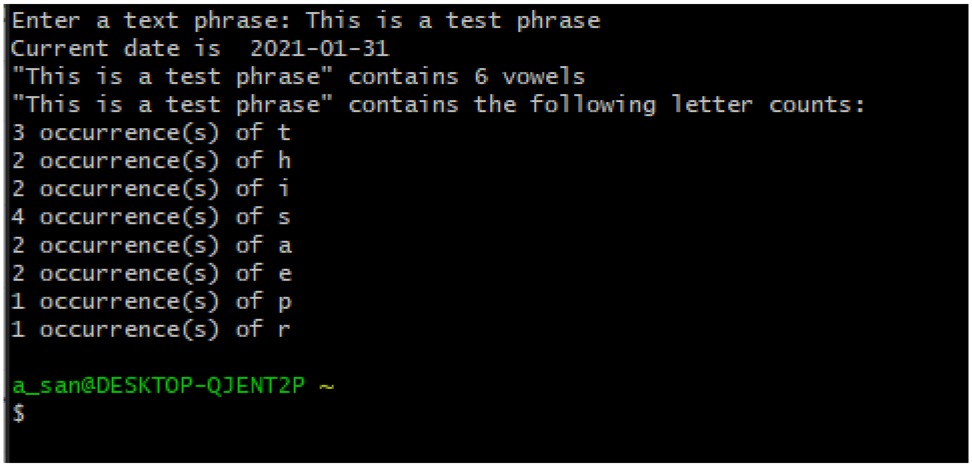
Docker Lab

Build a Python-based image and container for hosting/executing a Python app:

- In your browser, navigate to the public GitHub repository at https://github.com/KernelGamut32/dockerlab-repo1
- Fork the repository to create a copy under your GitHub account
- Using the URL for your forked version of the repository, clone the repository locally
- This is a simple Python app containing string functions and a date formatting operation



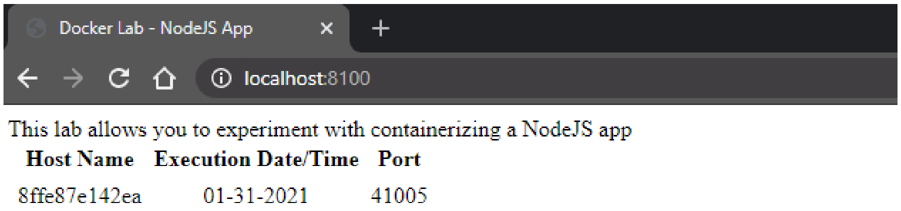
```
Enter a text phrase: This is a test phrase
Current date is  2021-01-31
"This is a test phrase" contains 6 vowels
"This is a test phrase" contains the following letter counts:
3 occurrence(s) of t
2 occurrence(s) of h
2 occurrence(s) of i
4 occurrence(s) of s
2 occurrence(s) of a
2 occurrence(s) of e
1 occurrence(s) of p
1 occurrence(s) of r

a_san@DESKTOP-QJENT2P ~
$
```

- Using Docker Hub (https://hub.docker.com), search for a Python image and use the provided information on usage to create a Dockerfile for building a new docker image
- Use docker command(s) to build a new image using a tag of your choosing
- Use docker command(s) to list details for all local images, including the newly created image
- Using the local image, create a new container for hosting the Python runtime to support execution of the Python app
- The app prompts the user for input – make sure the created container allows for interaction from the user for responding to prompt(s)
- Use docker command(s) to list details for all containers, including the newly created container
- Use docker command(s) to execute the python app in the container a second time without creating a new container (i.e., use the existing container for repeat execution)
- Use docker command(s) to list the folder contents for the container

Build a NodeJS-based image and container for hosting/executing a NodeJS app:

- In your browser, navigate to the public GitHub repository at https://github.com/KernelGamut32/dockerlab-repo2
- Fork the repository to create a copy under your GitHub account
- Using the URL for your forked version of the repository, clone the repository locally
- This is a simple NodeJS app containing tabular display (like the app demonstrated on Pluralsight)

Docker Lab



This lab allows you to experiment with containerizing a NodeJS app

Host Name	Execution Date/Time	Port
8ffe87e142ea	01-31-2021	41005

- Using Docker Hub (https://hub.docker.com), search for a Node image and use the provided information on usage to create a Dockerfile for building a new docker image; you may also find https://nodejs.org/en/docs/guides/nodejs-docker-webapp/ helpful
- Use docker command(s) to build a new image using a tag of your choosing
- Use docker command(s) to list details for all local images, including the newly created image
- Using the local image, create a new container for hosting the NodeJS runtime to support execution of the NodeJS app
- The app is configured to run at port 41005 (i.e., using http://localhost:41005 in the browser) – for the new container, create a port mapping of 8100 to 41005 (i.e., user will be able to access the app in the browser using http://localhost:8100 when the container is running)
- Use docker command(s) to check logs for the newly created container
- Use docker command(s) to list details for all containers, including the newly created container
- Ensure that the container continues running – open different browser tabs/sessions and hit the same URL (http://localhost:8100) to confirm ongoing application operation
- Use docker command(s) to view the contents of the deployed server.js file in the container

Cleanup:

- Use docker command(s) to delete both containers
- Use a single docker command to delete all local images