How to Set Up Development Environment

1. Install Software/Dependencies
    a. Install Eclipse IDE
        i. The installation file can be found on the following website:
            1. https://www.eclipse.org/downloads/packages/eclipse-ide-java-developers/oxygen1a
        ii. Ensure that the correct OS installation file for your machine is selected (can be found below 'Download Links' on website).
    b. Install MySQL Workbench
        i. The installation file can be found on the following website:
            1. https://dev.mysql.com/downloads/workbench/
        ii. Ensure that the correct OS is selected (can be found below 'Select Operating System: ').
        iii. Click 'Download' button
    c. Install MySQL Server
        i. The installation file can be found on the following website:
            1. https://dev.mysql.com/downloads/mysql/
        ii. Ensure that the correct OS is selected (can be found below 'Select Operating System: ').
    d. Click 'Download' button
2. Get Project Files on Machine
    a. Enter 'git clone https://github.com/ashhcree17/cs414-f17-801-Ashton.git' into the terminal/command line prompt on your machine.
        i. This step copies the project source code onto your machine.
3. Get Project Files into Eclipse IDE
    a. Open Eclipse IDE.
    b. A prompt to enter an Eclipse workspace name will appear. This workspace name is not important for successful access to the project, so its name can be anything (e.g., "eclipse-workspace", "cs414-workspace", etc).
    c. Select 'File'
    d. Select 'Import...'
    e. Select 'Gradle'
    f. Select 'Existing Gradle Project'
    g. Select 'Browse...' (location: to right of 'Project root directory' input bar).
    h. Navigate to the location of the previously cloned git repository folder.
    i. Click 'Open' button (project source files will appear)
4. Start MySQL Server
    a. For a Windows machine, enter ' "C:\Program Files\MySQL\MySQL Server 5.7\bin\mysqld" --console' (adjust path name as necessary)

    b. For a Macintosh machine, enter 'sudo launchctl load /Library/LaunchDaemons/mysql.agent.plist' (path name should not need to be adjusted)
5. Get Project Database into MySQL Workbench
    a. Open MySQL Workbench.
    b. Create New Connection (and Connect)
        i. Click [+] button to right of 'MySQL Connections' title seen on the home screen.
        ii. In the resulting 'Setup New Connection' form that displays, do not enter information or make any changes from what is default.
        iii. Click 'OK' button.
        iv. Select the newly created 'Local instance 3306' database to open.
    c. Import Data
        i. Select 'Data Import/Restore' under the 'Management' section of the Workbench left side panel.
        ii. Click the radio button to the left of 'Import from Self-Contained File'.
        iii. Check if the input field found to the right of 'Import from Self-Contained File' has a file auto-populated in it.
            1. If this file is the .sql file found in the project git repository previously cloned onto your machine, you may continue to Step iv.
            2. If this file is not the .sql file or there is no file auto-populated, then click the '…' button.
                a. Navigate to the location of the previously cloned git repository folder.
                b. Select the file named 'globo_gym_db.sql'.
        iv. Click 'Start Import' button at bottom right of screen.

<u>How to Run the System</u>

1. Enter './gradlew clean bootRun' into command line
2. Visit 'localhost:8080/sdnext' into address bar of an Internet browser

<u>How to Run Tests</u>

1. By Command Line
    a. Enter './gradlew clean build' into command line
2. By Eclipse
    a. Expand 'src' folder in 'globoGymMS' directory
        i. Expand src --> test --> java --> globoGymMS, AND
        ii. Expand src --> integrationTest --> java --> globoGymMS
    b. Right-click the folder 'globoGymMS' for src/test/java

c. Select 'Run As' --> 'JUnit Test'
d. Repeat Steps b. and for src/integrationTest/java

References

1. https://dev.mysql.com/doc/workbench/en/wb-admin-export-import-management.html
2. https://dev.mysql.com/doc/mysql-monitor/3.4/en/mem-starting-agent-osx.html
3. https://dev.mysql.com/doc/refman/5.7/en/windows-server-first-start.html
4. https://dev.mysql.com/doc/workbench/en/wb-mysql-connections-new.html
5. https://stackoverflow.com/questions/17371639/how-to-store-arrays-in-mysql
6. https://www.w3schools.com/sql/sql_primarykey.asp
7. http://www.joinfu.com/2005/12/managing-many-to-many-relationships-in-mysql-part-1/
8. https://www.dineshonjava.com/spring-mvc-with-hibernate-crud-example/