Building images

Getting setup

$ docker pull ubuntu:latest

```
cd@DESKTOP-VCNQ3D1:~$ docker pull ubuntu:latest
latest: Pulling from library/ubuntu
4d32b49e2995: Pull complete
Digest: sha256:bea6d19168bbfd6af8d77c2cc3c572114eb5d113e6f422573c93cb605a0e2ffb
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
cd@DESKTOP-VCNQ3D1:~$
```

$ docker images

```
cd@DESKTOP-VCNQ3D1:~$ docker images
REPOSITORY      TAG        IMAGE ID        CREATED           SIZE
delner/ping     latest     9869cc630d91    37 minutes ago    170MB
ubuntu          latest     ff0fea8310f3    8 days ago        72.8MB
ubuntu          16.04      b6f507652425    6 months ago      135MB
ubuntu          16.10      7d3f705d307c    4 years ago       107MB
cd@DESKTOP-VCNQ3D1:~$
```

Creating a Dockerfile

1. Create a new file named Dockerfile in your working directory:

```
cd@DESKTOP-VCNQ3D1:~$ touch dockerfile
cd@DESKTOP-VCNQ3D1:~$
```

2. Open Dockerfile with your favorite text editor.
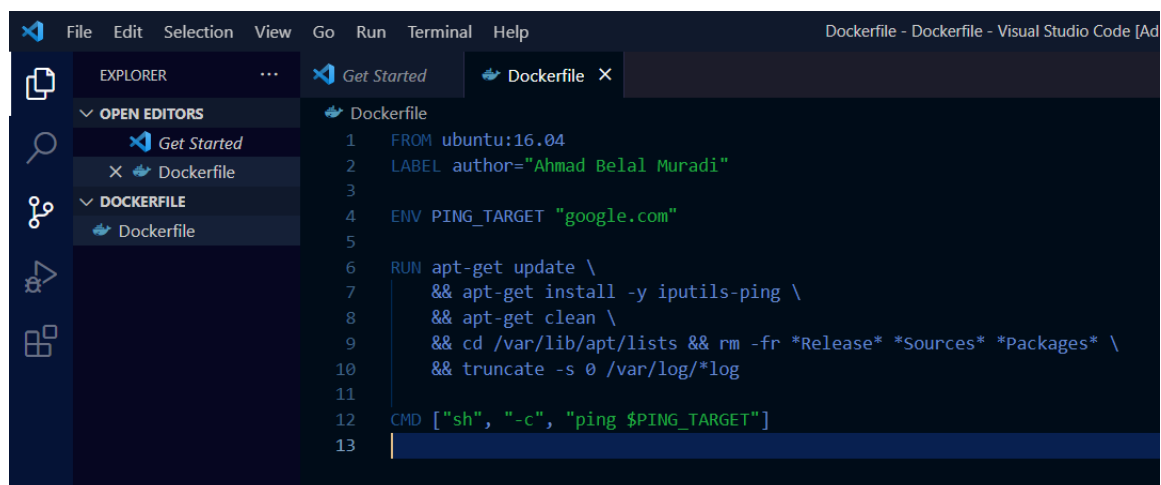
3. Inside the file, we'll need to add some important headers.

   FROM ubuntu:16.04
   LABEL author="David Elner"

4. Then we'll need to add some commands to modify the image.

   RUN apt-get update

   RUN apt-get install -y iputils-ping

Building the Dockerfile

1. Let's build our image

```
$ docker build -t 'delner/ping' .
```

Optimizing the Dockerfile

RUN apt-get clean \

Other Dockerfile directives

2. **COPY:** Copy files from your host into the Docker image.
3. **WORKDIR**: Specify a default directory to execute commands from.
4. **CMD**: Specify a default command to run.
5. **ENV**: Specify a default environment variable.
6. **EXPOSE**: Expose a port by default.
7. **ARG**: Specify a build-time argument (for more configurable, advanced builds.)