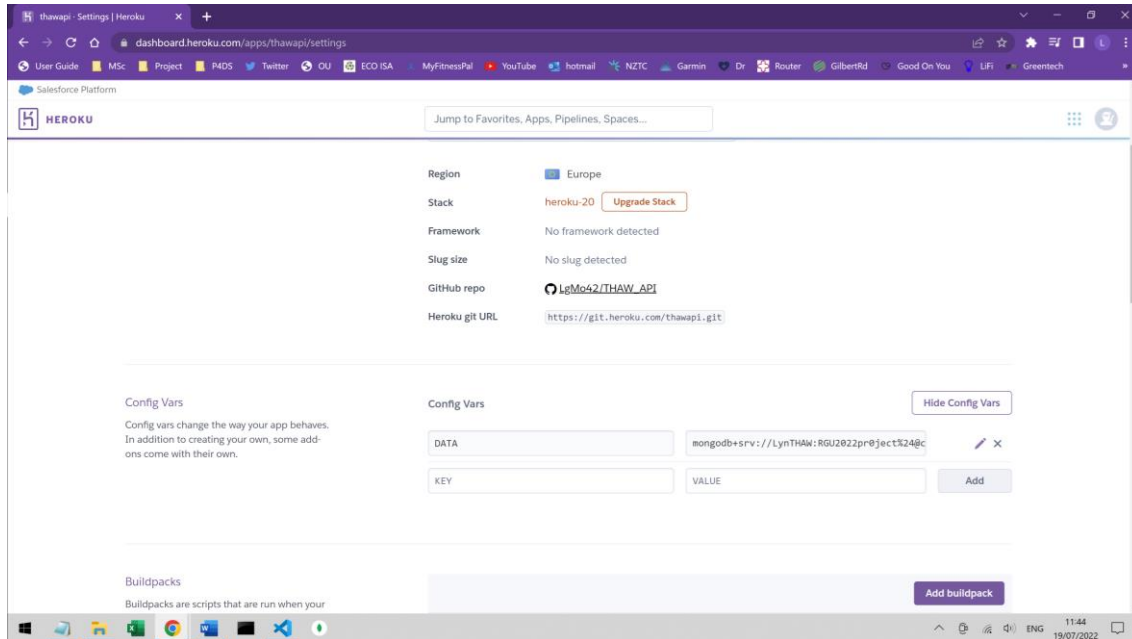
Top Screenshot: The 'Settings' page is shown. The 'App Information' section includes the following details:

- App Name: thawapi
- Region: Europe
- Stack: heroku-20 (with an 'Upgrade Stack' button)
- Framework: No framework detected
- Slug size: No slug detected
- GitHub repo: LgMo42/THAW_API
- Heroku git URL: https://git.heroku.com/thawapi.git

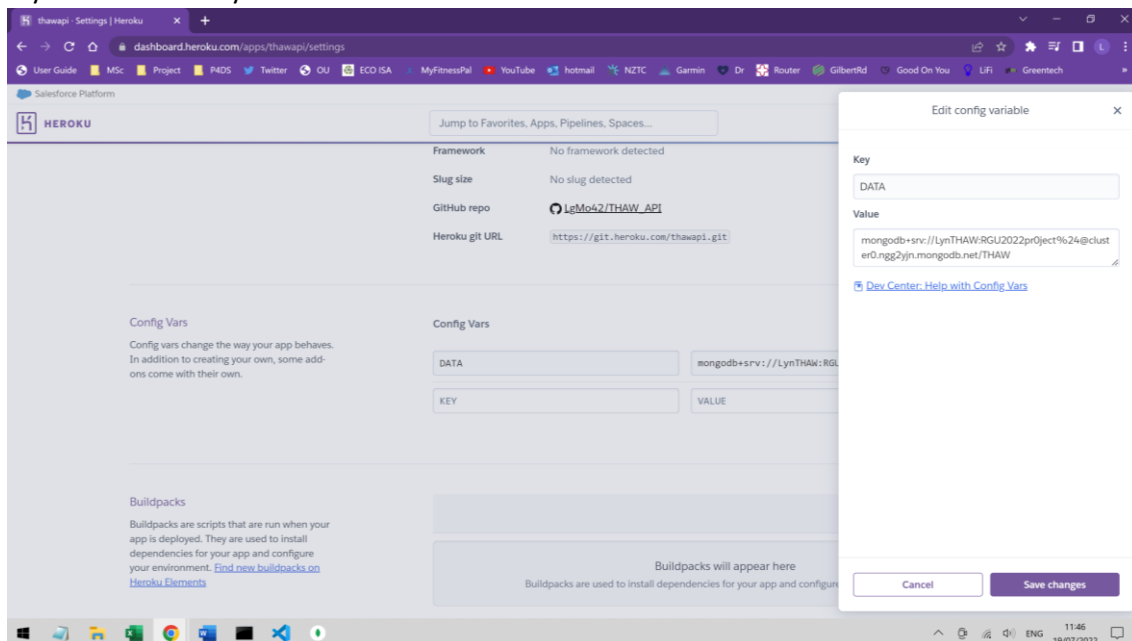
The 'Config Vars' section is collapsed, showing a 'Reveal Config Vars' button.

Bottom Screenshot: The 'Config Vars' section is expanded. It displays a message: 'There are no config vars for this app yet. Learn about config vars in the Dev Center.' Below this message is a table with columns 'KEY' and 'VALUE', and an 'Add' button.

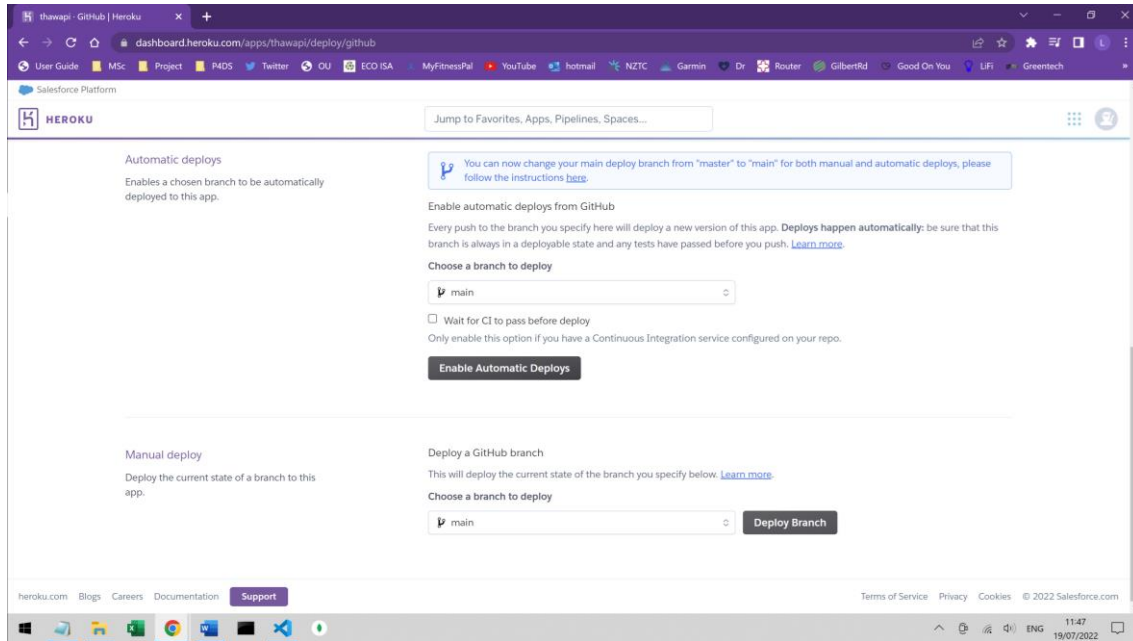
Enter the config var details for connection to MongoDB Atlas THAW database:



If you click on edit you can see the full link:

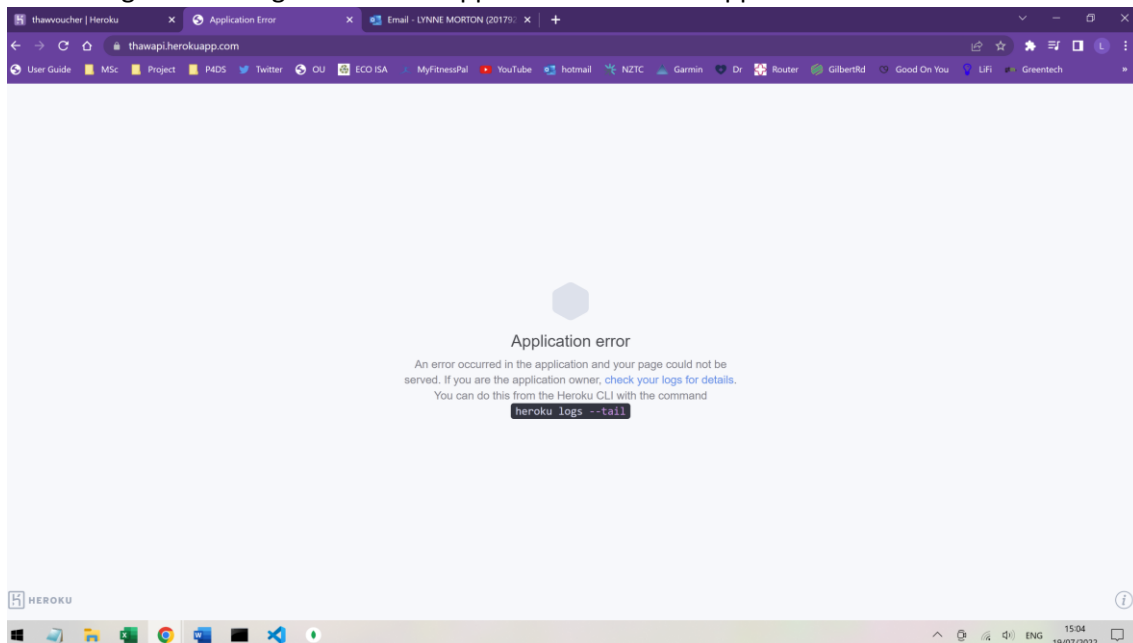


On the Deploy page click deploy branch:



Here branch is main and here are no other options. When developing the app in another branch can be deployed from to test it before merging the new branch with the main and overwriting a working version.

Something went wrong for the Flask app. For the streamlit app the above works.



2. Via Heroku Cli

A search online suggested flask apps need to be uploaded using the Heroku Cli. Once downloaded and installed the command prompt was used to create and deploy the flask app successfully. This was done by following the tutorial on <https://www.youtube.com/watch?v=SiCAIRc0pEI>

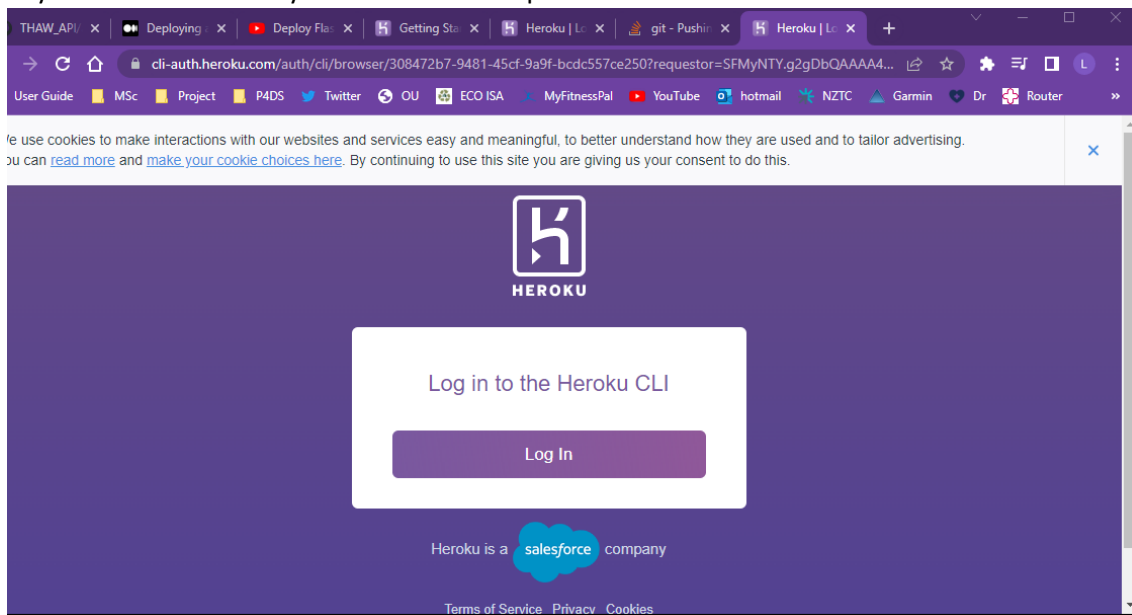
Open command prompt from folder that app is in or navigate to it via cd command.

Type: heroku login

```
Command Prompt - heroku login
remote: ----> No change in requirements detected, installing from cache
remote: ----> Using cached install of python-3.10.5
remote: ----> Installing pip 22.1.2, setuptools 60.10.0 and wheel 0.37.1
remote: ----> Installing SQLite3
remote: ----> Installing requirements with pip
remote: ----> Discovering process types
remote:          Procfile declares types -> web
remote:
remote: ----> Compressing...
remote:          Done: 58.2M
remote: ----> Launching...
remote:          Released v8
remote:          https://thawapiv1.herokuapp.com/ deployed to Heroku
remote:
remote: This app is using the Heroku-20 stack, however a newer stack is available.
remote: To upgrade to Heroku-22, see:
remote: https://devcenter.heroku.com/articles/upgrading-to-the-latest-stack
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/thawapiv1.git
e3214ce..937da7c main -> main

C:\Users\llyn\Desktop\THAW_Project\THAW_API>heroku login
» Warning: heroku update available from 7.53.0 to 7.60.2.
heroku: Press any key to open up the browser to login or q to exit:
Opening browser to https://cli-auth.heroku.com/auth/cli/browser/308472b7-9481-45cf-9a9f-bcdc557ce250?requestor=SFMyNTY.g2gDbQAAAA4zMS4xODUuMjM5LjE2Nm4GAMCVqxaCAWIAAVGA.FlYQcPJ8qWzFPBpO4Rom4zhxWe_lkQEDJhk0rWRhTE0
heroku: Waiting for login... |
```

This will open a page in the browser. If logged in already you will see the screen below. If not logged in you will be asked for your username and password.



After logging in create the Heroku app by typing: heroku create
(To set app name as thawapiv2 and region as eu type: heroku create thawapiv2 --region=eu)

To check Heroku app has been created type: git remote -v

This will show the Heroku apps http has been created and the repository it is linked to.

To deploy the code form the main branch type: git push heroku main

This will push the code from the main branch of the repository listed to the heroku app just created.

(To deploy from a branch type: git push heroku branchname:main)

```
Command Prompt

C:\Users\llyn\Desktop\THAW_Project\THAW_API>heroku create thawapiv1
» Warning: heroku update available from 7.53.0 to 7.60.2.
Creating @ thawapiv1... done
https://thawapiv1.herokuapp.com/ | https://git.heroku.com/thawapiv1.git

C:\Users\llyn\Desktop\THAW_Project\THAW_API>git remote -v
heroku https://git.heroku.com/thawapiv1.git (fetch)
heroku https://git.heroku.com/thawapiv1.git (push)
origin https://github.com/LgMo42/THAW_API.git (fetch)
origin https://github.com/LgMo42/THAW_API.git (push)

C:\Users\llyn\Desktop\THAW_Project\THAW_API>git push heroku main
Enumerating objects: 132, done.
Counting objects: 100% (132/132), done.
Delta compression using up to 8 threads
Compressing objects: 100% (126/126), done.
Writing objects: 100% (132/132), 65.53 KiB | 3.64 MiB/s, done.
Total 132 (delta 54), reused 7 (delta 0), pack-reused 0
remote: Compressing source files... done.
remote: Building source:
remote:
remote: -----> Building on the Heroku-20 stack
remote: -----> Determining which buildpack to use for this app
remote: -----> Python app detected
remote: -----> No Python version was specified. Using the buildpack default: python-3.10.5
remote: -----> To use a different version, see: https://devcenter.heroku.com/articles/python-runtimes
remote: -----> Installing python-3.10.5
remote: -----> Installing pip 22.1.2, setuptools 60.10.0 and wheel 0.37.1
```

```
Command Prompt

remote: -----> Discovering process types
remote: Procfile declares types -> web
remote:
remote: -----> Compressing...
remote: Done: 58.2M
remote: -----> Launching...
remote: Released v8
remote: https://thawapiv1.herokuapp.com/ deployed to Heroku
remote:
remote: This app is using the Heroku-20 stack, however a newer stack is available.
remote: To upgrade to Heroku-22, see:
remote: https://devcenter.heroku.com/articles/upgrading-to-the-latest-stack
remote:
remote: Verifying deploy... done.
To https://git.heroku.com/thawapiv1.git
e3214ce..937da7c main -> main

C:\Users\llyn\Desktop\THAW_Project\THAW_API>heroku login
» Warning: heroku update available from 7.53.0 to 7.60.2.
heroku: Press any key to open the browser to login or q to exit:
Opening browser to https://cli-auth.heroku.com/auth/cli/browser/308472b7-9481-45cf-9a9f-bcdc557ce250?requestor=SFMyNTY.2gDbQAAAA4zMS4xODUuMjM5LjE2Nm40GAMCVqxaCAWIAAVGA.F1YQcPJBqWzFPBp04Rom4zhxWe_1kQEDJhk0rWRhTE0
Logging in... done
Logged in as l.morton7@rgu.ac.uk

C:\Users\llyn\Desktop\THAW_Project\THAW_API>git push heroku main
Everything up-to-date

C:\Users\llyn\Desktop\THAW_Project\THAW_API>
```

Once deployed there is a verify message and the heroku link will be active.

If you push the code without changes then the app will not redeploy and a message saying all is up to date will be output instead.

To remove the Heroku app type: `git remote rm heroku`

To access an existing app type: `heroku git:remote -a appname`


```
Command Prompt
C:\Users\llyn\Desktop\THAW_Project\THAW_API>git remote -v
heroku https://git.heroku.com/thawapiv1.git (fetch)
heroku https://git.heroku.com/thawapiv1.git (push)
origin https://github.com/LgMo42/THAW_API.git (fetch)
origin https://github.com/LgMo42/THAW_API.git (push)

C:\Users\llyn\Desktop\THAW_Project\THAW_API>git remote -v
heroku https://git.heroku.com/thawapiv1.git (fetch)
heroku https://git.heroku.com/thawapiv1.git (push)
origin https://github.com/LgMo42/THAW_API.git (fetch)
origin https://github.com/LgMo42/THAW_API.git (push)

C:\Users\llyn\Desktop\THAW_Project\THAW_API>git remote rm heroku

C:\Users\llyn\Desktop\THAW_Project\THAW_API>git remote -v
origin https://github.com/LgMo42/THAW_API.git (fetch)
origin https://github.com/LgMo42/THAW_API.git (push)

C:\Users\llyn\Desktop\THAW_Project\THAW_API>heroku git:remote -a thawapiv1
Warning: heroku update available from 7.53.0 to 7.60.2.
set git remote heroku to https://git.heroku.com/thawapiv1.git

C:\Users\llyn\Desktop\THAW_Project\THAW_API>git remote -v
heroku https://git.heroku.com/thawapiv1.git (fetch)
heroku https://git.heroku.com/thawapiv1.git (push)
origin https://github.com/LgMo42/THAW_API.git (fetch)
origin https://github.com/LgMo42/THAW_API.git (push)

C:\Users\llyn\Desktop\THAW_Project\THAW_API>
```

Success!

