Guided Exercise: 02

1. Create the /var/local/mysql directory with the correct permission.
    a. Create the host folder to store the MySQL database data.
    b. Apply the appropriate SELinux context to the host folder.
    c. Change the owner of the host folder to the mysql user (uid=27) and mysql group (gid=27).
2. Deploy a MySQL container instance using the following characteristics:
    a. **Name:** mysql-1
    b. **Run as Daemon:** yes
    c. **Volume:** from /var/local/mysql host folder to /var/lib/mysql/data container folder.
    d. **Container image:** rhel:5.7
    e. **Port forward:** no
    f. **Environment variables:**
        i. **MYSQL_USER:** user1
        ii. **MYSQL_PASSWORD:** mypa55
        iii. **MYSQL_DATABASE:** items
        iv. **MYSQL_ROOT_PASSWORD:** r00tpa55
    g. **Create and start the container.**
    h. **Verify that the container was started correctly.**
3. **Stop the container gracefully.**
4. **Create a new container with the following characteristics:**
    a. **Name:** mysql-2
    b. **Run as a daemon:** yes
    c. **Volume**: from /var/local/mysql host folder to /var/lib/mysql/data container.
    d. **Container image:** mysql:5.7
    e. **Port forward:** 13306 to 3306
    f. **Environment variables:**
        i. **MYSQL_USER:** user1
        ii. **MYSQL_PASSWORD:** mypa55
        iii. **MYSQL_DATABASE:** items
        iv. **MYSQL_ROOT_PASSWORD:** r00tpa55
    g. **Create and start the container.**
    h. **Verify that the container was started correctly.**
5. **Save the list of all containers to the /tmp/my-containers file.**
6. **Access the bash shell inside the container and verify that the items database and the Item table are still available. Confirm also that the table contains data.**
    a. **Access the bash shell inside the container.**
    b. **Connect to the MySQL server.**
    c. **List all databases and confirm that the items database is available.**
    d. **List all tables from the items database and verify that the Item table is available.**
    e. **View the data from the table.**
    f. **Exit from the MySQL client and from the container shell.**
7. Delete the containers and resources create by this tab.
    a. Stop the running container.
    b. Remove the container storage.
    c. Remove the container image.
    d. Remove the file created to store the information about the containers.

e. Remove the host directory used by the container volumes.