Docker
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1. What user are you logged in as by default?
   - Root

2. If you start and then exit an interactive container, and then use the **docker run -it ubuntu:xenial /bin/bash** command again, is it the same container? How can you tell?
   - No. Each time Docker creates a new container with different IDs and names. We can verify this by using the command **docker ps -a**.

3. Run the image you just built. Since we specified the default CMD, you can just do **docker run -it mypython:latest**. What do you observe?
   - I am using Python 3.6.9 on a virtual machine of Linux in an isolated mode.

4. Write and build a Dockerfile that installs the packages fortune and fortunes-min and runs the fortune executable (located in /usr/games/fortune after you install it). Note that you won't need to use the -it flags when you run the container as fortune doesn't need STDIN. Submit your Dockerfile with this lab. Hint: if you're having trouble writing your Dockerfile, try booting an interactive container and installing both packages. Translate what you did into a Dockerfile. How can you translate what you did interactively to a Dockerfile?
   - See the attached Dockerfile.

5. Paste the output of your docker images command after questions 1 and 2.
   - Q1 output:
     ```
     liang@Tzus-MacBook-Air ~ % docker run -it mypython:latest

     Python 3.6.9 (default, Mar 10 2023, 16:46:00)
     [GCC 8.4.0] on linux
     Type "help", "copyright", "credits" or "license" for more
     information.
     ```

   - Q2 output:
     ```
     Good day to deal with people in high places; particularly lonely
     stewardesses.
     ```

   - Docker images:
     ```
     REPOSITORY      TAG         IMAGE ID        CREATED         SIZE
     myfortune       latest      629e3689a3fb    13 minutes ago  149MB
     mypython        latest      05f97730a32e    2 weeks ago     188MB
     ```

6. With httpd running in a detached container, run /bin/bash on the same container and paste the output of ps aux. Observe that there's very few processes running as compared to running ps aux on your VM. Why is this the case?
   - httpd starts the Apache service directly without loading an interactive shell or additional setup. In contrast, running /bin/bash launches a full interactive environment, which takes longer to initialise.

7. Paste your Dockerfile for the Node.js web application
   - See the attached Docker file.
8. Paste your docker-compose.yml file
   - See the attached yml file.