

Revised Text

Handed out: 11/21/2015

Due by 11:59 PM on Friday, 12/04/2015

Place all of your narratives and illustrations in a single MS Word document named E90_LastNameFirstNameHW12.docx [.pdf]. Use the text of this assignment as the initial template. Add description of your steps and your code below problem statements used for each problem. You

Upload your homework file and your working code (e.g., Filename.java) into your Assignment 12 folder. Do not include executables. Please also do not zip your files.

Problem 1: Implement a Docker container running a Tomcat server and displaying a single HTML page with your name and the current date. You are welcome to do it in a Docker installation on Ubuntu 14.04.3, Docker installation on Mac OS or Docker installation on Windows. Describe the process of building the container fully. *Please upload your new image into the Docker Hub. Remove your local container and local copy of the image and demonstrate that you could instantiate new container by pulling your image from the hub.*

Note: If you have a good control over another Linux distribution, like CentOS 7, please be free to use. ~~If you do not know CentOS 7 well, stay away from it.~~ For some reason, the default network configuration of CentOS 7 does not allow you to connect to the Internet. *Note: Our colleague Scott Lepper told us how to enable network on CentOS 7. Once you have your VM up, go to Applications > System Tools > Settings > Network and then toggle the switch for every Ethernet adapter ON.*

Total Points: 100

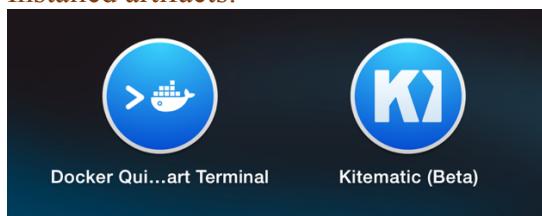
Use the holiday break to get started on your final project. If you have not registered your final project topic yet, please do so as soon as possible.

1. Install Docker Toolbox.

References: http://docs.docker.com/mac/step_one/



Installed artifacts:



Open Docker QuickStart Terminal. Check the Docker environment variables set:

The IP of the Docker Host is 192.168.99.100

Run a simple Docker container to verify my Docker configuration is right.

```
hqiu@bos-mpdei:~$ docker images
```

```

hqiu@bos-mpdei>> docker pull busybox
Using default tag: latest
latest: Pulling from library/busybox
039b63dd2cba: Pull complete
c51f86c28340: Pull complete
Digest: sha256:eb3c0d4680f9213ee5f348ea6d39489a1f85a318a2ae09e012c426f78252a6d2
Status: Downloaded newer image for busybox:latest
hqiu@bos-mpdei>> docker images
REPOSITORY          TAG           IMAGE ID            CREATED             VIRTUAL SIZE
busybox              latest        c51f86c28340      4 weeks ago        1.109 MB
hqiu@bos-mpdei>> docker run busybox echo "Hello there"
Hello there

```

2. Get a standard Tomcat Docker image.

```

hqiu@bos-mpdei>> docker search tomcat

```

NAME	DESCRIPTION	STARS	OFFICIAL	AUTOMATED
tomcat	Apache Tomcat is an open source implementa...	371	[OK]	
consol/tomcat-7.0	Tomcat 7.0.57, 8080, "admin/admin"	14	[OK]	
consol/tomcat-8.0	Tomcat 8.0.15, 8080, "admin/admin"	13	[OK]	
dordoka/tomcat	Ubuntu 14.04, Oracle JDK 8 and Tomcat 8 ba...	8	[OK]	
consol/tomcat-6.0	Tomcat 6.0.43, 8080, "admin/admin"	6	[OK]	
consol/tomcat-3.3	Tomcat 3.3.2, 8080, "admin/admin"	4	[OK]	
consol/tomcat-5.5	Tomcat 5.5.36, 8080, "admin/admin"	4	[OK]	
readytalk/tomcat-native	Debian backed Tomcat + Tomcat Native Library	4	[OK]	
cloudesire/tomcat	Tomcat server 6/7/8 with oracle java 7/8 o...	3	[OK]	
malderhout/tomcat	Tomcat7 with OpenJDK7 on CentOS7	3	[OK]	

We are using Tomcat8 with JRE8. Download the image to local repository.

```

hqiu@bos-mpdei>> docker pull tomcat:jre8

```

```

hqiu@bos-mpdei>> docker pull tomcat:jre8
jre8: Pulling from library/tomcat
1565e86129b8: Pull complete
a604b236bcd: Pull complete
5822f840e16b: Pull complete
00ef84872481: Pull complete
3fd0001c4a9d: Pull complete
52fa1b91a9e0: Pull complete
d79ac6c813b8: Pull complete
33d424d40a66: Pull complete
6687f498122c: Pull complete
d989f1023f13: Pull complete
709515e3008f: Pull complete
20e756f23350: Pull complete
0ab578ecf6c2: Pull complete
5ee81cd1b6fa: Pull complete
b0eeeef845ad7: Pull complete
10a200cefdf0: Pull complete
ec494e093674: Pull complete
db453905280c: Pull complete
d5d36aab3102: Pull complete
014796e29ff3: Pull complete
351dffcc0b94d: Pull complete
7dd52f0ca658: Pull complete
77476c3ee3d7: Pull complete
Digest: sha256:9d5c4fd1779d58ab9c64d2bd9ce915727e281e55251bd6661463d4426dd5588d
Status: Downloaded newer image for tomcat:jre8

```

3. Run Tomcat in the container and map its port 8080 to the 8888 port of the host system.

```

hqiu@bos-mpdei>> docker run -it --rm -p 8888:8080 tomcat:jre8

```

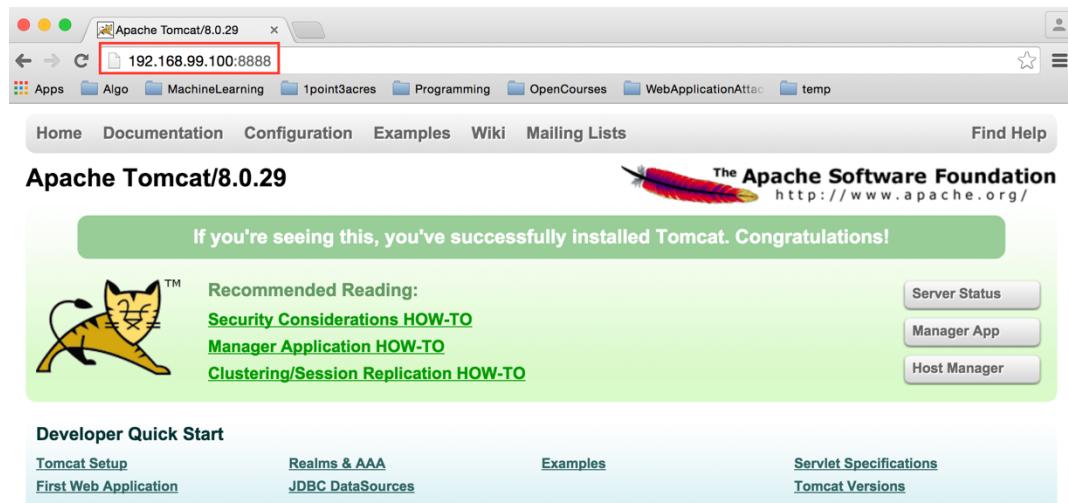
```

hqiu@bos-mpdei:~$ docker run -it --rm -p 8888:8080 tomcat:jre8
Using CATALINA_BASE: /usr/local/tomcat
Using CATALINA_HOME: /usr/local/tomcat
Using CATALINA_TMPDIR: /usr/local/tomcat/temp
Using JRE_HOME: /usr
Using CLASSPATH: /usr/local/tomcat/bin/bootstrap.jar:/usr/local/tomcat/bin/tomcat-juli.jar
04-Dec-2015 06:31:28.824 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server version: Apache Tomcat/8.0.29
04-Dec-2015 06:31:28.825 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server built: Nov 20 2015 09:18:00 UTC
04-Dec-2015 06:31:28.826 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server number: 8.0.29.0
04-Dec-2015 06:31:28.827 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log OS Name: Linux
04-Dec-2015 06:31:28.827 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log OS Version: 4.1.13-boot2docker
04-Dec-2015 06:31:28.828 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Architecture: amd64
04-Dec-2015 06:31:28.830 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Java Home: /usr/lib/jvm/java-8-openjdk-amd64
/jre
04-Dec-2015 06:31:28.830 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log JVM Version: 1.8.0_66-internal-b17
04-Dec-2015 06:31:28.831 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log JVM Vendor: Oracle Corporation
04-Dec-2015 06:31:28.831 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log CATALINA_BASE: /usr/local/tomcat
04-Dec-2015 06:31:28.832 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log CATALINA_HOME: /usr/local/tomcat
04-Dec-2015 06:31:28.834 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Djava.util.logging.config.file=/usr/local/tomcat/conf/logging.properties
04-Dec-2015 06:31:28.835 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Command line argument: -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager

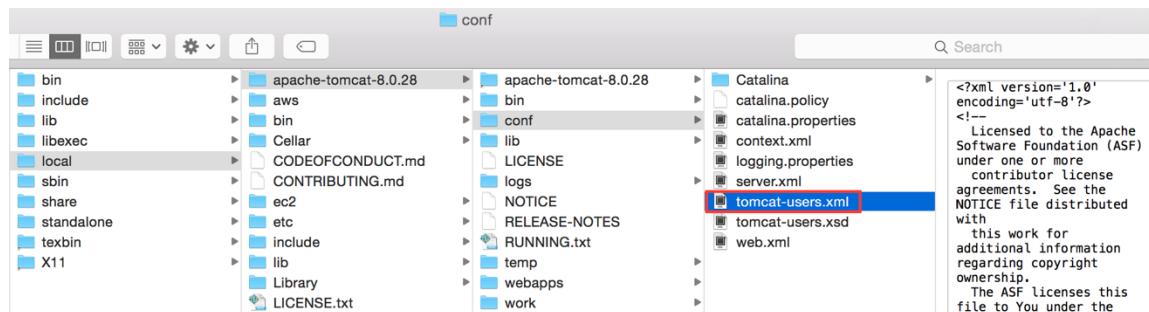
```

It's run in the attached mode. So if we use “Ctrl+C”, the docker container will be stopped. We can access it through “default” Docker machine IP.

<http://192.168.99.100:8888>



- Now we couldn't login into "Manager App". Customize the Tomcat installation to enable it. First add "manager-gui" role and user to "tomcat-users.xml" from my local apache-tomcat. Start my local Tomcat (<http://localhost:8080>) and verify the file/setting. Now we can access Manager App in Tomcat.

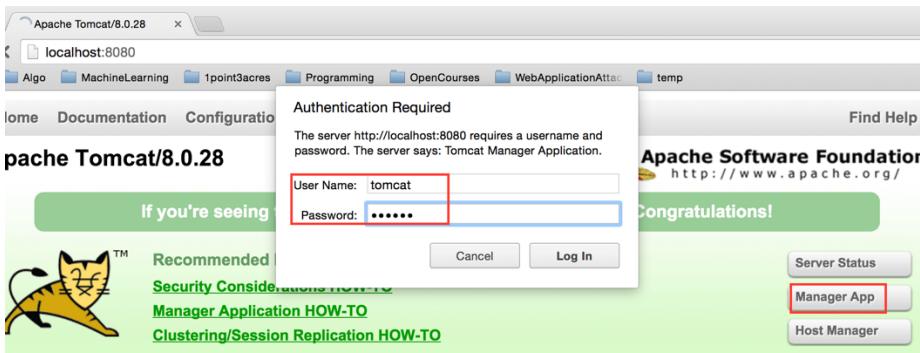


```

19      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
20      xsi:schemaLocation="http://tomcat.apache.org/xml tomcat-users
21      .xsd"
22      version="1.0">
23      <!--
24      NOTE: By default, no user is included in the "manager-gui" role required
25      to operate the "/manager/html" web application. If you wish to use this
26      app,
27      you must define such a user - the username and password are arbitrary.
28      -->
29      <!--
30      NOTE: The sample user and role entries below are wrapped in a comment
31      and thus are ignored when reading this file. Do not forget to remove
32      <!... ..> that surrounds them.
33      -->
34      <role rolename="tomcat"/>
35      <role rolename="role1"/>
36      <user username="tomcat" password="tomcat" roles="tomcat"/>
37      <user username="both" password="tomcat" roles="tomcat,role1"/>
38      <user username="role1" password="tomcat" roles="role1"/>
39
40      <role rolename="manager-gui"/>
41      <user username="tomcat" password="tomcat" roles="manager-gui"/>
42
43  </tomcat-users>
44

```

Line 1, Column 1 Spaces: 2 XML



Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy

5. Create a new directory that will hold all necessary artifacts to create the custom Tomcat. Copy tomcat-users.xml into this directory. Create a “index.html” to display my name and current date. Most importantly, create a Dockerfile in this directory.

```
hqiu@bos-mpdei:> cd ~/Documents/HarvardExtension/Cloud_Computing/Homework/HW12
```

```
hqiu@bos-mpdei>> mkdir dockerBuild  
hqiu@bos-mpdei>> cd dockerBuild  
hqiu@bos-mpdei>> pwd  
/Users/hqiu/Documents/HarvardExtension/Cloud_Computing/Homework/HW12/dockerBuild
```

```
hqiu@bos-mpdei>> cp /usr/local/apache-tomcat-8.0.28/conf/tomcat-users.xml .  
hqiu@bos-mpdei>> vi index.html
```

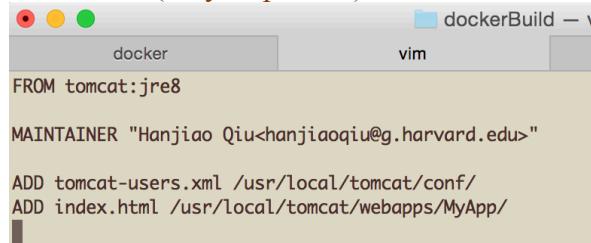
index.html:



```
<!DOCTYPE html>  
<html>  
    <body>  
        <name>Hanjiao Qiu</name>  
  
        <p id="demo"></p>  
  
        <script>  
            document.getElementById("demo").innerHTML = Date();  
        </script>  
  
    </body>  
</html>
```

```
hqiu@bos-mpdei>> vi Dockerfile
```

Dockerfile (very important):



```
FROM tomcat:jre8  
  
MAINTAINER "Hanjiao Qiu<hanjiaoqiu@g.harvard.edu>"  
  
ADD tomcat-users.xml /usr/local/tomcat/conf/  
ADD index.html /usr/local/tomcat/webapps/MyApp/
```

Note that when we create the new image, the directory
“/usr/local/tomcat/webapps/MyApp/” will be automatically created if it doesn’t exist. The
“index.html” will be added from my local host to the image directory.

6. From the Docker terminal, cd to the build directory. Build a new image “hanjiao/mytomcat” in this directory.

```
hqiu@bos-mpdei>> docker build -t hanjiao/mytomcat .
```

```

hqiu@bos-mpdei>> ls
Dockerfile           index.html          tomcat-users.xml
hqiu@bos-mpdei>> docker build -t hanjiao/mytomcat .
Sending build context to Docker daemon 5.632 kB
Step 1 : FROM tomcat:jre8
--> 77476c3ee3d7
Step 2 : MAINTAINER "Hanjiao Qiu<hanjiaoqiu@g.harvard.edu>"
--> Running in 57024ec1ddb8
--> f2b7fcf31fec
Removing intermediate container 57024ec1ddb8
Step 3 : ADD tomcat-users.xml /usr/local/tomcat/conf/
--> d26694ce5ad5
Removing intermediate container 0e4758788865
Step 4 : ADD index.html /usr/local/tomcat/webapps/MyApp/
--> d42aeeb435ad
Removing intermediate container 16bac35b7291
Successfully built d42aeeb435ad

```

Check the newly created image in my local docker repository.

```
hqiu@bos-mpdei>> docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	VIRTUAL SIZE
hanjiao/mytomcat	latest	d42aeeb435ad	About a minute ago	323.5 MB
tomcat	jre8	77476c3ee3d7	9 days ago	323.5 MB
busybox	latest	c51f86c28340	4 weeks ago	1.109 MB

7. Run the new image.

```
hqiu@bos-mpdei>> docker run -it --rm -p 8888:8080 hanjiao/mytomcat
```

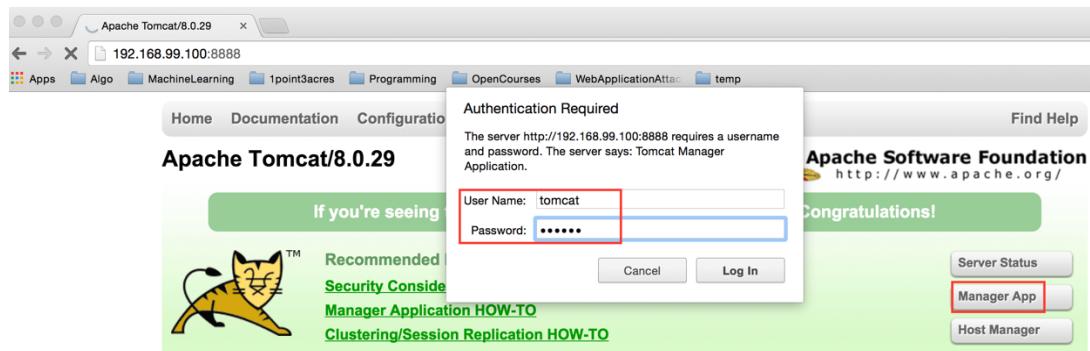
```

hqiu@bos-mpdei>> docker run -it --rm -p 8888:8080 hanjiao/mytomcat
Using CATALINA_BASE:  /usr/local/tomcat
Using CATALINA_HOME:  /usr/local/tomcat
Using CATALINA_TMPDIR: /usr/local/tomcat/temp
Using JRE_HOME:      /usr
Using CLASSPATH:     /usr/local/tomcat/bin/bootstrap.jar:/usr/local/tomcat/bin/tomcat-juli.jar

...
04-Dec-2015 07:30:39.626 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["h
ttp-nio-8080"]
04-Dec-2015 07:30:39.641 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["a
jp-nio-8009"]
04-Dec-2015 07:30:39.643 INFO [main] org.apache.catalina.startup.Catalina.start Server startup in 1018 ms

```

Now we can access the Manage App and can see the web page “index.html” we deployed.



The screenshot shows the Apache Tomcat Web Application Manager. At the top, there's a banner for 'The Apache Software Foundation'. Below it, the title 'Tomcat Web Application Manager' is displayed. A message box says 'Message: OK'. The main area is titled 'Manager' with tabs for 'List Applications', 'HTML Manager Help', 'Manager Help', and 'Server Status'. Under 'Applications', there's a table with columns: Path, Version, Display Name, Running, Sessions, and Commands. It lists three applications: 'Welcome to Tomcat' (Path /, Version None specified), 'MyApp' (Path /MyApp, Version None specified), and 'Tomcat Documentation' (Path /docs, Version None specified). Each application row has a 'Commands' section with options like Start, Stop, Reload, Undeploy, and Expire sessions with idle ≥ 30 minutes.

This is what we want! Since we put the “index.html” under “MyApp” directory, we can visit the page through: <http://192.168.99.100:8888/MyApp>

The screenshot shows a web browser window with the URL '192.168.99.100:8888/MyApp'. The page content is a simple HTML file with the text 'Hanjiao Qiu' and the date 'Fri Dec 04 2015 02:30:57 GMT-0500 (EST)'. The browser's address bar also shows the full URL.

Stop the Docker container using “Ctrl+C” since it’s in attached mode.

8. Open another Docker QuickStart Terminal. Publish the Docker image into the DockerHub Repository.

First create an account on DockerHub: <https://hub.docker.com>

Login from the Docker QuickStart Terminal.

```
hqiu@bos-mpdei:>> docker login
Username: hanjiao
Password:
Email: hanjiaoqiu@g.harvard.edu
WARNING: login credentials saved in /Users/hqiu/.docker/config.json
Login Succeeded
```

Make a tag for the new created image from the same build directory.

```
hqiu@bos-mpdei:>> docker tag d42aeeb435ad hanjiao/mytomcat:tomcatv1
```

```
hqiu@bos-mpdei:>> docker tag d42aeeb435ad hanjiao/mytomcat:tomcatv1
hqiu@bos-mpdei:>>
hqiu@bos-mpdei:>> docker images
REPOSITORY          TAG           IMAGE ID      CREATED       VIRTUAL SIZE
hanjiao/mytomcat   latest        d42aeeb435ad  15 minutes ago  323.5 MB
hanjiao/mytomcat   tomcatv1     d42aeeb435ad  15 minutes ago  323.5 MB
tomcat              jre8          77476c3ee3d7  9 days ago    323.5 MB
busybox             latest        c51f86c28340  4 weeks ago   1.109 MB
```

Push the image to the public DockerHub repository.

```
hqiu@bos-mpdei:>> docker push hanjiao/mytomcat:tomcatv1
```

```
hqiu@bos-mpdei:>> docker push hanjiao/mytomcat:tomcatv1
The push refers to a repository [docker.io/hanjiao/mytomcat] (len: 1)
d42aebb435ad: Pushed
d26694ce5ad5: Pushed
f2b7fcf31fec: Pushed
351dffc0b94d: Pushed
ec494e093674: Pushed
b0eeef845ad7: Pushed
20e756f23350: Pushed
709515e3008f: Pushed
d989f1023f13: Pushed
3fd001c4a9d: Pushed
00ef84872481: Pushed
5822f840e16b: Pushed
1565e86129b8: Pushed
tomcatv1: digest: sha256:2891a5ea25e96184d4095dfc35539cce37b7baa3131cae1ab4420e2b49db9960 size: 50467
```

Check the public repository. Now this image can be used from any host.

Repositories

Type to filter repositories by name

hanjiao/mytomcat public	0 STARS	2 PULLS	> DETAILS
----------------------------	---------	---------	-----------

PUBLIC REPOSITORY

[hanjiao/mytomcat](#)

Last pushed: a minute ago

[Repo Info](#) [Tags](#) [Collaborators](#) [Webhooks](#) [Settings](#)

Tag Name	Size
tomcatv1	133 MB

Docker Pull Command

```
docker pull hanjiao/mytomcat
```

9. Remove all the local running Docker containers and images.

Check the local running Docker Containers.

```
hqiu@bos-mpdei:>> docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
PORTS	NAMES			

Remove local Docker images.

```
hqiu@bos-mpdei:>> docker rmi hanjiao/mytomcat
```

```
hqiu@bos-mpdei:>> docker images
REPOSITORY      TAG          IMAGE ID      CREATED        VIRTUAL SIZE
hanjiao/mytomcat    latest       d42aeeb435ad  29 minutes ago  323.5 MB
hanjiao/mytomcat    tomcatv1    d42aeeb435ad  29 minutes ago  323.5 MB
tomcat           jre8         77476c3ee3d7  9 days ago   323.5 MB
busybox           latest       c51f86c28340  4 weeks ago   1.109 MB
hqiu@bos-mpdei:>> docker rmi hanjiao/mytomcat:tomcatv1
Untagged: hanjiao/mytomcat:tomcatv1
hqiu@bos-mpdei:>> docker rmi hanjiao/mytomcat
Untagged: hanjiao/mytomcat:latest
Deleted: d42aeeb435ad58d1a51ad4551f85fee59bdb8a842e1c49119fdbd1f92690b863
Deleted: d26694ce5ad537ad4fd40bd0cdfb3d36f0199bcd93133718252de5c667ac513
Deleted: f2b7fcf31fec467e094ee34eaeef9b9cebaca5bf97fc86b5c50ee2b1bf354d133
hqiu@bos-mpdei:>
hqiu@bos-mpdei:>> docker images
REPOSITORY      TAG          IMAGE ID      CREATED        VIRTUAL SIZE
tomcat           jre8         77476c3ee3d7  9 days ago   323.5 MB
busybox           latest       c51f86c28340  4 weeks ago   1.109 MB
```

10. Pull the image out from the public repository and initiate a new Docker container using the image.

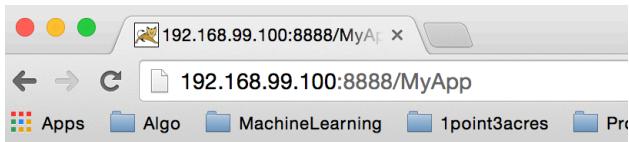
```
hqiu@bos-mpdei:>> docker pull hanjiao/mytomcat:tomcatv1
```

```
hqiu@bos-mpdei:>> docker pull hanjiao/mytomcat:tomcatv1
tomcatv1: Pulling from hanjiao/mytomcat
1abb62d8ff40: Pull complete
a7ed0f8d7997: Pull complete
759cd415f76: Pull complete
Digest: sha256:2891a5ea25e96184d4095dfc35539cce37b7baa3131cae1ab4420e2b49db9960
Status: Downloaded newer image for hanjiao/mytomcat:tomcatv1
```

```
hqiu@bos-mpdei:>> docker run -it --rm -p 8888:8080 hanjiao/mytomcat:tomcatv1
```

```
hqiu@bos-mpdei:>> docker run -it --rm -p 8888:8080 hanjiao/mytomcat:tomcatv1
Using CATALINA_BASE: /usr/local/tomcat
Using CATALINA_HOME: /usr/local/tomcat
Using CATALINA_TMPDIR: /usr/local/tomcat/temp
Using JRE_HOME:      /usr
Using CLASSPATH:     /usr/local/tomcat/bin/bootstrap.jar:/usr/local/tomcat/bin/tomcat-juli.jar
04-Dec-2015 07:56:44.590 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server version: Apache Tomcat/8.0.29
04-Dec-2015 07:56:44.594 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server built: Nov 20 2015 09:18:00 UTC
04-Dec-2015 07:56:44.595 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server number: 8.0.29.0
04-Dec-2015 07:56:44.595 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log OS Name: Linux
04-Dec-2015 07:56:44.596 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log OS Version: 4.1.13-boot2docker
04-Dec-2015 07:56:44.597 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Architecture: amd64
04-Dec-2015 07:56:44.598 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Java Home: /usr/lib/jvm/java-8-openjdk-a
.....
04-Dec-2015 07:56:45.410 INFO [localhost-startStop-1] org.apache.catalina.startup.HostConfig.deployDirectory Deploying web application direct
usr/local/tomcat/webapps/examples
04-Dec-2015 07:56:45.781 INFO [localhost-startStop-1] org.apache.catalina.startup.HostConfig.deployDirectory Deployment of web application di
ry /usr/local/tomcat/webapps/examples has finished in 371 ms
04-Dec-2015 07:56:45.786 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["http-nio-8080"]
04-Dec-2015 07:56:45.798 INFO [main] org.apache.coyote.AbstractProtocol.start Starting ProtocolHandler ["ajp-nio-8009"]
04-Dec-2015 07:56:45.800 INFO [main] org.apache.catalina.startup.Catalina.start Server startup in 1013 ms
```

Check the web page. It works!



Hanjiao Qiu

Fri Dec 04 2015 02:57:41 GMT-0500 (EST)

Check the public repository. The number of “PULLS” has been increased.

Repositories

Type to filter repositories by name

hanjiao/mytomcat public	0 STARS	4 PULLS	DETAILS
----------------------------	------------	------------	---------

11. I also tried to install an Ubuntu 64-bit 14.04.3 on my VM and practice some Docker operations on it. The procedure to customize the Tomcat server and create the new image is identical to the above steps. I just tried to pull out the “hanjiao/mytomcat:tomcatv1” image and run an instance of it on Ubuntu machine.

Reference to install Docker on Ubuntu:

<https://docs.docker.com/engine/installation/ubuntu/>

Just follow the steps to update apt sources/repository to get Docker.

Update the apt package index.

```
$ sudo apt-get update
```

Install Docker.

```
$ sudo apt-get install docker-engine
```

Start Docker daemon.

```
$ sudo service docker start
```

Create the “docker” group and add my user “hqiu”

```
$ sudo usermod -aG docker hqiu
```

Verify the work by running docker without “sudo”. Pull out the image from the public DockerHub Repository. Run it locally and visit <http://192.168.99.100:8888/MyApp>.

```

hqiu@ubuntu:~$ docker run hello-world
Hello from Docker.
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker Hub account:
https://hub.docker.com

For more examples and ideas, visit:
https://docs.docker.com/userguide/

```

```

hqiu@ubuntu:~$ docker ps
CONTAINER ID        IMAGE               COMMAND       CREATED          STATUS          PORTS     NAMES
hqiu@ubuntu:~$ docker login
Username: hanjiao
Password:
Email: hanjiaoqiu@g.harvard.edu
WARNING: login credentials saved in /home/hqiu/.docker/config.json
Login Succeeded

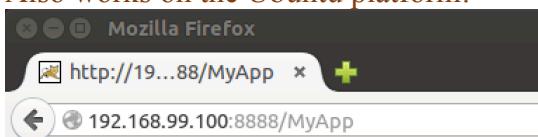
```

```

hqiu@ubuntu:~$ docker pull hanjiao/mytomcat:tomcatv1
tomcatv1: Pulling from hanjiao/mytomcat
1abb62d8ff40: Pull complete
a7ed0f8d7997: Pull complete
759cdd415f76: Pull complete
Digest: sha256:2891a5ea25e96184d4095dfc35539cce37b7baa3131cae1ab4420e2b49db9960
Status: Downloaded newer image for hanjiao/mytomcat:tomcatv1
hqiu@ubuntu:~$ docker run -it --rm -p 8888:8080 hanjiao/mytomcat:tomcatv1
Using CATALINA_BASE:      /usr/local/tomcat
Using CATALINA_HOME:      /usr/local/tomcat
Using CATALINA_TMPDIR:    /usr/local/tomcat/temp
Using JRE_HOME:           /usr
Using CLASSPATH:          /usr/local/tomcat/bin/bootstrap.jar:/usr/local/tomcat/bin/tomcat-juli.jar
04-Dec-2015 18:41:25.779 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server version:          Apache Tomcat/8.
.29
04-Dec-2015 18:41:25.781 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server built:            Nov 20 2015 09:1
:00 UTC
04-Dec-2015 18:41:25.781 INFO [main] org.apache.catalina.startup.VersionLoggerListener.log Server number:         8.0.29.0

```

Also works on the Ubuntu platform!



Hanjiao Qiu

Fri Dec 04 2015 10:41:38 GMT-0800 (PST)

The number of “PULLS” has been increased to 5.

Repositories

Type to filter repositories by name			
	hanjiao/mytomcat public	0 STARS	5 PULLS
			DETAILS