

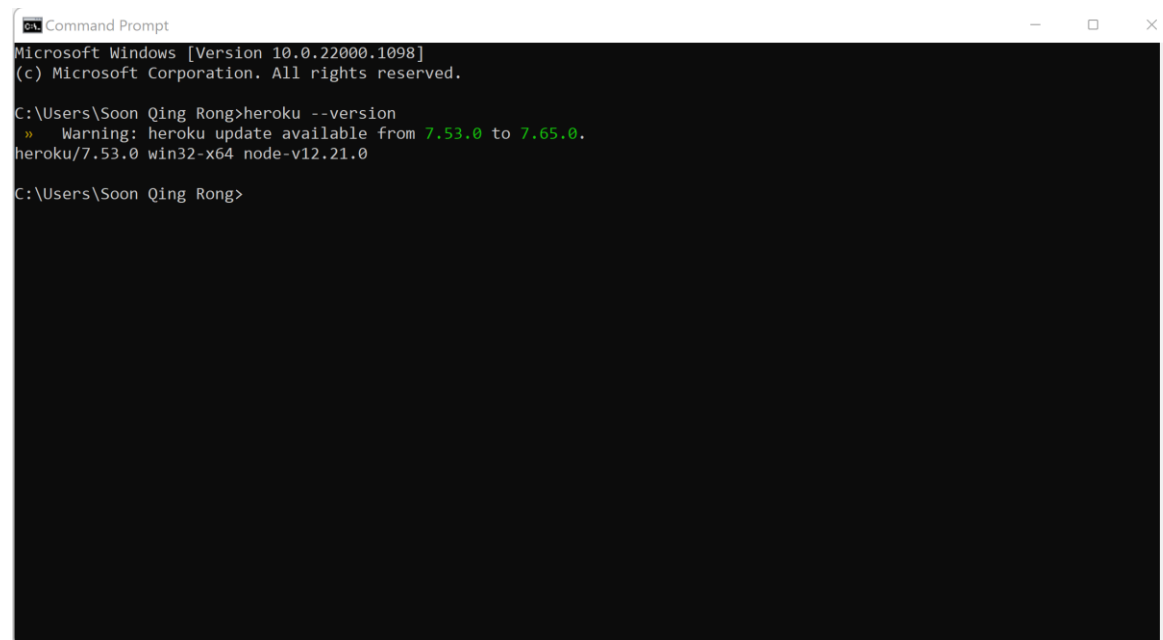
Pushing data from PostgreSQL to Heroku

Step 1a

Download Heroku CLI from
<https://devcenter.heroku.com/articles/heroku-cli>

Step 1b

To test if you successfully downloaded Heroku CLI, go to command prompt and type
heroku --version
(should see something like below)



```
Command Prompt
Microsoft Windows [Version 10.0.22000.1098]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Soon Qing Rong>heroku --version
» Warning: heroku update available from 7.53.0 to 7.65.0.
heroku/7.53.0 win32-x64 node-v12.21.0

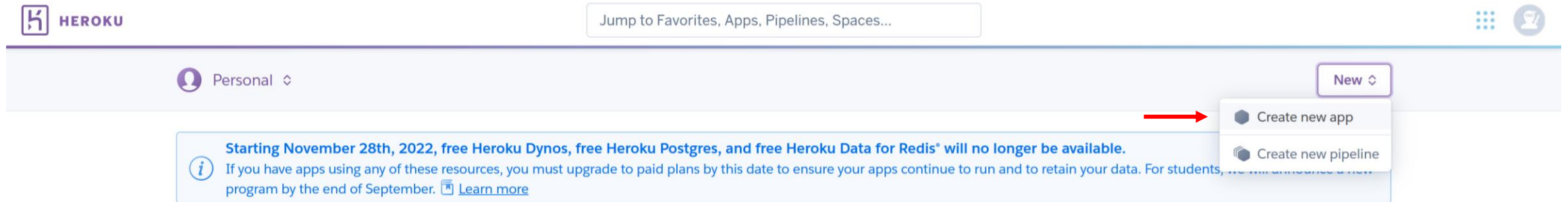
C:\Users\Soon Qing Rong>
```

Step 2

Create a Heroku account on
<https://id.heroku.com/login>

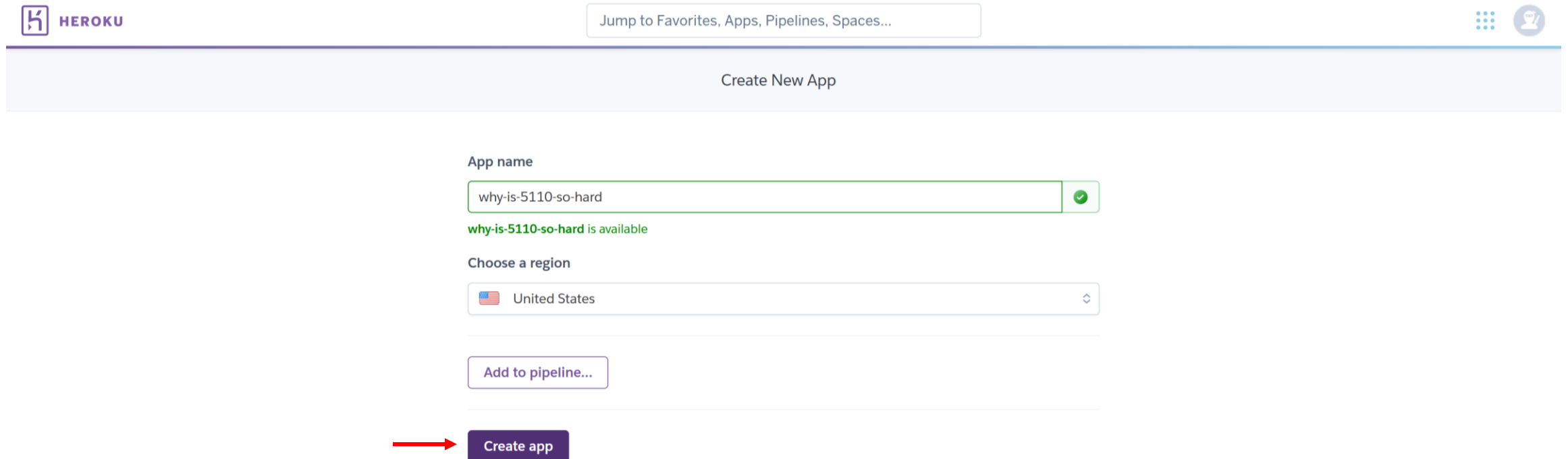
Step 3

In main page, click the “New” button on top right of the page and click “Create new app”



Step 4

Enter a unique name for your project, set the region to default and click “Create app”! 😊



The screenshot shows the Heroku 'Create New App' interface. At the top left is the Heroku logo. In the top center is a search bar with the text 'Jump to Favorites, Apps, Pipelines, Spaces...'. At the top right are icons for a grid and a user profile. Below the header is a light blue bar with the text 'Create New App'. The main form area contains the following elements:

- App name:** A text input field containing 'why-is-5110-so-hard' with a green checkmark icon to its right. Below the input, a green message states 'why-is-5110-so-hard is available'.
- Choose a region:** A dropdown menu showing 'United States' with a US flag icon and a dropdown arrow.
- Add to pipeline...** A button with a purple border.
- Create app** A dark purple button. A red arrow points to this button from the left.

Step 5

Click on “Overview”

The screenshot shows the Heroku dashboard for the application "why-is-5110-so-hard". The top navigation bar includes the Heroku logo, a search bar, and a user profile. The main navigation bar shows the "Overview" tab selected with a red arrow. The "Overview" section contains two main cards: "Add this app to a pipeline" and "Add this app to a stage in a pipeline to enable additional features". The "Add this app to a pipeline" card includes a description and a "Choose a pipeline" dropdown. The "Add this app to a stage in a pipeline" card includes two sub-cards: "Pipelines let you connect multiple apps together and promote code between them." and "Pipelines connected to GitHub can enable review apps, and create apps for new pull requests." The bottom section, "Deployment method", shows three options: "Heroku Git Use Heroku CLI", "GitHub Connect to GitHub", and "Container Registry Use Heroku CLI".

HEROKU

Jump to Favorites, Apps, Pipelines, Spaces...

Personal > why-is-5110-so-hard

☆ Open app More

Overview Resources Deploy Metrics Activity Access Settings

Add this app to a pipeline

Create a new pipeline or choose an existing one and add this app to a stage in it.

Add this app to a stage in a pipeline to enable additional features

Pipelines let you connect multiple apps together and **promote code** between them. [Learn more.](#)

Pipelines connected to GitHub can enable **review apps**, and create apps for new pull requests. [Learn more.](#)

Choose a pipeline

Deployment method



Heroku Git Use Heroku CLI


GitHub Connect to GitHub

Container Registry Use Heroku CLI

Step 6

Click on “Configure Add-ons”

 Personal >  why-is-5110-so-hard

 Open app More

Overview

Resources

Deploy


Metrics

Activity

Access

Settings

Installed add-ons \$0.00/month

 [Configure Add-ons](#)

There are no add-ons for this app


You can add add-ons to this app and they will show here. [Learn more](#)

Dyno formation \$0.00/month

[Configure Dynos](#)

This app has no process types yet

Add a Procfile to your app in order to define its process types. [Learn more](#)



Collaborator activity 



[Manage Access](#)

There is no recent activity on this app

Collaborator activity will be shown when there are recent deploys

Latest activity [All Activity](#)

  **qingrongsoon@gmail.com:** Enable Logplex
Today at 12:32 PM · v2

  **qingrongsoon@gmail.com:** Initial release
Today at 12:32 PM · v1

Step 7

Type “Heroku Postgres” in Add-ons and select it in the drop down box

The screenshot shows the Heroku dashboard for the application 'why-is-5110-so-hard'. The top navigation bar includes a profile icon, the text 'Personal', a dropdown arrow, a greater-than sign, the app name 'why-is-5110-so-hard', a star icon, and buttons for 'Open app' and 'More'. Below this is a tabbed interface with 'Overview', 'Resources', 'Deploy', 'Metrics', 'Activity', 'Access', and 'Settings'. The 'Resources' tab is active. Under the 'Dynos' section, a message states: 'This app has no process types yet. Add a Procfile to your app in order to define its process types. [Learn more](#)'. The 'Add-ons' section features a search bar with 'Heroku Postgres' entered, highlighted by a red arrow. Below the search bar, a dropdown menu shows the 'Heroku Postgres' option with its logo. A 'Find more add-ons' button is located to the right of the search bar. Below the dropdown, a message states: 'There are no add-ons for this app. You can add add-ons to this app and they will show here. [Learn more](#)'. At the bottom, the 'Estimated Monthly Cost' is displayed as '\$0.00'.

Personal > why-is-5110-so-hard ☆ Open app More

Overview Resources Deploy Metrics Activity Access Settings

Dynos

This app has no process types yet
Add a Procfile to your app in order to define its process types. [Learn more](#)

Add-ons Find more add-ons

→ 🔍 Heroku Postgres

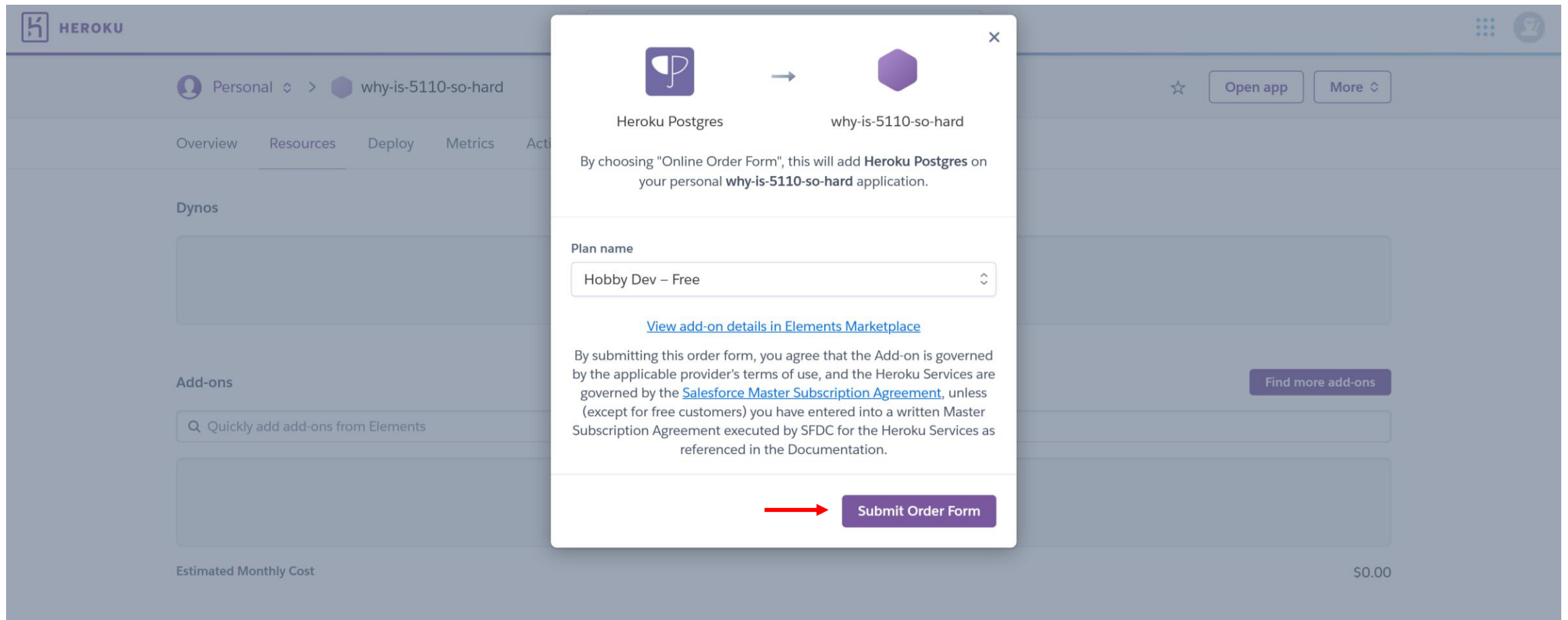
Heroku Postgres

There are no add-ons for this app
You can add add-ons to this app and they will show here. [Learn more](#)

Estimated Monthly Cost \$0.00

Step 8

Click “Submit Order Form”,
(Plan should be free 😊)



The screenshot shows the Heroku dashboard for a personal application named 'why-is-5110-so-hard'. A modal window is open for adding the 'Heroku Postgres' add-on. The modal displays the Heroku Postgres logo, the application name, and a message: 'By choosing "Online Order Form", this will add Heroku Postgres on your personal why-is-5110-so-hard application.' Below this, the 'Plan name' is set to 'Hobby Dev – Free'. A link to 'View add-on details in Elements Marketplace' is provided. A disclaimer states: 'By submitting this order form, you agree that the Add-on is governed by the applicable provider's terms of use, and the Heroku Services are governed by the Salesforce Master Subscription Agreement, unless (except for free customers) you have entered into a written Master Subscription Agreement executed by SFDC for the Heroku Services as referenced in the Documentation.' At the bottom of the modal, a red arrow points to the 'Submit Order Form' button. The background shows the 'Add-ons' section with a search bar and a 'Find more add-ons' button. The 'Estimated Monthly Cost' is shown as '\$0.00'.

HEROKU

Personal > why-is-5110-so-hard

Overview Resources Deploy Metrics Act

Dynos

Add-ons

Quickly add add-ons from Elements

Estimated Monthly Cost \$0.00

Heroku Postgres → why-is-5110-so-hard

By choosing "Online Order Form", this will add Heroku Postgres on your personal why-is-5110-so-hard application.

Plan name

Hobby Dev – Free



[View add-on details in Elements Marketplace](#)


By submitting this order form, you agree that the Add-on is governed by the applicable provider's terms of use, and the Heroku Services are governed by the [Salesforce Master Subscription Agreement](#), unless (except for free customers) you have entered into a written Master Subscription Agreement executed by SFDC for the Heroku Services as referenced in the Documentation.


Submit Order Form

Step 10


You will then be redirected to this page with your new Add-on!

 Personal 

>  why-is-5110-so-hard



Open app

More 

Overview Resources Deploy Metrics Activity Access Settings

Dynos

This app has no process types yet



Add a Procfile to your app in order to define its process types. [Learn more](#)


Add-ons

Find more add-ons


The add-on `heroku-postgresql` has been installed. Check out the documentation in its [Dev Center](#) article to get started.

Q Quickly add add-ons from Elements

 Heroku Postgres 

Attached as DATABASE 

Hobby Dev

Free 

Estimated Monthly Cost

\$0.00

Step 11

You will then be redirected to this page with your new Add-on! Now click on “Overview”

Personal > why-is-5110-so-hard

☆ Open app More

Overview Resources Deploy Metrics Activity Access Settings

Dynos


This app has no process types yet
Add a Procfile to your app in order to define its process types. [Learn more](#)

Add-ons

Find more add-ons

The add-on heroku-postgresql has been installed. Check out the documentation in its [Dev Center](#) article to get started.

Quickly add add-ons from Elements

 Heroku Postgres

Attached as DATABASE

Hobby Dev

Free

Estimated Monthly Cost \$0.00

Step 12a


There will now be a string created in your main page (impt), this link will be different for different users

Personal > why-is-5110-so-hard

☆ Open app More

Overview Resources Deploy Metrics Activity Access Settings

Installed add-ons \$0.00/month Configure Add-ons

 Heroku Postgres Hobby Dev postgresql-rectangular-34938

Dyno formation \$0.00/month Configure Dynos

This app has no process types yet


Add a Procfile to your app in order to define its process types. [Learn more](#)


Collaborator activity Manage Access


There is no recent activity on this app


Collaborator activity will be shown when there are recent deploys

Latest activity All Activity

 qingrongsoon@gmail.com: @ref:postgresql-rectangular-34938 completed provisioning, setting DATABASE_URL. Today at 12:41 PM · v4

 qingrongsoon@gmail.com: Attach DATABASE (@ref:postgresql-rectangular-34938) Today at 12:41 PM · v3

 qingrongsoon@gmail.com: Enable Logplex Today at 12:32 PM · v2

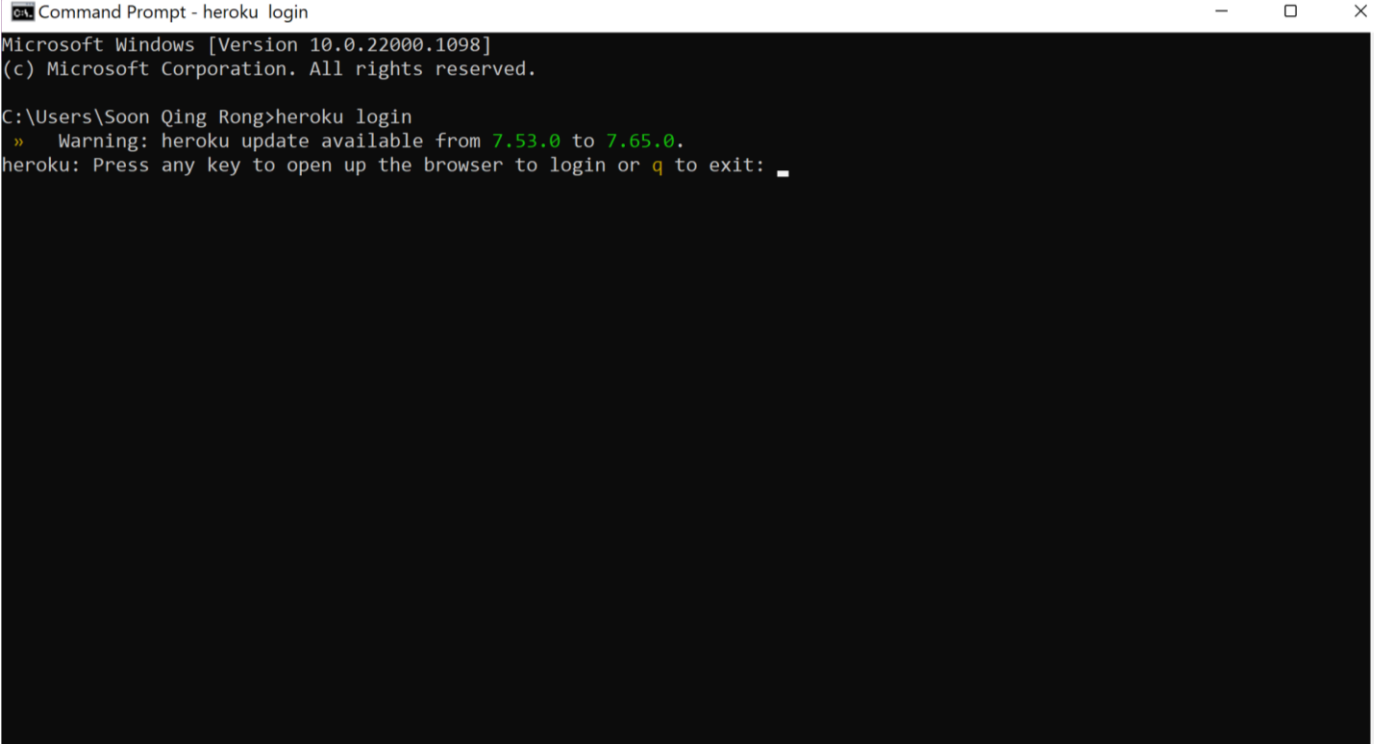
 qingrongsoon@gmail.com: Initial release Today at 12:32 PM · v1

Step 12b

Remember the Heroku CLI,
now we need to use that thingy 😞

Step 13

Open command prompt/terminal and type
heroku login

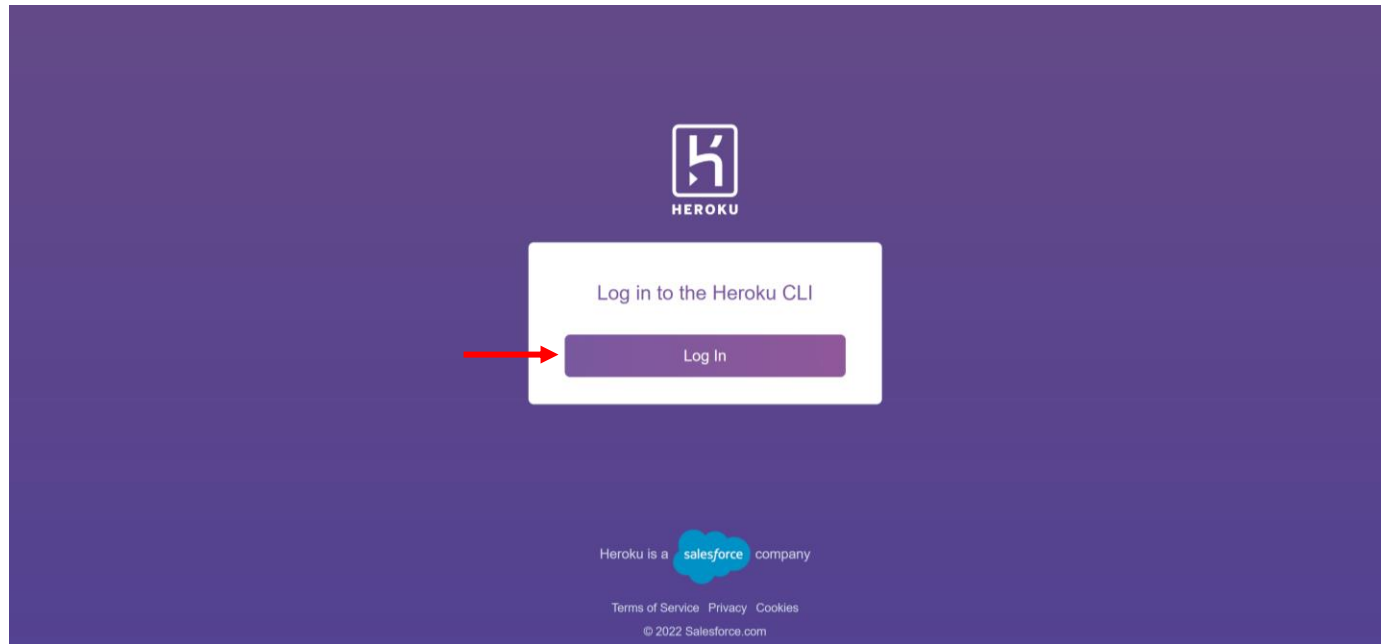


```
Command Prompt - heroku login
Microsoft Windows [Version 10.0.22000.1098]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Soon Qing Rong>heroku login
» Warning: heroku update available from 7.53.0 to 7.65.0.
heroku: Press any key to open up the browser to login or q to exit: _
```

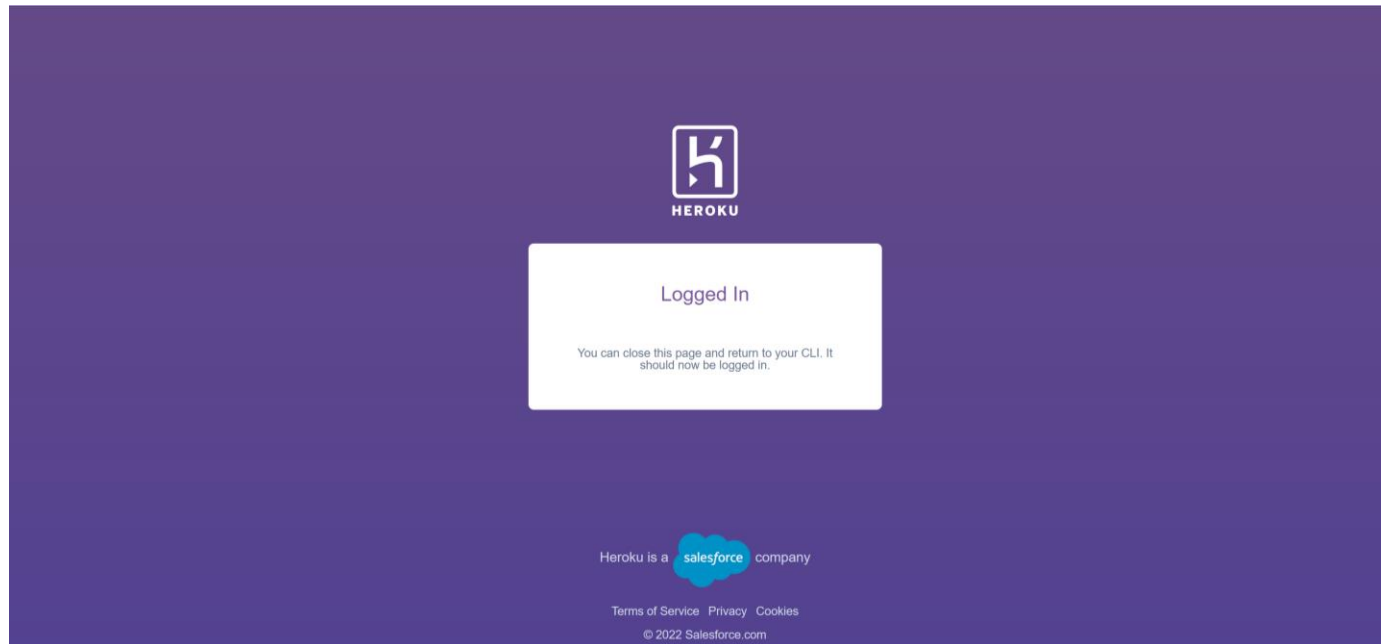
Step 14

Press any key and a browser will open that looks like this.
Click “Log In”



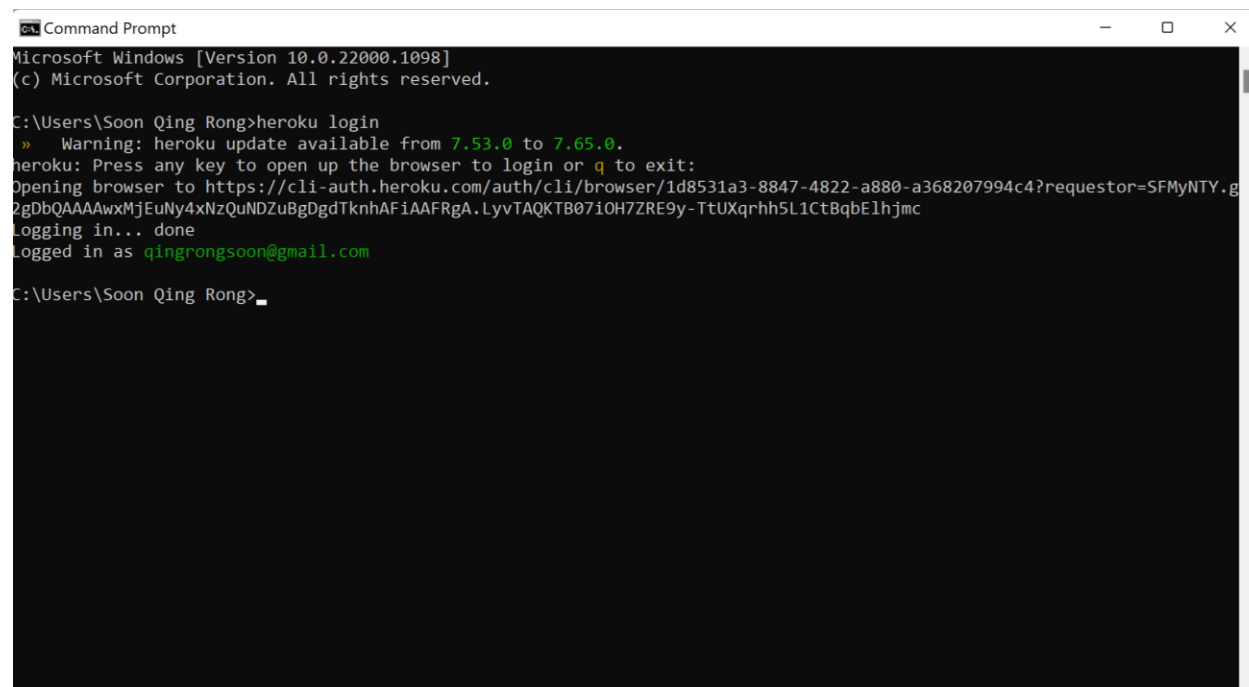
Step 15

If you are logged in, you will see this. You can close this page now.



Step 16

At this point, your command prompt should look something like this



```
Command Prompt
Microsoft Windows [Version 10.0.22000.1098]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Soon Qing Rong>heroku login
» Warning: heroku update available from 7.53.0 to 7.65.0.
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/1d8531a3-8847-4822-a880-a368207994c4?requestor=SFMyNTY.g
2gDbQAAAAAwMjEuNy4xNzQuNDZuBgDgdTknhAFiAAFRgA.LyvTAQKTb07iOH7ZRE9y-TtUXqrhh5L1CtBqbElhjmc
Logging in... done
Logged in as qingrongsoon@gmail.com

C:\Users\Soon Qing Rong>
```

Step 17a


Back to the Heroku website, click on “Heroku Postgres”

Personal > why-is-5110-so-hard

☆ Open app More

Overview Resources Deploy Metrics Activity Access Settings

Installed add-ons \$0.00/month Configure Add-ons

 Heroku Postgres Hobby Dev postgresql-rectangular-34938


Dyno formation \$0.00/month Configure Dynos


This app has no process types yet
Add a Procfile to your app in order to define its process types. [Learn more](#)


Collaborator activity Manage Access


There is no recent activity on this app
Collaborator activity will be shown when there are recent deploys

Latest activity All Activity

 qingrongsoon@gmail.com: @ref:postgresql-rectangular-34938 completed provisioning, setting DATABASE_URL.
Today at 12:41 PM · v4



 qingrongsoon@gmail.com: Attach DATABASE (@ref:postgresql-rectangular-34938)
Today at 12:41 PM · v3


 qingrongsoon@gmail.com: Enable Logplex
Today at 12:32 PM · v2

 qingrongsoon@gmail.com: Initial release
Today at 12:32 PM · v1

Step 17b


A new tab will open and you should see that there is an empty database created

 Datastores >  postgresql-rectangular-34938

SERVICE heroku-postgresql PLAN hobby-dev BILLING APP  why-is-5110-so-hard

Overview Durability Settings Dataclips


HEALTH

 Available

PRIMARY Yes VERSION 14.5 CREATED 17 minutes ago MAINTENANCE Unsupported ⓘ ROLLBACK Unsupported ⓘ


UTILIZATION

0 of 20

 0 of 10,000

8.5 MB

0

CONNECTIONS ROWS  IN COMPLIANCE DATA SIZE TABLES

Step 18 (Most Important Step)

Now in your command prompt, type this **exact** command:

```
heroku pg:push postgres://[pg db username]:[pg db password]@localhost:5432/[db name in pg] [link made in Heroku] --app [db name in Heroku]
```

Replace it according to how your database are named, but in this example case,

[pg db username]: same as what we changed in models.py in tutorial

[pg db password]: same as what we changed in models.py in tutorial

[db name in pg]: the database you created for this project in postgresql

[link made in Heroku]: postgresql-rectangular-34938

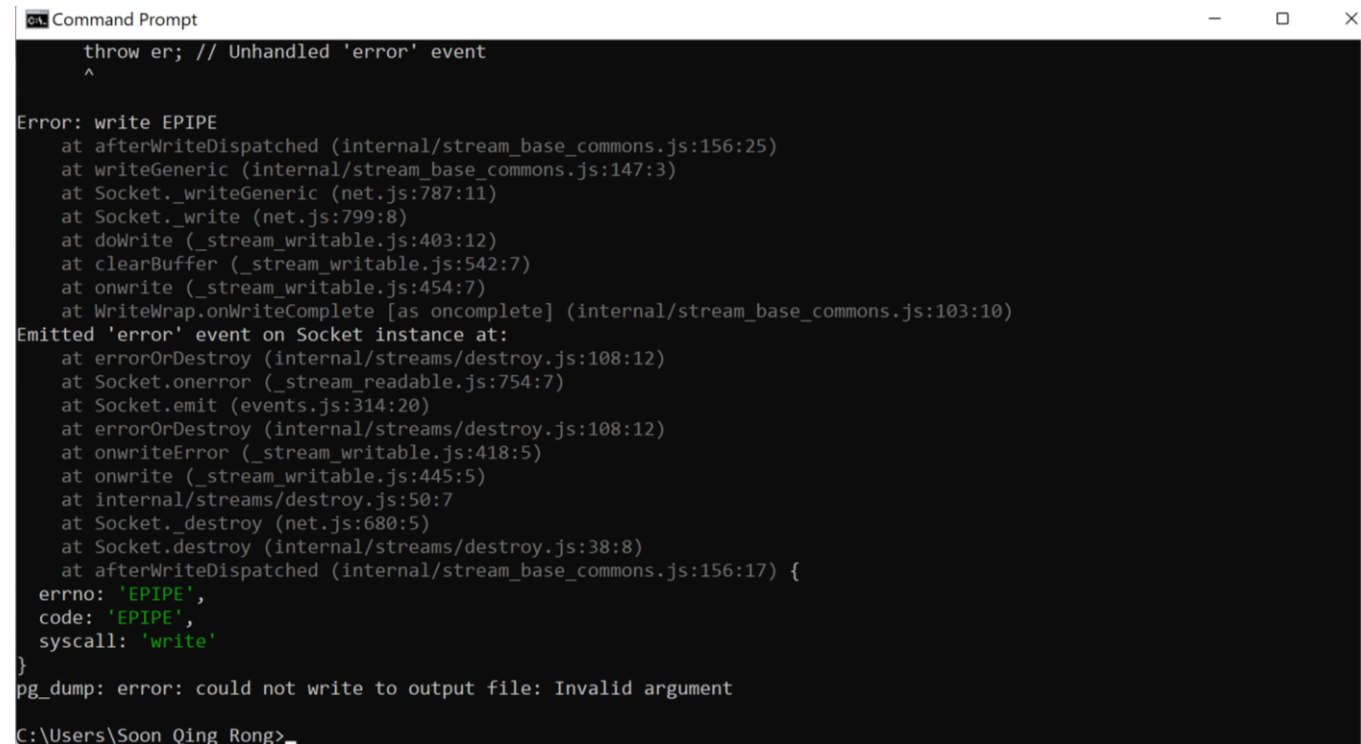
[db name in Heroku]: why-is-5110-so-hard

Step 19a

Based on our team's experience, if you are a MAC user, it should be pushed to Heroku successfully so can skip to Step 23

Step 19b

But if you are a Windows user, you may encounter this error (quite sian)



```
Command Prompt
throw er; // Unhandled 'error' event
^
Error: write EPIPE
    at afterWriteDispatched (internal/stream_base_commons.js:156:25)
    at writeGeneric (internal/stream_base_commons.js:147:3)
    at Socket._writeGeneric (net.js:787:11)
    at Socket._write (net.js:799:8)
    at doWrite (_stream_writable.js:403:12)
    at clearBuffer (_stream_writable.js:542:7)
    at onwrite (_stream_writable.js:454:7)
    at WriteWrap.onWriteComplete [as oncomplete] (internal/stream_base_commons.js:103:10)
Emitted 'error' event on Socket instance at:
    at errorOrDestroy (internal/streams/destroy.js:108:12)
    at Socket.onerror (_stream_readable.js:754:7)
    at Socket.emit (events.js:314:20)
    at errorOrDestroy (internal/streams/destroy.js:108:12)
    at onwriteError (_stream_writable.js:418:5)
    at onwrite (_stream_writable.js:445:5)
    at internal/streams/destroy.js:50:7
    at Socket._destroy (net.js:680:5)
    at Socket.destroy (internal/streams/destroy.js:38:8)
    at afterWriteDispatched (internal/stream_base_commons.js:156:17) {
  errno: 'EPIPE',
  code: 'EPIPE',
  syscall: 'write'
}
pg_dump: error: could not write to output file: Invalid argument
C:\Users\Soon Qing Rong>
```

Step 20

In your command prompt, type this **exact** command:

```
pg_dump -f test-dump --no-owner --no-acl -U postgres [db name in pg]
```

Replace it according to how your database is named

[db name in pg]: the database you created for this project in postgresql

Step 21

You may be prompted to enter your postgresql password

```
Command Prompt - pg_dump -f test-dump --no-owner --no-acl -U postgres project_starapp
at afterWriteDispatched (internal/stream_base_commons.js:156:25)
at writeGeneric (internal/stream_base_commons.js:147:3)
at Socket._writeGeneric (net.js:787:11)
at Socket._write (net.js:799:8)
at doWrite (_stream_writable.js:403:12)
at clearBuffer (_stream_writable.js:542:7)
at onwrite (_stream_writable.js:454:7)
at WriteWrap.onWriteComplete [as oncomplete] (internal/stream_base_commons.js:103:10)
Emitted 'error' event on Socket instance at:
at errorOrDestroy (internal/streams/destroy.js:108:12)
at Socket.onerror (_stream_readable.js:754:7)
at Socket.emit (events.js:314:20)
at errorOrDestroy (internal/streams/destroy.js:108:12)
at onwriteError (_stream_writable.js:418:5)
at onwrite (_stream_writable.js:445:5)
at internal/streams/destroy.js:50:7
at Socket._destroy (net.js:680:5)
at Socket.destroy (internal/streams/destroy.js:38:8)
at afterWriteDispatched (internal/stream_base_commons.js:156:17) {
  errno: 'EPIPE',
  code: 'EPIPE',
  syscall: 'write'
}
pg_dump: error: could not write to output file: Invalid argument

C:\Users\Soon Qing Rong>pg_dump -f test-dump --no-owner --no-acl -U postgres project_starapp
Password:
```

Step 21

They won't show you what you type so you may have to enter more than once if you are careless like me 😞 but after a few tries you will get it 😊

```
Command Prompt
at doWrite (_stream_writable.js:403:12)
at clearBuffer (_stream_writable.js:542:7)
at onwrite (_stream_writable.js:454:7)
at WriteWrap.onWriteComplete [as oncomplete] (internal/stream_base_commons.js:103:10)
Emitted 'error' event on Socket instance at:
at errorOrDestroy (internal/streams/destroy.js:108:12)
at Socket.onerror (_stream_readable.js:754:7)
at Socket.emit (events.js:314:20)
at errorOrDestroy (internal/streams/destroy.js:108:12)
at onwriteError (_stream_writable.js:418:5)
at onwrite (_stream_writable.js:445:5)
at internal/streams/destroy.js:50:7
at Socket._destroy (net.js:680:5)
at Socket.destroy (internal/streams/destroy.js:38:8)
at afterWriteDispatched (internal/stream_base_commons.js:156:17) {
  errno: 'EPIPE',
  code: 'EPIPE',
  syscall: 'write'
}
pg_dump: error: could not write to output file: Invalid argument

C:\Users\Soon Qing Rong>pg_dump -f test-dump --no-owner --no-acl -U postgres project_starapp
Password:
pg_dump: error: connection to server at "localhost" (:::1), port 5432 failed: FATAL: password authentication failed for
user "postgres"

C:\Users\Soon Qing Rong>pg_dump -f test-dump --no-owner --no-acl -U postgres project_starapp
Password:

C:\Users\Soon Qing Rong>
```

Step 22a

In your command prompt, type this **exact** command:



```
heroku pg:psql --app [db name in Heroku] < test-dump
```


Replace it according to how your database is named

```
[db name in Heroku]: why-is-5110-so-hard
```


Step 23 (Finally)


If all goes well, you will see something like this.
If you do see this, then woohoo you are done!

 Datastores >  postgresql-rectangular-34938

SERVICE heroku-postgresql PLAN hobby-dev BILLING APP  why-is-5110-so-hard

Overview Durability Settings Dataclips


HEALTH

 Available

PRIMARY Yes VERSION 14.5 CREATED an hour ago MAINTENANCE Unsupported ⓘ ROLLBACK Unsupported ⓘ

UTILIZATION


0 of 20

 3,035 of 10,000

9.4 MB

4

CONNECTIONS

ROWS  IN COMPLIANCE

DATA SIZE

TABLES

Step 24

In case you would like to reset your database back to 0 rows, you can type this command

heroku pg:reset -a [db name in pg]

Replace it according to how your database is named

[db name in Heroku]: why-is-5110-so-hard

Then you can start from Step 17 from this slide

Final Remarks

Hope this tutorial is helpful to you!
Have a good day 😊

Fun Fact 1: Life can be colourful, you just need 3 colors to cover everything and we are wearing them 😊 (RGB)

Fun Fact 2: Big Bro Nathan suggest to do this tutorial to help others so lets go! 😊

