Part D: Deploy an Application to Cloud Foundry

Estimated time needed: 30 minutes

Lab Overview

In this hands-on lab, you will deploy a "Hello world" Node.js appliation to IBM Cloud using Cloud Foundry and the CLI (Command Line Interface).

Objectives

After completing this lab, you will be able to:

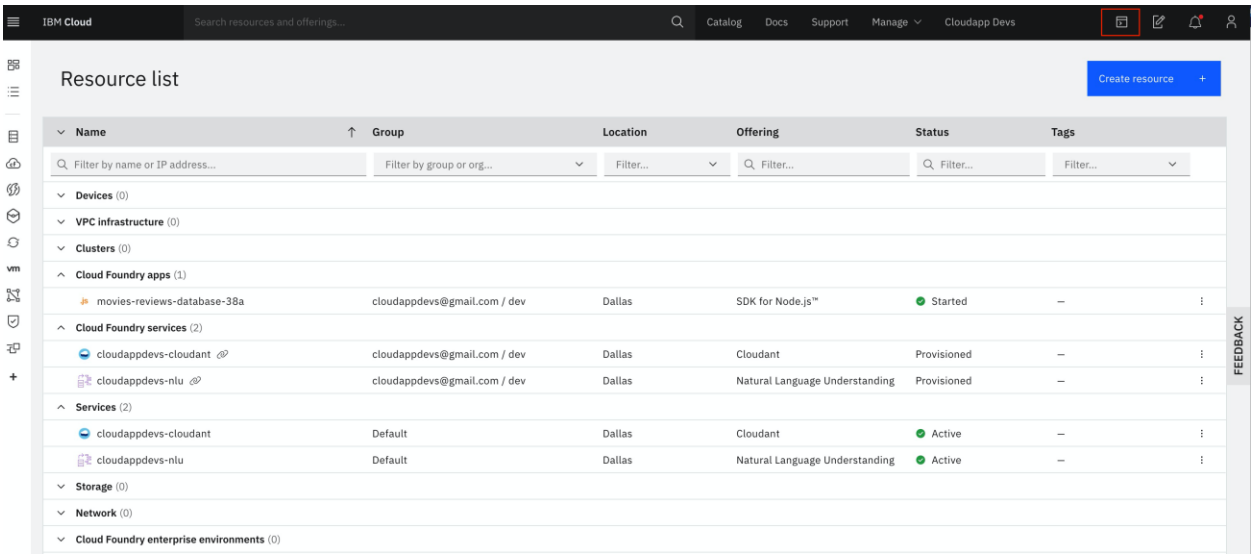
1. Launch the IBM Cloud Shell
2. Explain how to use the IBM Cloud CLI to deploy applications to Cloud Foundry

Lab Instructions

This lab is broken up into the following tasks:

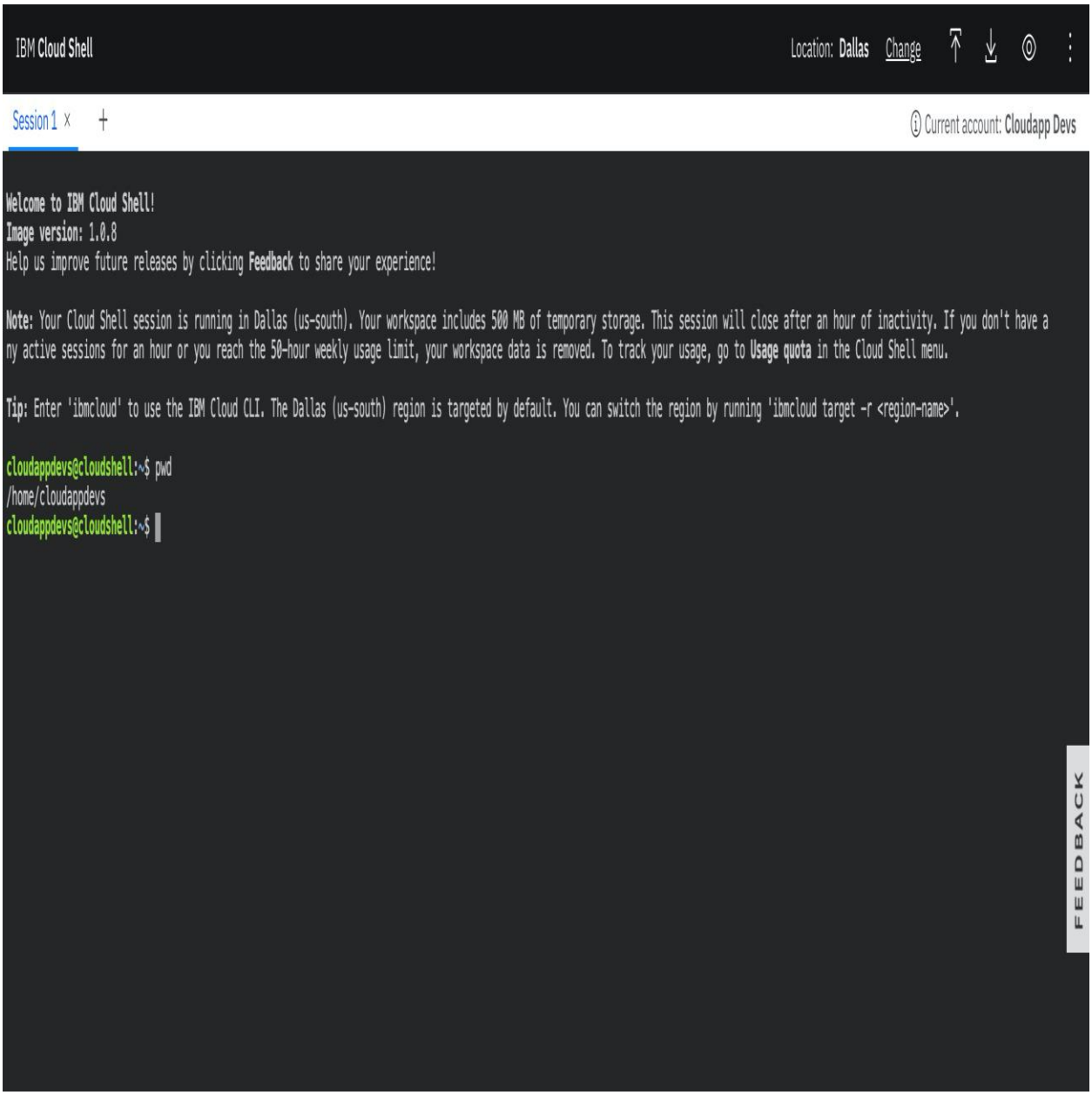
1. Launch the IBM Cloud Shell

For this next step we'll be using the *IBM Cloud Shell*, which is available by clicking on the terminal icon on the top right.



{ width=1024 height=1024 }

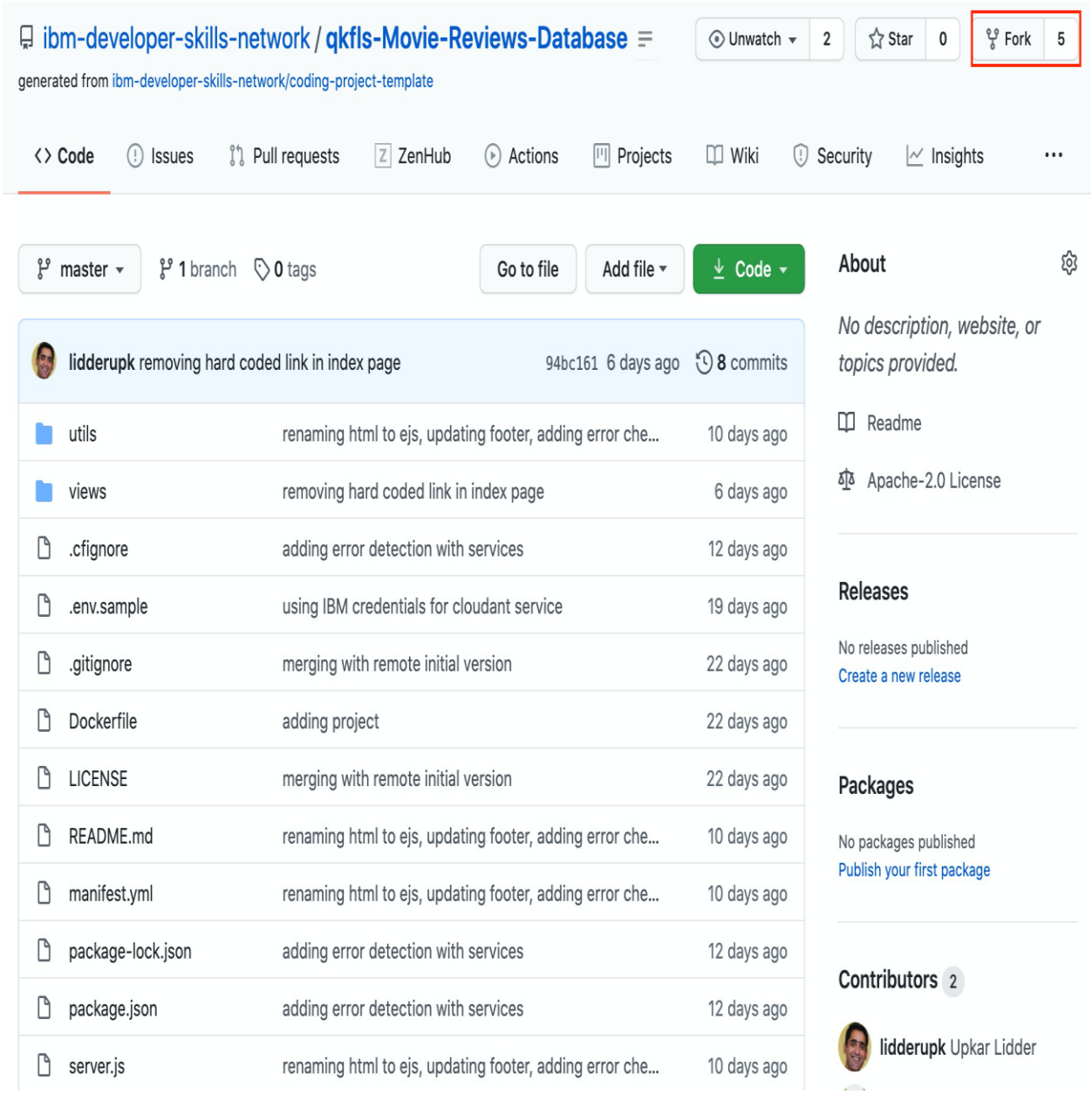
You should see a terminal



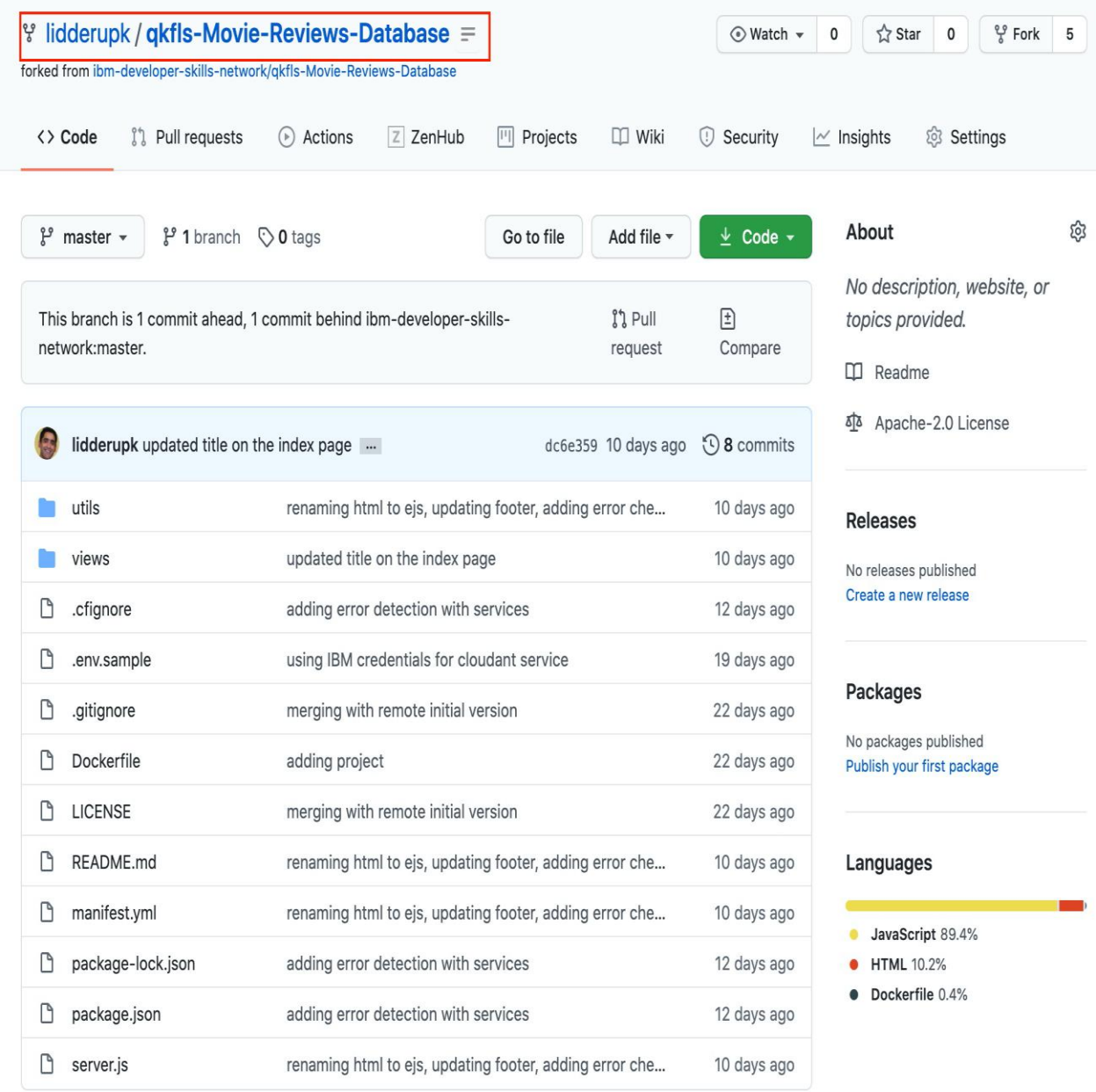
Fork the repository and clone in the shell

Open the Movies Reviews Database Repository available at

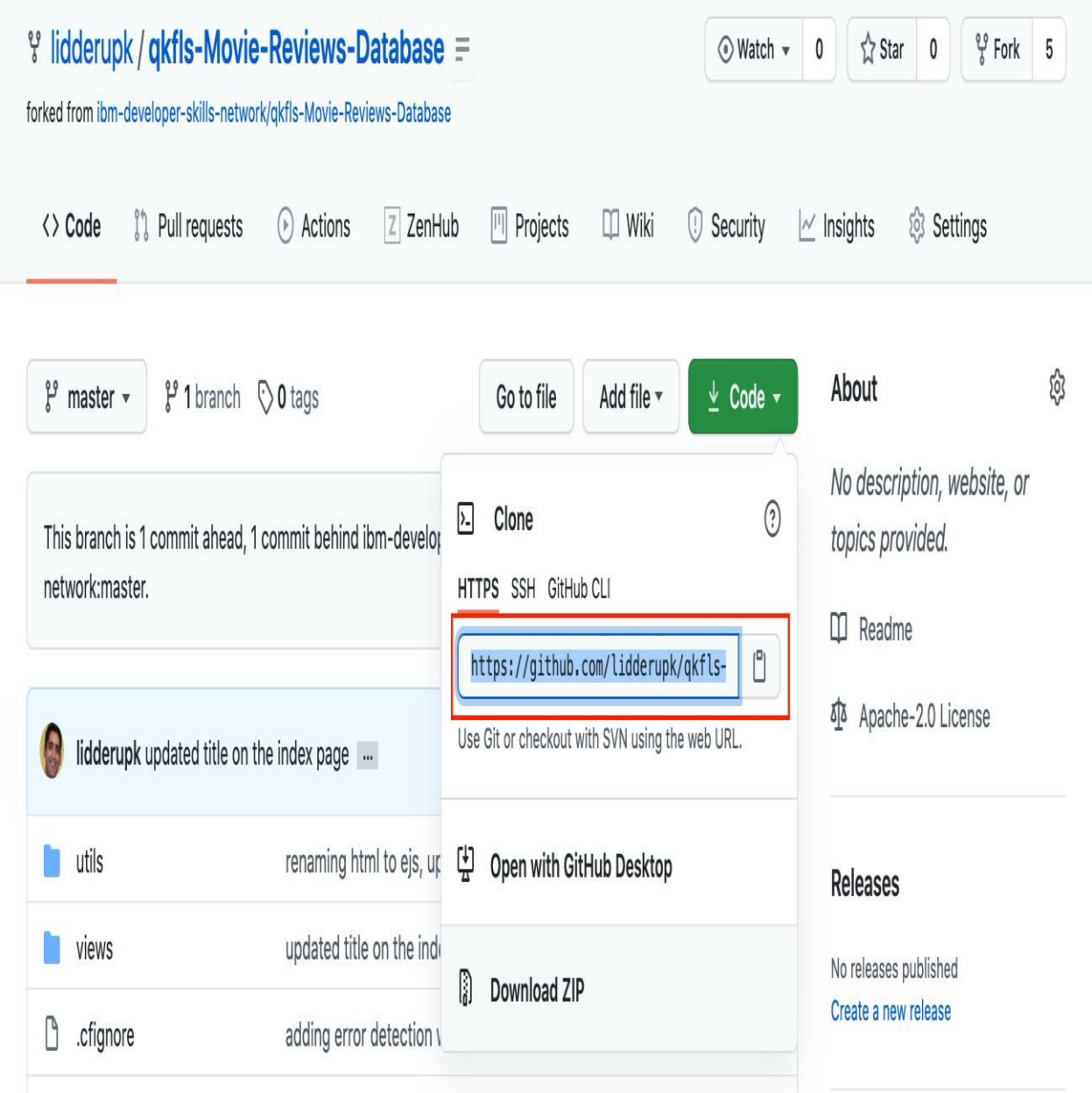
https://github.com/ibm-developer-skills-network/qkfls-Movie-Reviews-Database



Once the repository is forked successfully, you will be taken to your copy under your github account.

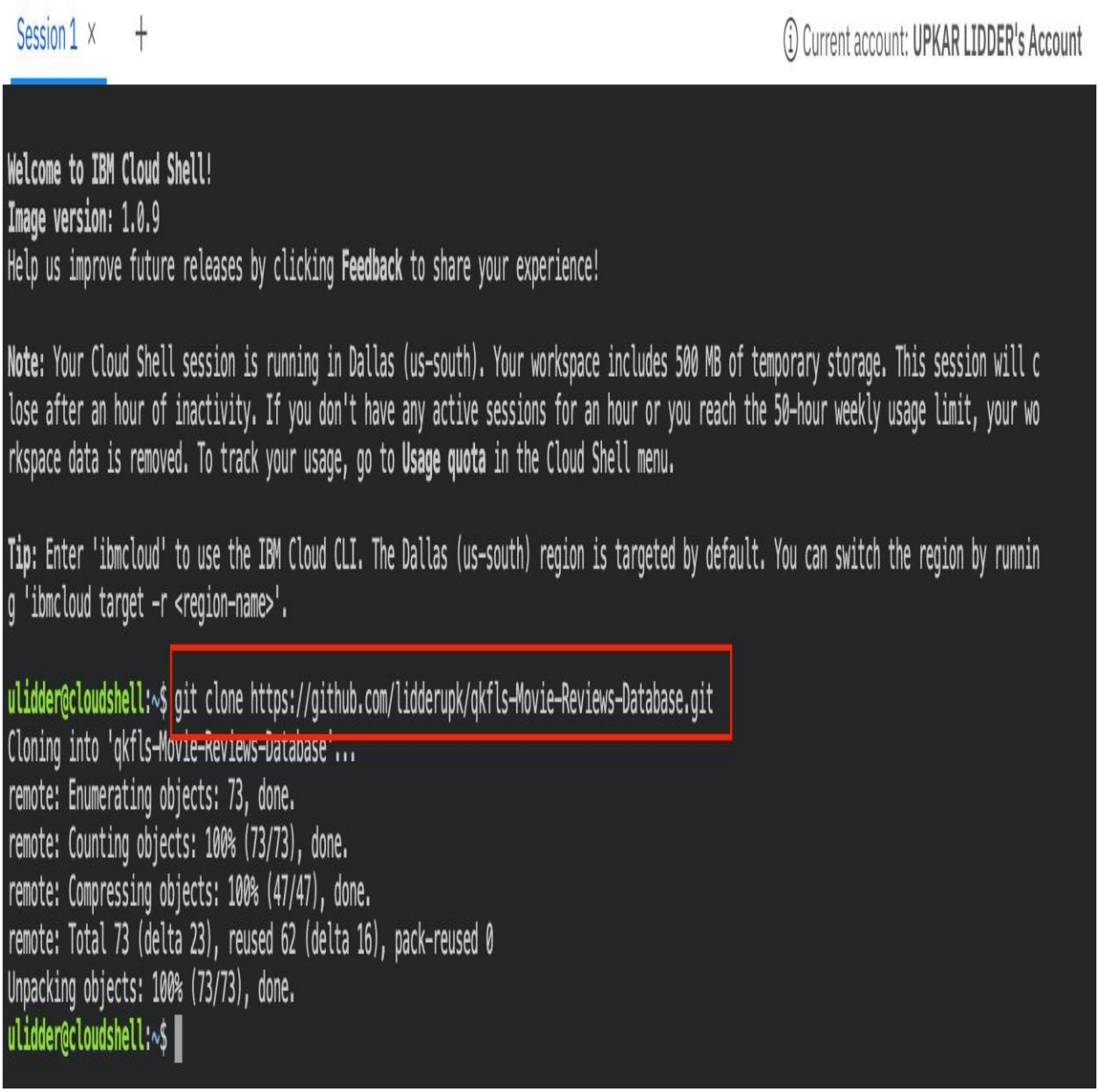


Next, clone the forked code repository that has the source code we want to deploy. Copy the following command into the terminal. You can get the `https` URL of the repository as shown here:



In my case, the command looks as follows:

```
git clone https://github.com/lidderupk/qkfls-Movie-Reviews-Database.git
```



Go into the directory of the cloned repository

```
cd qkfls-Movie-Reviews-Database
```

3. Change application name in the manifest file

Let's modify the source code to produce your changes. Use the Nano text editor to open the manifest.yml file.

```
nano manifest.yml
```

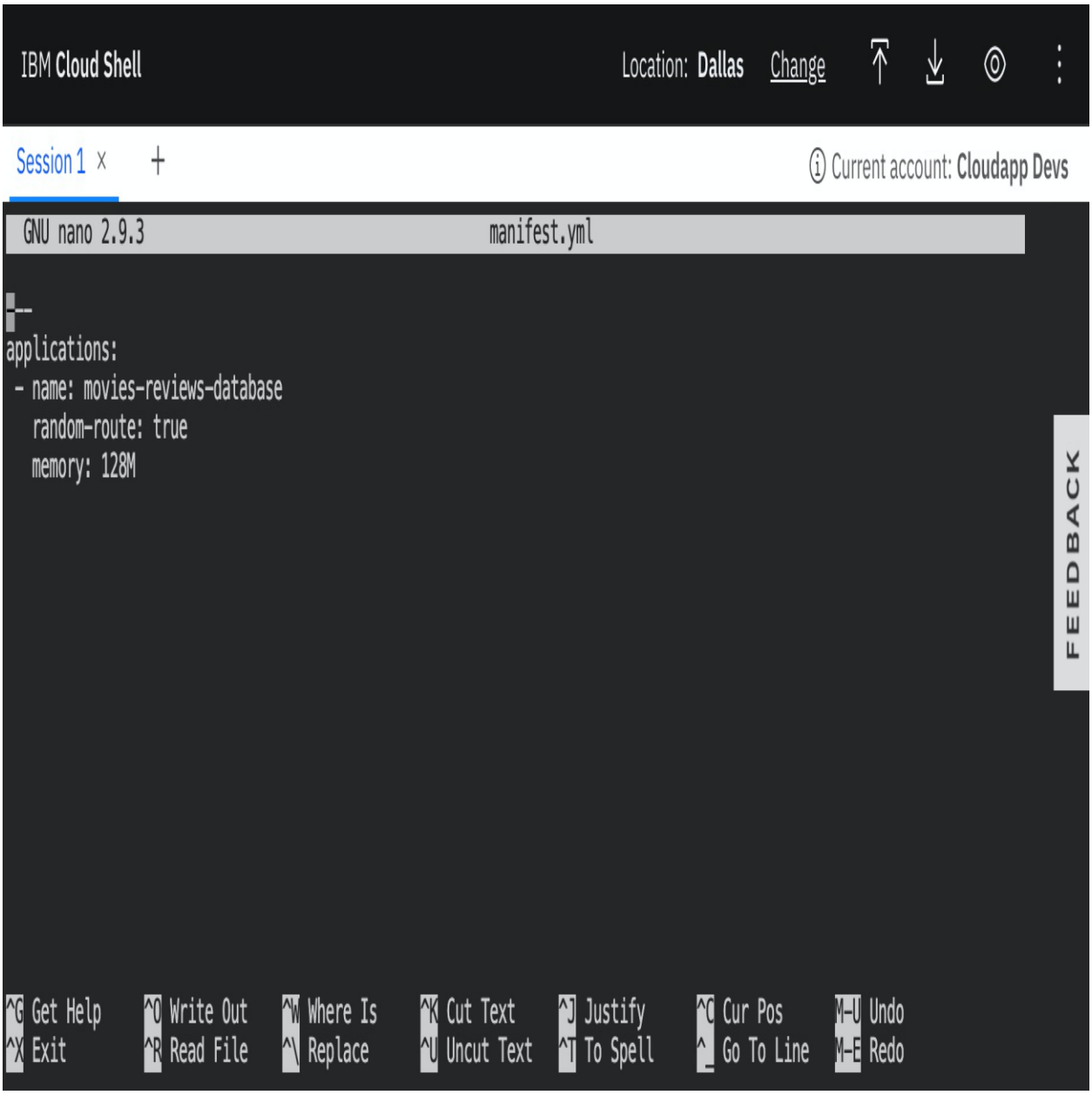


Figure 1-13 Nano text editor

1. Using the cursor keys to navigate, change the application name from **movies-reviews-database** to the name of your application **movies-reviews-database-xxx**.

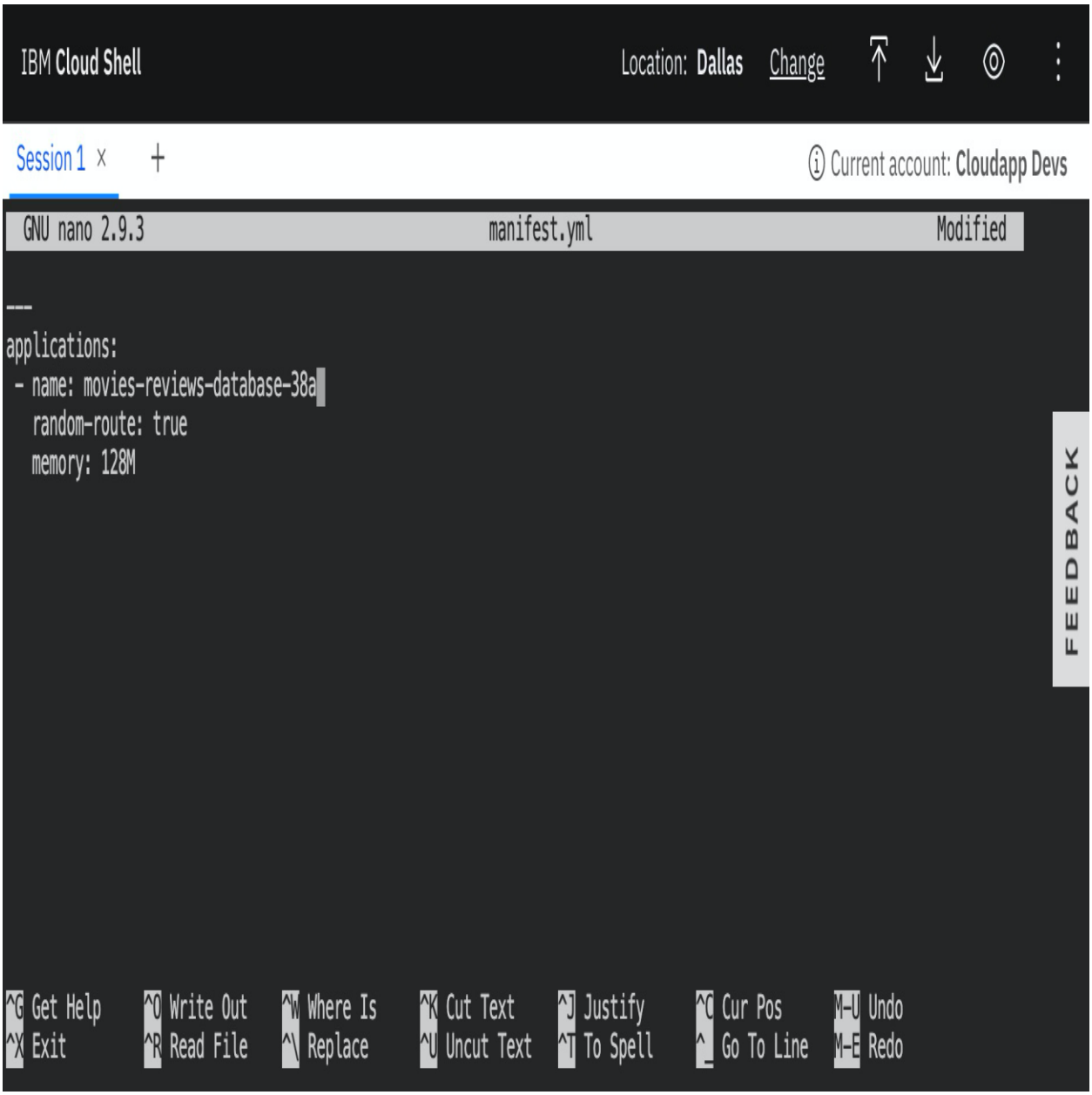


Figure 1-14 Editing text

2. Press CTRL+X to save the file, press Y to save the modified buffer.

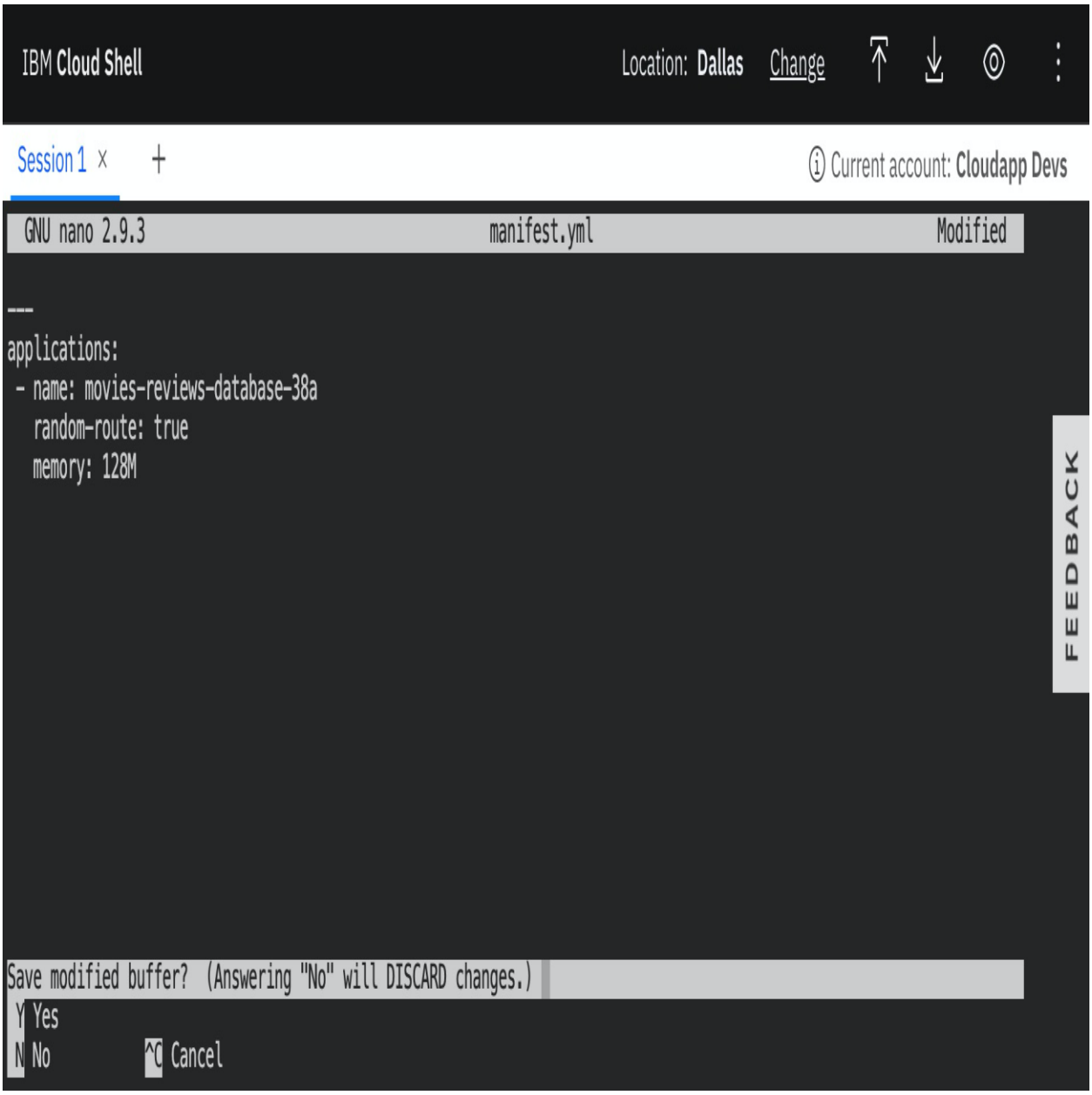


Figure 1-15 Saving the file

3. Verify that the **File Name to Write** is **manifest.yml**, and then press Enter.

Figure 1-15 verify the file

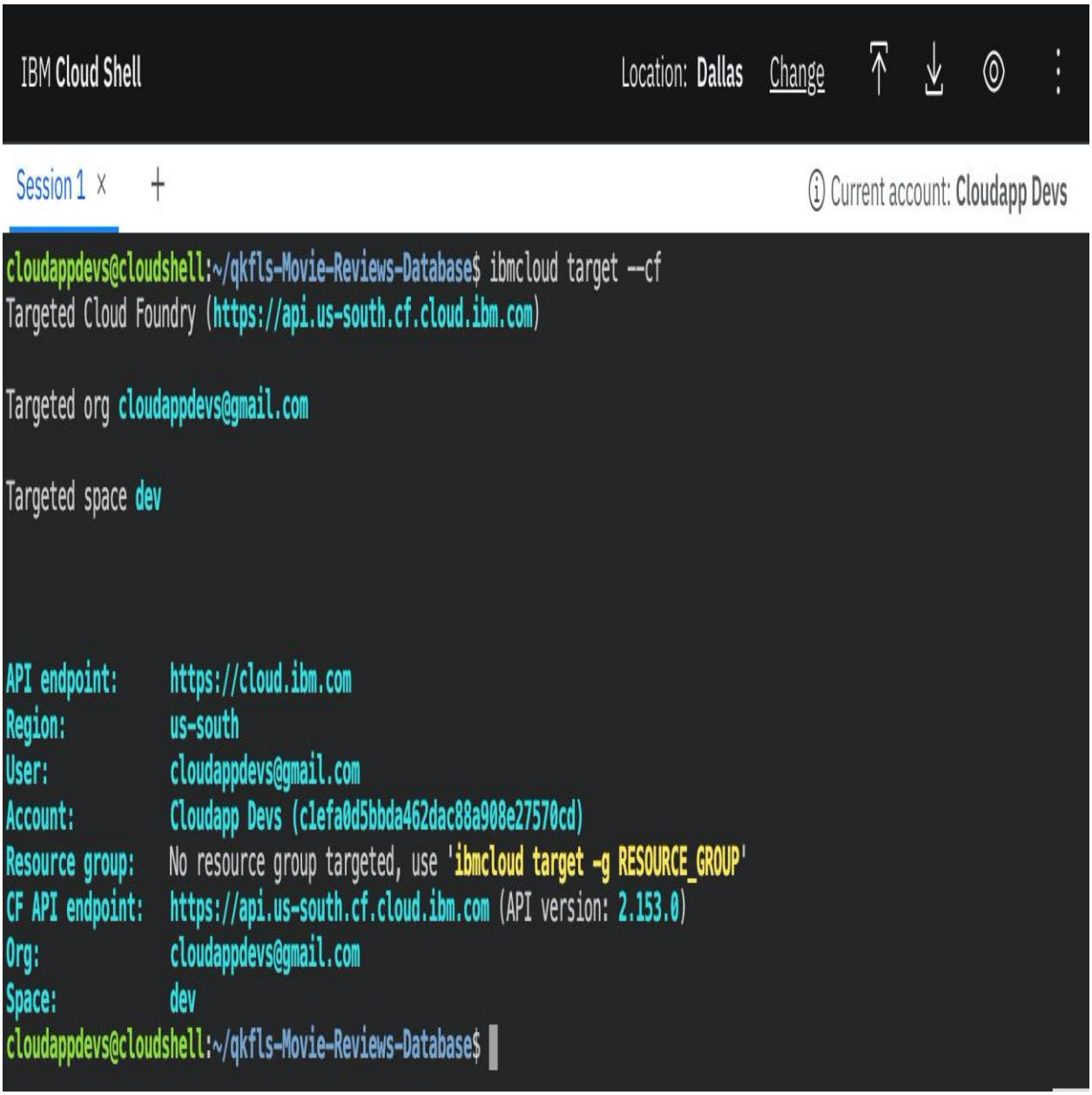
You can confirm that the manifest file has the right application name by writing it to the terminal using the `cat` command.

5. Deploy the application

To deploy the application with Cloud Foundry we first we need to target a Cloud Foundry API endpoint. To do this, run the following interactive command.

```
ibmcloud target --cf
```

You should see output like the example below:



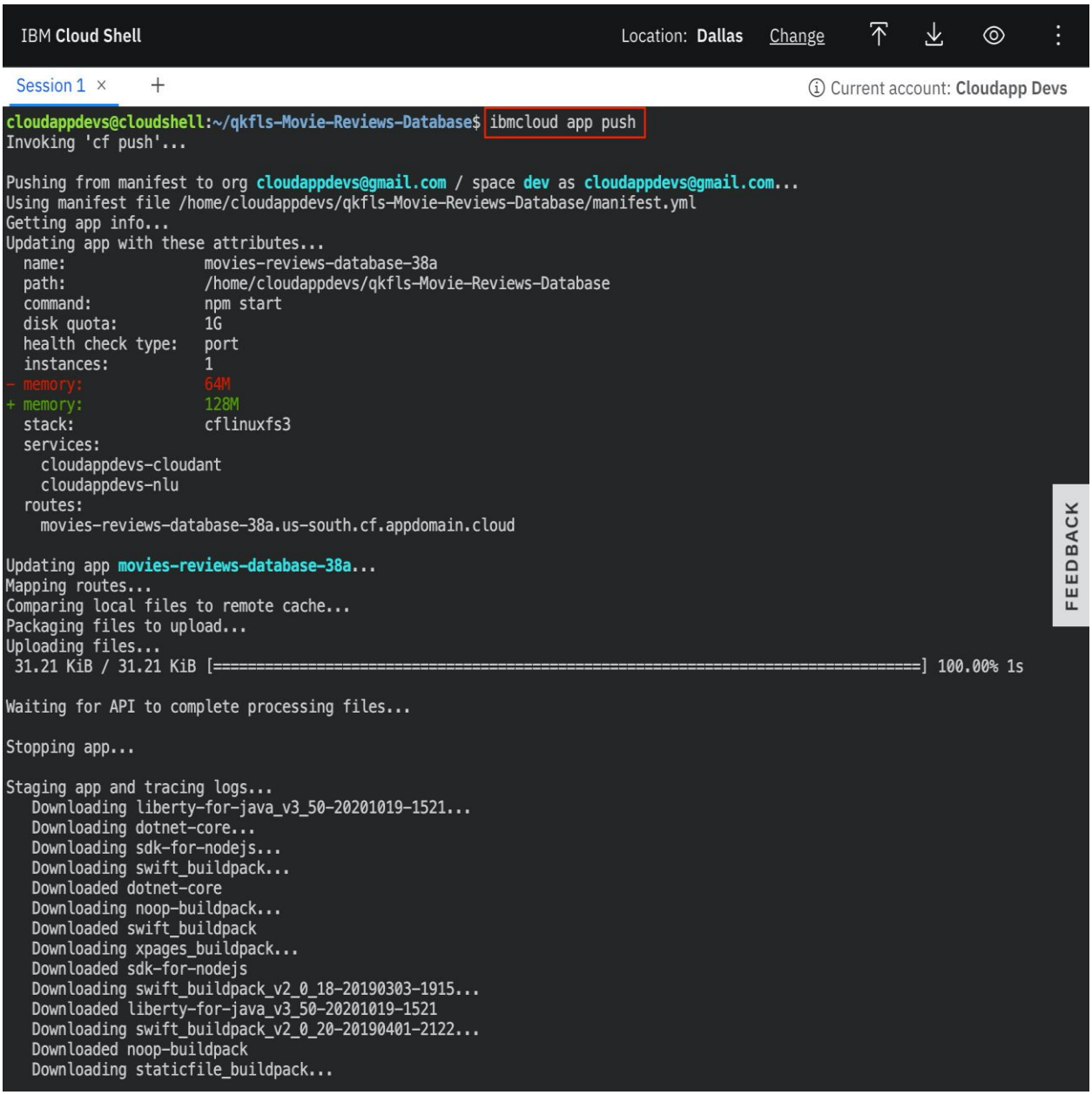
We can now deploy our application with `cf push`.

```
ibmcloud app push
```

You should see output like the example below:

```
$ ibmcloud cf push
Invoking 'cf push'...

Pushing from manifest to org cloudappdevs@gmail.com / space dev as
cloudappdevs@gmail.com...
Using manifest file /home/cloudappdevs/qkfls-Movie-Reviews-Database/manifest.yml
Getting app info...
Updating app with these attributes...
```

```
  name:                movies-reviews-database-38a
  path:                /home/cloudappdevs/qkfls-Movie-Reviews-Database
  command:             npm start
  disk quota:          1G
  health check type:   port
  instances:           1- memory:              64M
+ memory:              128M
  stack:               cflinuxfs3
  services:
    cloudappdevs-cloudant
    cloudappdevs-nlu
  routes:
    movies-reviews-database-38a.us-south.cf.appdomain.cloud

Updating app movies-reviews-database-38a...
Mapping routes...
Comparing local files to remote cache...
Packaging files to upload...

...


Waiting for app to start...

name:              movies-reviews-database-38a
requested state:   started
routes:            movies-reviews-database-38a.us-south.cf.appdomain.cloud
last uploaded:     Mon 26 Oct 19:31:17 UTC 2020
stack:             cflinuxfs3
buildpacks:        sdk-for-nodejs

type:            web
instances:       1/1
memory usage:    128M
start command:   npm start
     state     since                  cpu    memory         disk       details
#0   running   2020-10-26T19:31:41Z   0.0%   40K of 128M    8K of 1G
```



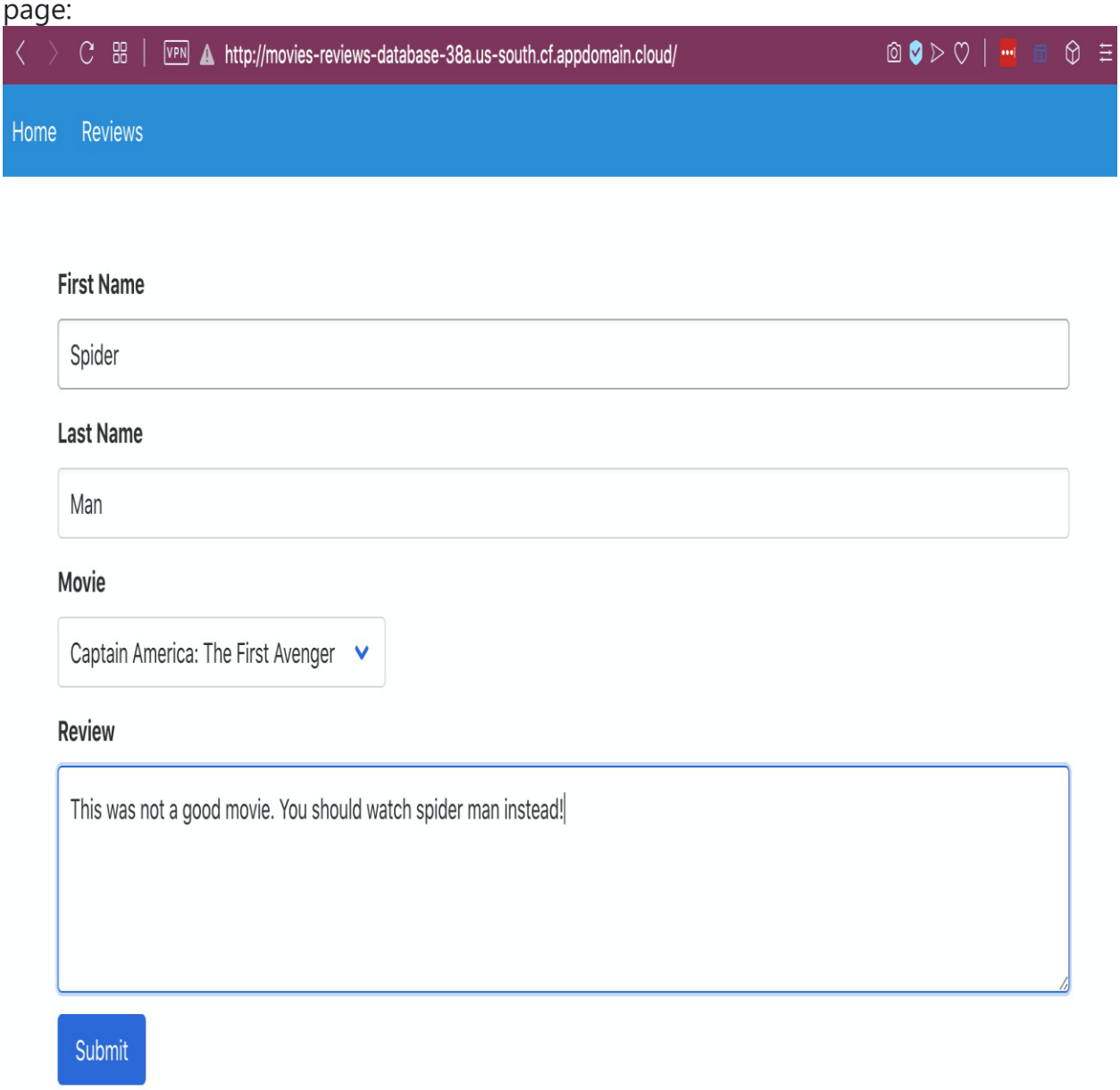
5. Access the web app

Navigate to the URL that is show in the `routes` value, in the example above it is:

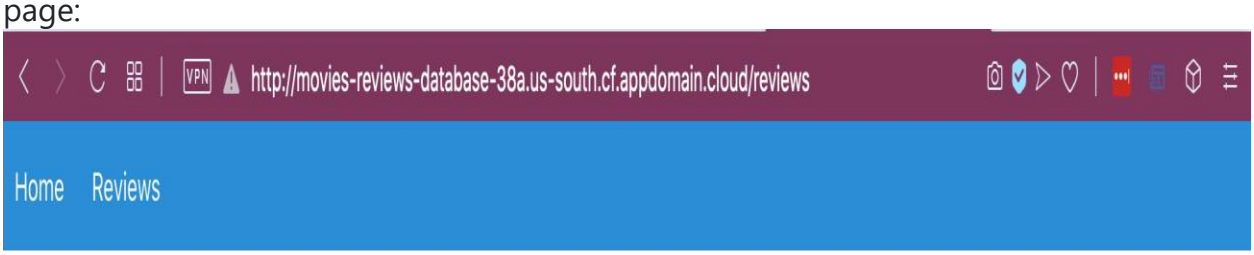
`movies-reviews-database-38a.us-south.cf.appdomain.cloud`

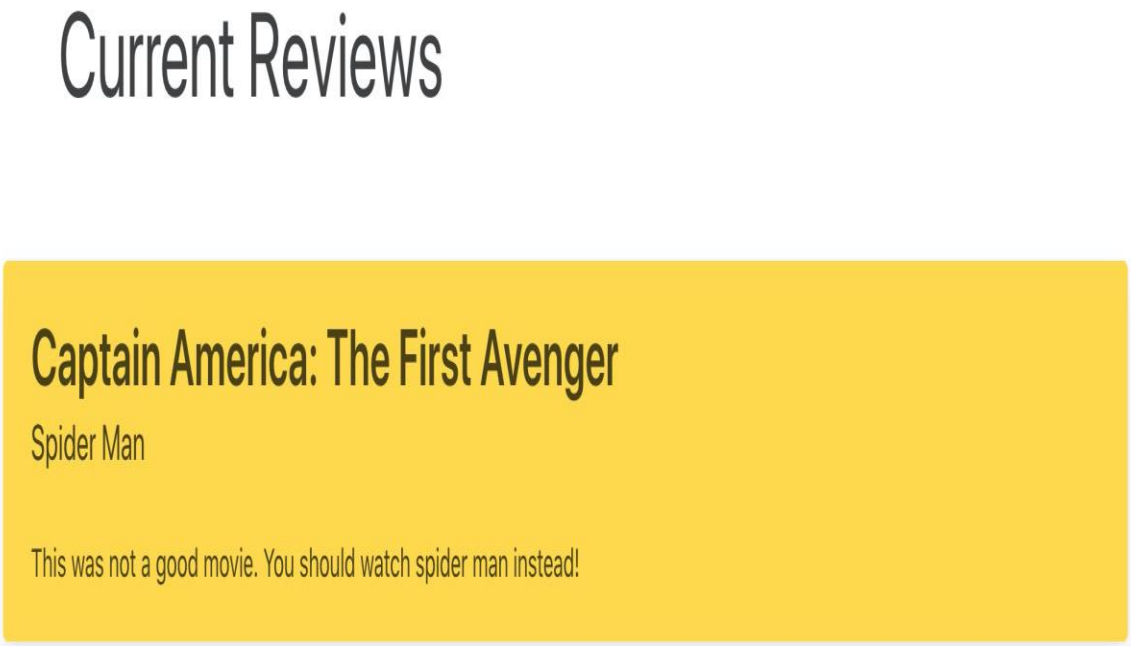
If all goes well - you should see a website with two menu items. **Home** should have a form that lets the user enter a movie review. **Reviews** should show the reviews that users have already entered. If the services were not created or connected to the application, you will see some error messages on both pages. If everything was connected properly, the pages will look as follows:

Home page:


http://movies-reviews-database-38a.us-south.cf.appdomain.cloud/
Home
Reviews
First Name
Spider
Last Name
Man
Movie
Captain America: The First Avenger
Review
This was not a good movie. You should watch spider man instead!
Submit

Reviews page:





Congratulations! We hope you've deployed an application to Cloud Foundry on IBM Cloud using the command line interface.