Optional Exercise: Deploying a Spring Boot RESTful Service into Docker

In this exercise, you will deploy a Spring Boot-based RESTful service into a Docker container.

Time: 20 minutes
Format: Programming exercise

1. Open the `DockerWarehouseService` Eclipse project.
2. Examine the `Dockerfile`.
   a. This file controls how the Docker image will be created.

3. Build a Docker image for this project by doing the following steps:
   a. Right click on the project (in the Project Explorer window) and choosing Run As | Maven build …
   b. In the Goals text box type: clean package
   c. Then click Run

4. Verify that the uber jar file is in the target folder
   a. You may need to Refresh the folder to see the file.
   b. Note the name of the uber jar file.
      - DockerWarehouseService-1.0.0.jar

5. Open a Command window as an Administrator
   a. Double click on the desktop icon
   b. CMD Prompt (as Admin)

6. Change to the D: drive in the command window
   a. Then change to the directory for the DockerWarehouseService project
   b. Don't remember where it is?
      - In STS, right click on the project and choose Show In | System Explorer

7. Build the Docker image by running the following command:

```
docker build -t warehouse/dockerwarehouse .
```

8. Run the Docker image by running the following command:

```
docker run -p 8080:8080 warehouse/dockerwarehouse
```

9. The application should now be available on http://localhost:8080
    a. Verify this by entering the URL in your favorite browser
    b. Or use Postman or ARC

10. Open a second command window as Administrator.

11. Run the following command in the second command window to view the list of Docker containers:

    ```
    docker ps
    ```

12. To stop the Docker container, run this command with the processId (or unique name) displayed by the previous command:

    ```
    docker stop {processId}
    ```