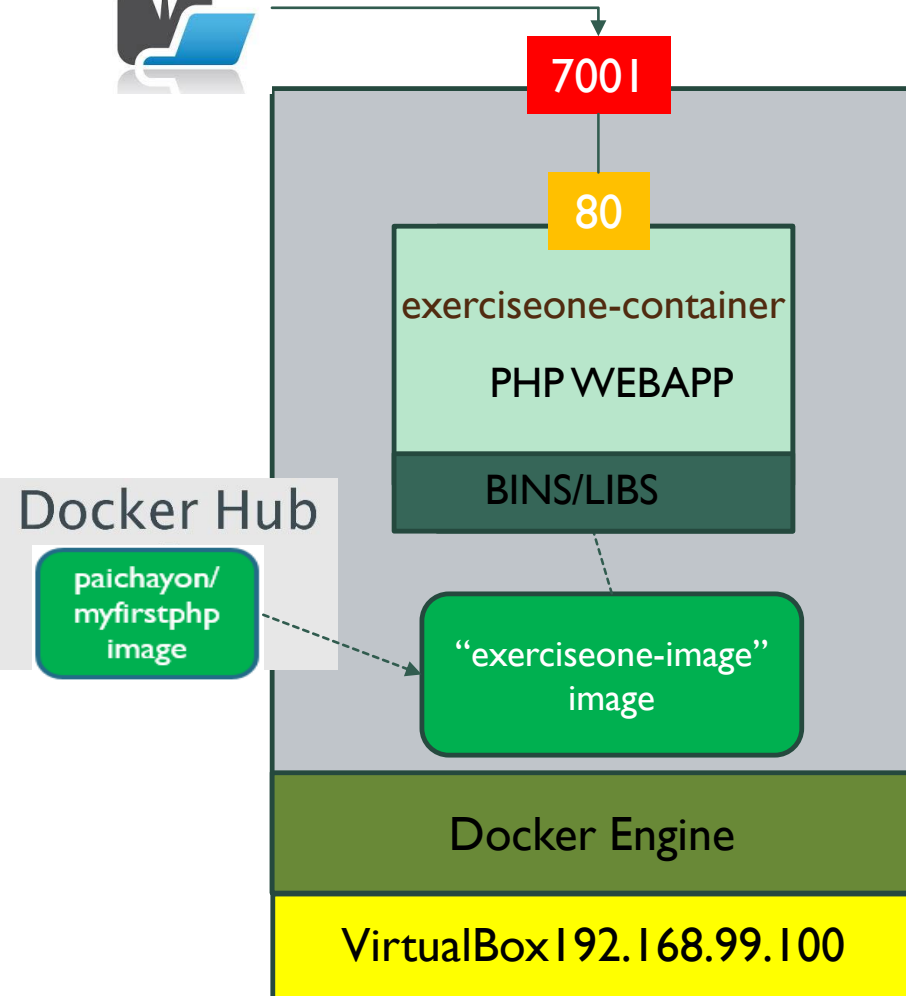




DOCKER EXERCISE

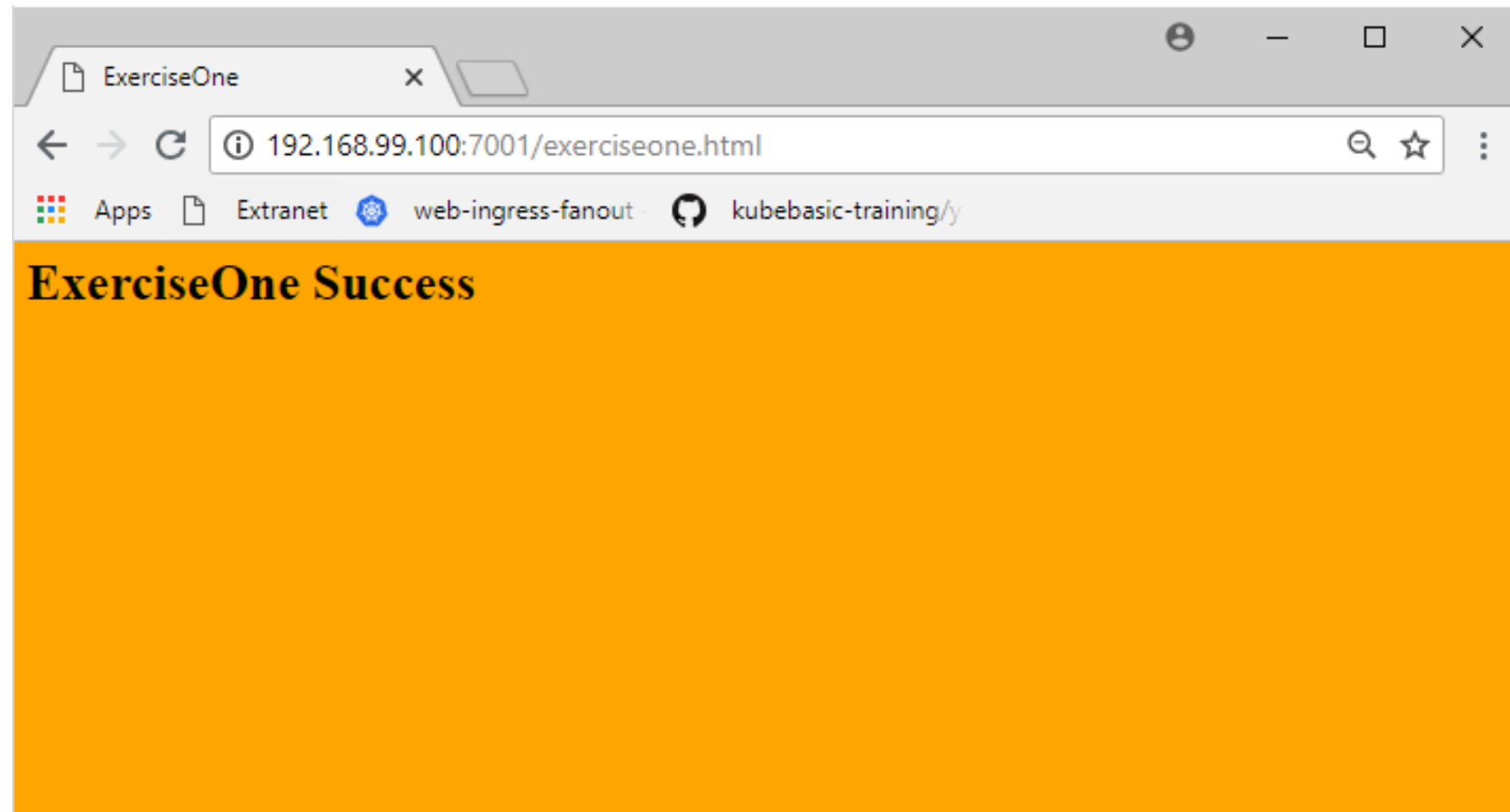


EXERCISE I: CREATE IMAGE AND RUN CONTAINER (15 MIN)

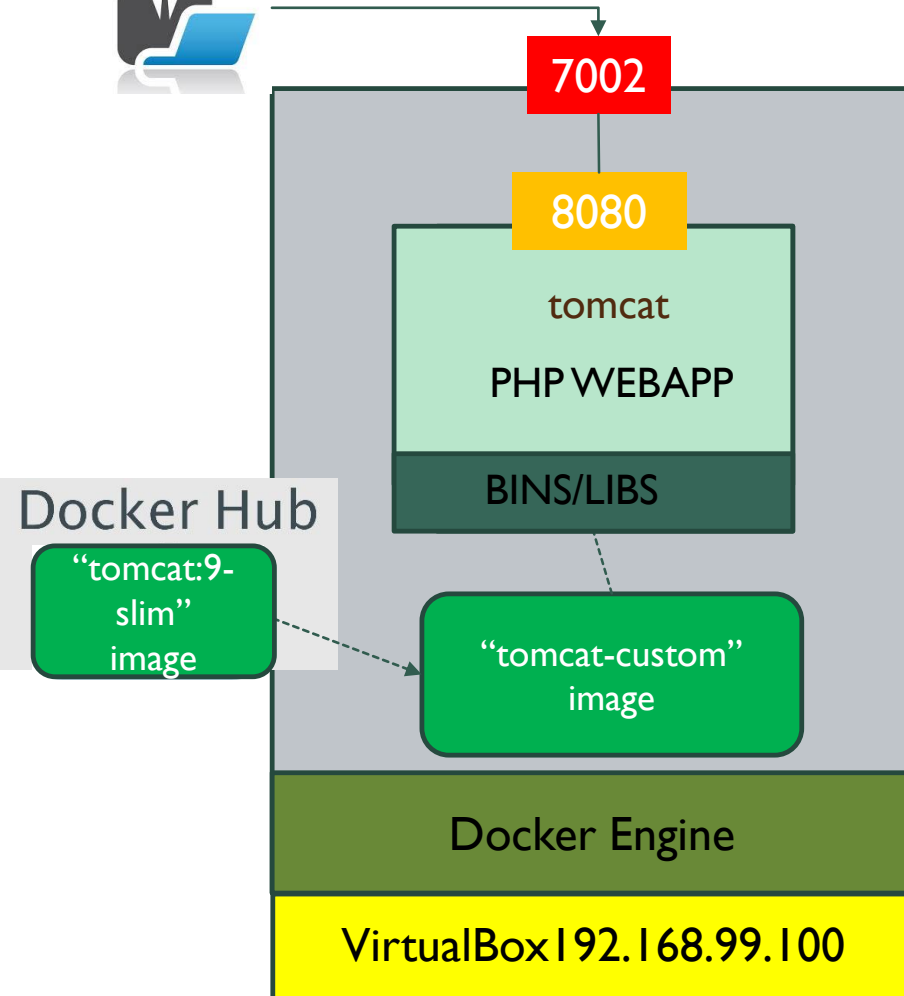


1. Create new html file name "**exerciseone.html**" with content below:

```
<html><head><title>ExerciseOne</title></head>
<body bgcolor=orange>
<h1>ExerciseOne Success</h1>
</body>
</html>
```
2. Build new docker image name "**exerciseone-image:latest**" from base images name "**paichayon/myfirstphp:latest**" and ADD **exerciseone.html** file
3. Run Container name "**exerciseone-container**" with access port **7001**
4. After run success, Remove container and image



EXERCISE 2: CREATE CUSTOM TOMCAT IMAGE(30 MIN)



1. Run container from tomcat:9-slim image
`docker run -d --name tomcat -p 7002:8080 tomcat:9-slim`
2. Modify or replace file **`"/usr/local/tomcat/conf/tomcat-users.xml"`** with content below in tomcat container:

```
<role rolename="manager-gui"/>
<role rolename="manager"/>
<role rolename="manager-script"/>
<role rolename="admin-gui"/>
<user username="admin" password="admin123" roles="manager-gui,manager-script,admin-gui,manager"/>
```
3. Modify or replace file **`"/usr/local/tomcat/webapps/manager/META-INF/context.xml"`** with content below in tomcat container:

```
<Valve className="org.apache.catalina.valves.RemoteAddrValve"
allow="\d+\.\d+\.\d+\.\d+" />
```
4. Create new docker image name **`"tomcat-custom:latest"`** from tomcat container
5. Run container name **`"tomcat"`** and access port **`7002`** with **`tomcat-custom:latest`** image
6. Access Server status page with user admin

tomcat-users.xml →

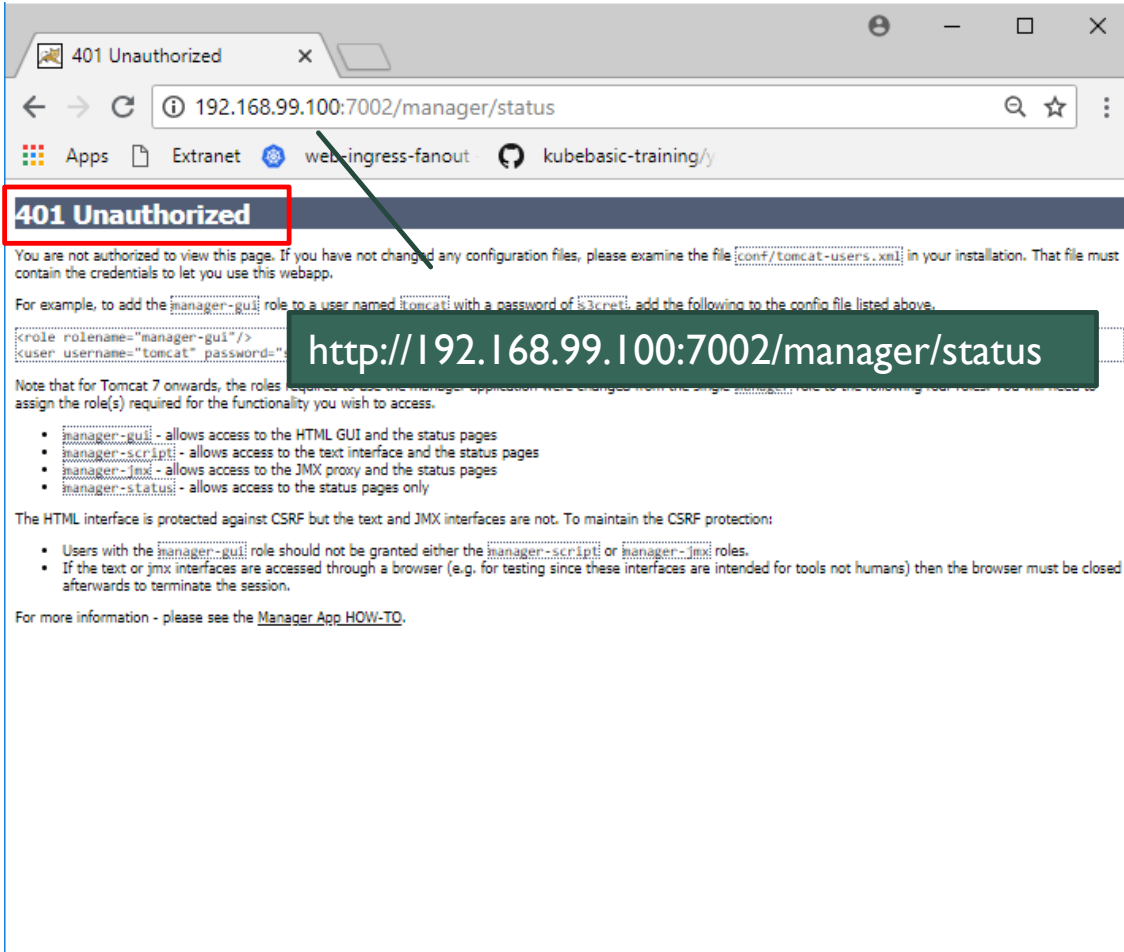
```
<!--
NOTE: The sample user and role entries below are intended for use with the
examples web application. They are wrapped in a comment and thus are ignored
when reading this file. If you wish to configure these users for use with the
examples web application, do not forget to remove the <!-- ... --> that surrounds
them. You will also need to set the passwords to something appropriate.
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="<must-be-changed>" roles="tomcat"/>
<user username="both" password="<must-be-changed>" roles="tomcat,role1"/>
<user username="role1" password="<must-be-changed>" roles="role1"/>
-->
<role rolename="manager-gui"/>
<role rolename="manager"/>
<role rolename="manager-script"/>
<role rolename="admin-gui"/>
<user username="admin" password="admin123" roles="manager-gui,manager-script,admin-gui,manager"/>
-->
</tomcat-users>
```

context.xml →

```
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distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->
<Context antiResourceLocking="false" privileged="true" >
<Valve className="org.apache.catalina.valves.RemoteAddrValve"
allow="\d+\.\d+\.\d+\.\d+" />
<Manager sessionAttributeValueClassNameFilter="java\.lang\.(?:Boolean|Integer|Long|Number|string)|org\.
nFilter\$LruCache(?:\$1)?|java\.util\.(?:Linked)?HashMap"/>
</Context>
```

RESULT

Before customize



401 Unauthorized

You are not authorized to view this page. If you have not changed any configuration files, please examine the file `conf/tomcat-users.xml` in your installation. That file must contain the credentials to let you use this webapp.

For example, to add the `manager-gui` role to a user named `tomcat` with a password of `secret`, add the following to the config file listed above.

```
<role rolename="manager-gui"/>
<user username="tomcat" password="secret" roles="manager-gui"/>
```

Note that for Tomcat 7 onwards, the roles required to use the Manager application were changed from the single `manager` role to the following four roles. You will need to assign the role(s) required for the functionality you wish to access.

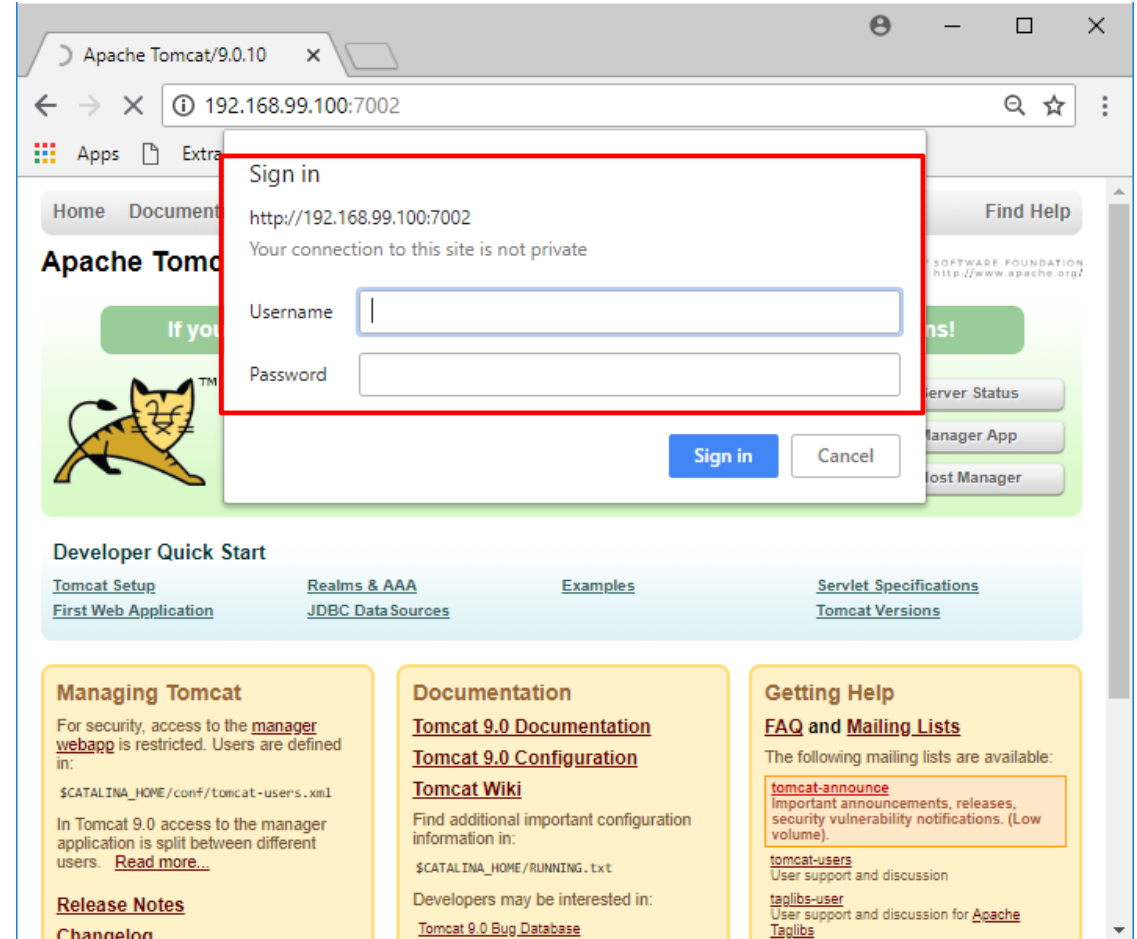
- `manager-gui` - allows access to the HTML GUI and the status pages
- `manager-script` - allows access to the text interface and the status pages
- `manager-jmx` - allows access to the JMX proxy and the status pages
- `manager-status` - allows access to the status pages only

The HTML interface is protected against CSRF but the text and JMX interfaces are not. To maintain the CSRF protection:

- Users with the `manager-gui` role should not be granted either the `manager-script` or `manager-jmx` roles.
- If the text or jmx interfaces are accessed through a browser (e.g. for testing since these interfaces are intended for tools not humans) then the browser must be closed afterwards to terminate the session.

For more information - please see the [Manager App HOW-TO](#).

After customize



Sign in

http://192.168.99.100:7002

Your connection to this site is not private

Username

Password

Sign in Cancel

Apache Tomcat/9.0.10

Home Document

Find Help

SOFTWARE FOUNDATION
http://www.apache.org/

ns!

Server Status

Manager App

Host Manager

Developer Quick Start

[Tomcat Setup](#) [Realms & AAA](#) [Examples](#) [Servlet Specifications](#)

[First Web Application](#) [JDBC Data Sources](#) [Tomcat Versions](#)

Managing Tomcat

For security, access to the `manager` webapp is restricted. Users are defined in:

```
$CATALINA_HOME/conf/tomcat-users.xml
```

In Tomcat 9.0 access to the manager application is split between different users. [Read more...](#)

[Release Notes](#)

[Changelog](#)

Documentation

[Tomcat 9.0 Documentation](#)

[Tomcat 9.0 Configuration](#)

[Tomcat Wiki](#)

Find additional important configuration information in:

```
$CATALINA_HOME/RUNNING.txt
```

Developers may be interested in:

[Tomcat 9.0 Bug Database](#)

Getting Help

[FAQ and Mailing Lists](#)

The following mailing lists are available:

- [tomcat-announce](#)
Important announcements, releases, security vulnerability notifications. (Low volume).
- [tomcat-users](#)
User support and discussion
- [taglibs-user](#)
User support and discussion for [Apache Taglibs](#)

Hint: Use docker volume and busy box to solve this exercise