

# Home Exercise

1. Write a Python script in order to complete the task detailed in the PDF file named "Forter\_Challenge\_name\_count.pdf".
2. Go online and read a little bit about [Docker](#), then answer the following questions:
  - a. What is a Dockerfile?  
What does the following Dockerfile instructions mean:
    - i. FROM
    - ii. CMD
    - iii. RUN
    - iv. ENTRYPOINT
  - b. What is a docker image?
  - c. What is a docker container?
3. Create a Dockerfile that executes the Python script you created in step #1.
  - a. Include necessary instructions in the Dockerfile such as base image selection, installation of Python dependencies, and copying the Python script into the container.
  - b. Save the Dockerfile in the same directory as your Python script.
4. Build the Docker image using the "docker build" command.
  - a. Make sure that executing the following command, executes your python script within the docker image: **docker run <IMAGE\_NAME>**
  - b. Verify that the Docker container executes the Python script as expected and produces the desired output.
5. Once you have successfully created and tested the Docker image to execute your Python script, submit the following:
  - a. Dockerfile
  - b. Python script file
  - c. Any additional instructions or documentation related to building and running the Docker image