



PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY
Department of Information Technology
(NBA Accredited)



Department of Information Technology

Academic Year: 2022-23

Semester: V

Class / Branch: IT

Subject: DevOps Lab

Name of Instructor: Prof. Neha Deshmukh

Name of Student: Atharv Sathe

Student ID: 20104054

Date of Performance: 03/11/22

Date of Submission: 03/11/22

Experiment No.

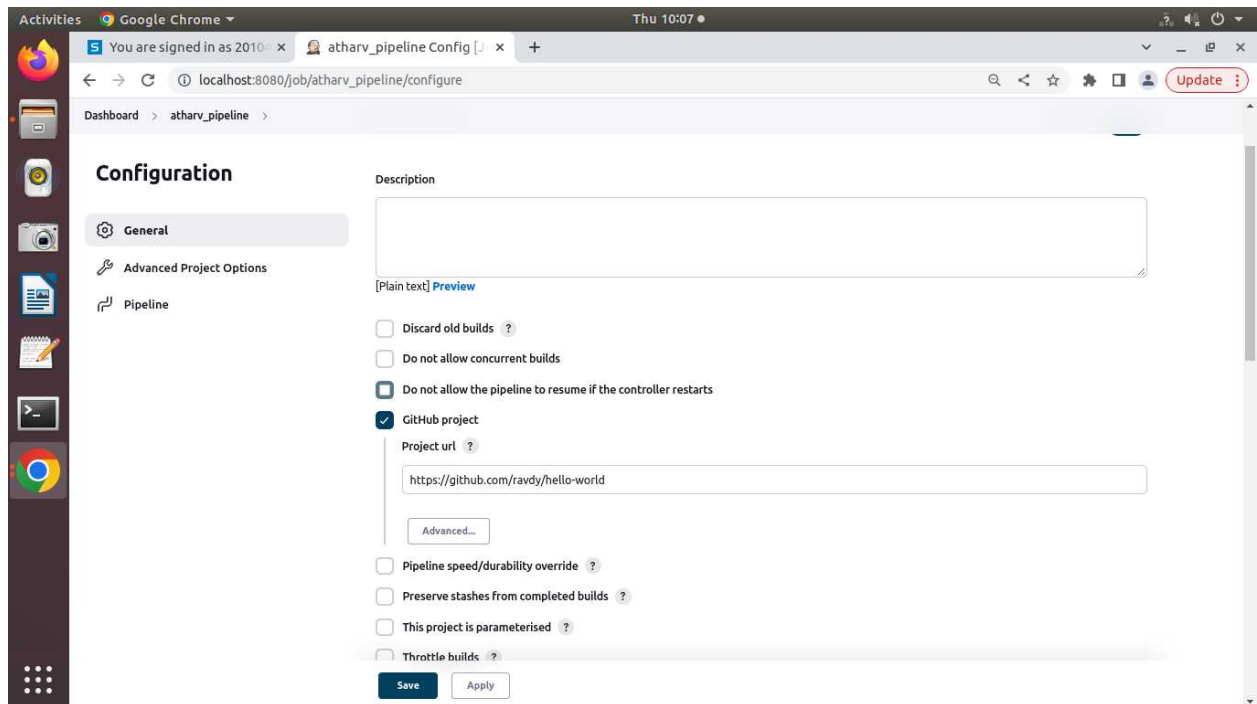
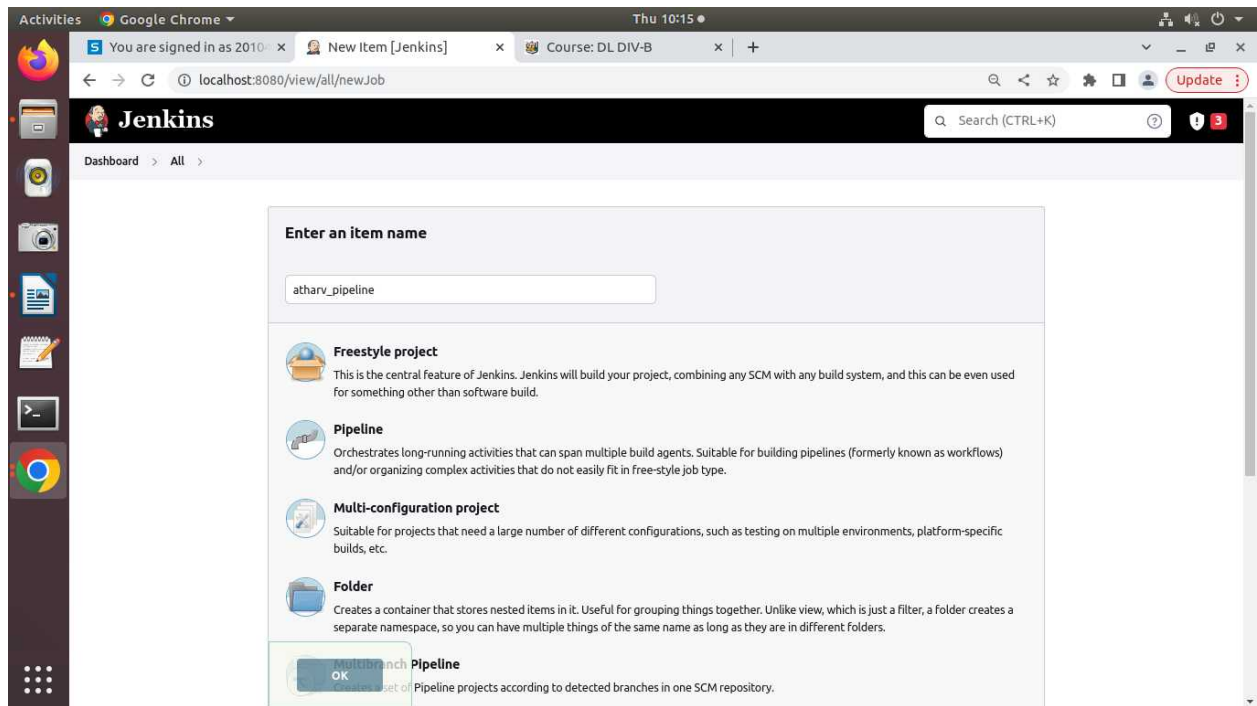
Aim: To create and build a CI/CD pipeline in Jenkins to test and deploy an application over the tomcat server.

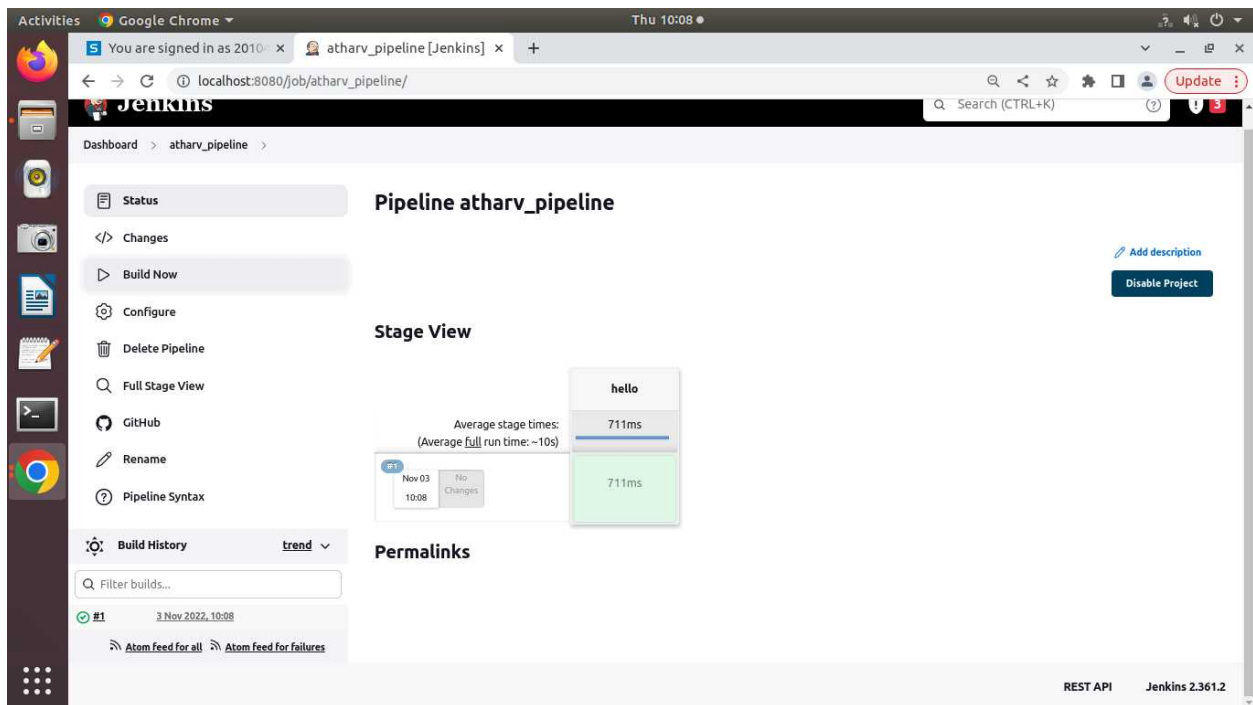
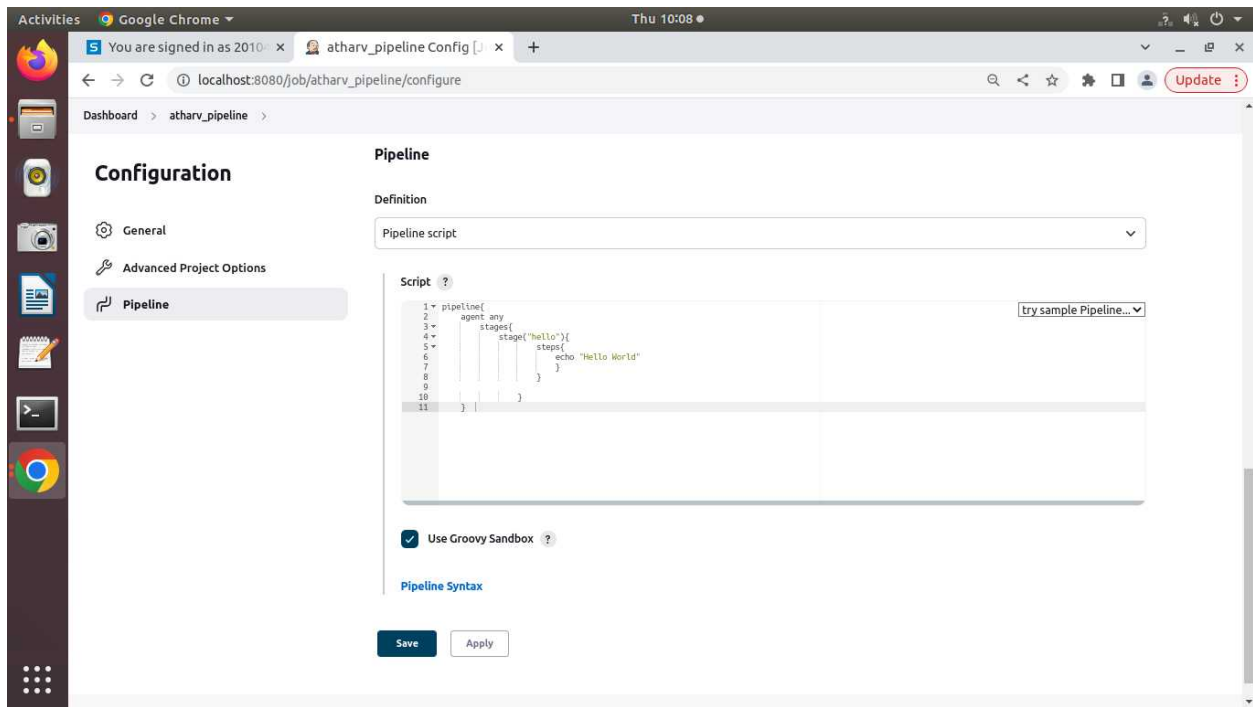
Output :

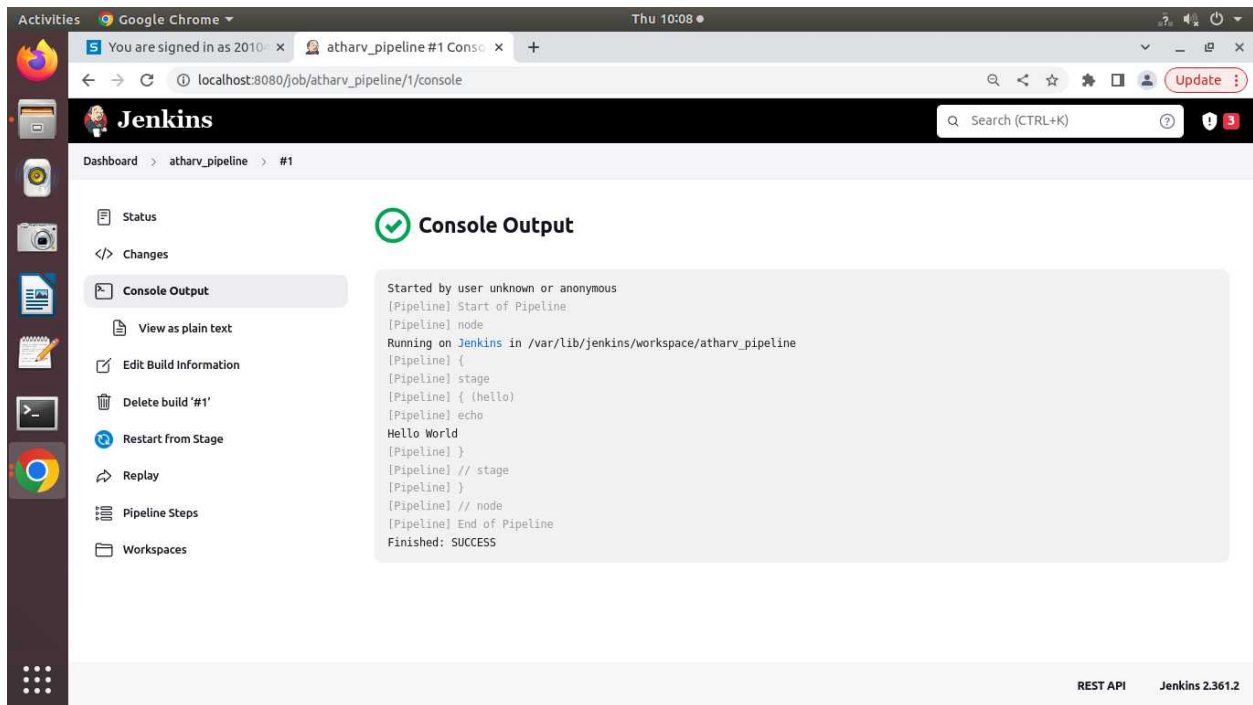
a) To create a CI/CD pipeline in Jenkins

The screenshot displays the Jenkins web interface. At the top, the browser shows the URL 'localhost:8080'. The Jenkins dashboard includes a search bar and a table of users. The table has columns for status (S), workspace (W), name, last success, last failure, and last duration. Two users are listed: 'sania' and 'viva_59', both with 'N/A' for success and failure. The left sidebar has a 'Build Queue' section showing 'No builds in the queue' and a 'Build Executor Status' section showing two idle executors. The bottom status bar indicates 'Jenkins 2.361.2'.

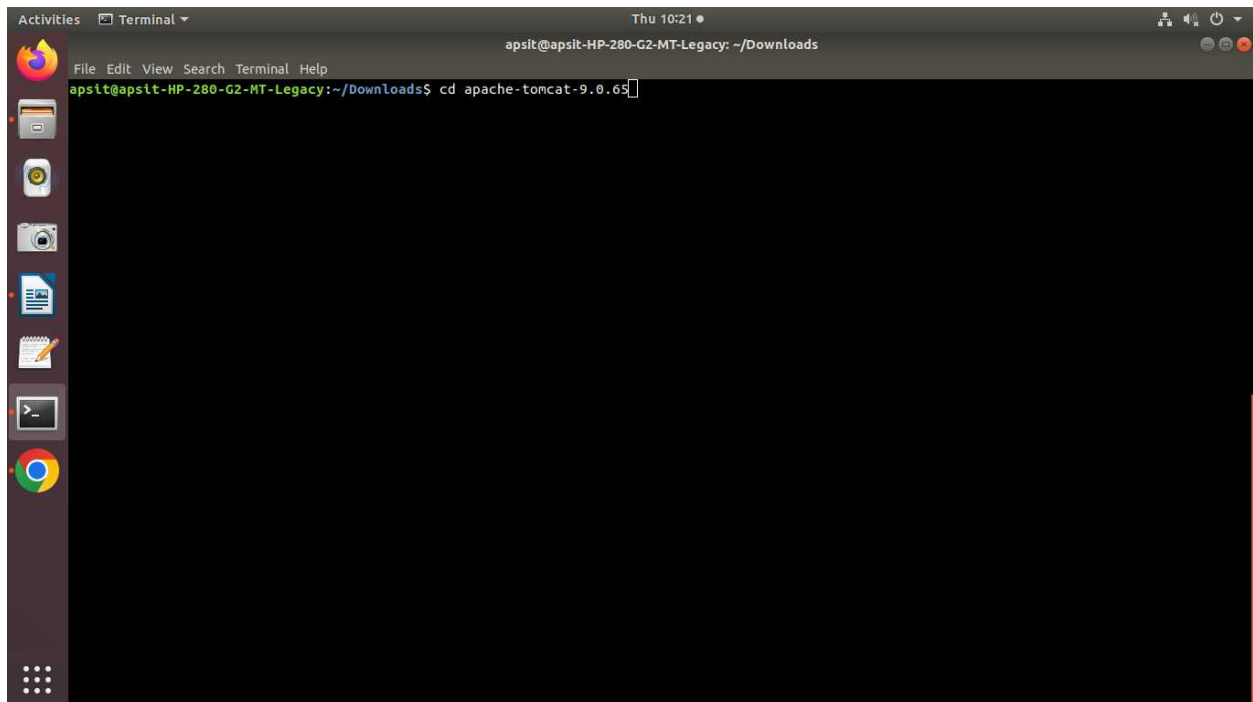
S	W	Name ↓	Last Success	Last Failure	Last Duration
...	...	sania	N/A	N/A	N/A
...	...	viva_59	N/A	N/A	N/A







b) Tomcat



```
Activities Terminal Thu 10:21
apsit@apsit-HP-280-G2-MT-Legacy: ~/Downloads/apache-tomcat-9.0.65
File Edit View Search Terminal Help
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads$ cd apache-tomcat-9.0.65
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65$ ls
bin BUILDING.txt conf CONTRIBUTING.md lib LICENSE logs NOTICE README.md RELEASE-NOTES RUNNING.txt temp webapps work
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65$
```

```
Activities Terminal Thu 10:30
apsit@apsit-HP-280-G2-MT-Legacy: ~/Downloads/apache-tomcat-9.0.65/conf
File Edit View Search Terminal Help
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65/bin$ cd ..
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65$ ls
bin BUILDING.txt conf CONTRIBUTING.md lib LICENSE logs NOTICE README.md RELEASE-NOTES RUNNING.txt temp webapps work
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65$ cd conf
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65/conf$ ls
Catalina catalina.properties jaspic-providers.xml logging.properties tomcat-users.xml web.xml
catalina.policy context.xml jaspic-providers.xsd server.xml tomcat-users.xsd
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65/conf$
```

```
Activities Terminal Thu 10:23 ●
apsit@apsit-HP-280-G2-MT-Legacy: ~/Downloads/apache-tomcat-9.0.65/conf

-->
<Service name="Catalina">

<!--The connectors can use a shared executor, you can define one or more named thread pools-->
<!--
<Executor name="tomcatThreadPool" namePrefix="catalina-exec-"
      maxThreads="150" minSpareThreads="4"/>
-->

<!-- A "Connector" represents an endpoint by which requests are received
and responses are returned. Documentation at :
Java HTTP Connector: /docs/config/http.html
Java AJP Connector: /docs/config/ajp.html
APR (HTTP/AJP) Connector: /docs/apr.html
Define a non-SSL/TLS HTTP/1.1 Connector on port 8080
-->
<Connector port="8080" protocol="HTTP/1.1"
      connectionTimeout="20000"
      redirectPort="8443" />
<!-- A "Connector" using the shared thread pool-->
<!--
<Connector executor="tomcatThreadPool"
      port="8080" protocol="HTTP/1.1"
      connectionTimeout="20000"
      redirectPort="8443" />
-->
<!-- Define an SSL/TLS HTTP/1.1 Connector on port 8443
This connector uses the NIO implementation. The default
SSLImplementation will depend on the presence of the APR/native
library and the useOpenSSL attribute of the AprLifecycleListener.
Either JSSE or OpenSSL style configuration may be used regardless of
the SSLImplementation selected. JSSE style configuration is used below.
-->
<!--
<Connector port="8443" protocol="org.apache.coyote.http11.Http11NioProtocol"
      maxThreads="150" SSLEnabled="true">
-->
```

```
Activities Terminal Thu 10:24 ●
apsit@apsit-HP-280-G2-MT-Legacy: ~/Downloads/apache-tomcat-9.0.65/bin

apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65$ cd bin
apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65/bin$ ls
bootstrap.jar      ciphers.bat      configtest.bat  digest.sh        setclasspath.sh  startup.sh      tool-wrapper.sh
catalina.bat      ciphers.sh       configtest.sh   makebase.bat     shutdown.bat     tomcat-juli.jar  version.bat
catalina.sh       commons-daemon.jar  daemon.sh       makebase.sh      shutdown.sh      tomcat-native.tar.gz  version.sh
catalina-tasks.xml commons-daemon-native.tar.gz digest.bat      setclasspath.bat startup.bat      tool-wrapper.bat

apsit@apsit-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65/bin$
```

```

apstt@apstt-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65/bin$ ./startup.sh
Using CATALINA_BASE:   /home/apstt/Downloads/apache-tomcat-9.0.65
Using CATALINA_HOME:   /home/apstt/Downloads/apache-tomcat-9.0.65
Using CATALINA_TMPDIR: /home/apstt/Downloads/apache-tomcat-9.0.65/temp
Using JRE_HOME:        /usr
Using CLASSPATH:        /home/apstt/Downloads/apache-tomcat-9.0.65/bin/bootstrap.jar:/home/apstt/Downloads/apache-tomcat-9.0.65/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
apstt@apstt-HP-280-G2-MT-Legacy:~/Downloads/apache-tomcat-9.0.65/bin$

```

Activities Google Chrome Thu 10:26


You are signed in as 2010 Dashboard [Jenkins] Course: DL DIV-B Apache Tomcat/9.0.65

localhost:8081

Home Documentation Configuration Examples Wiki Mailing Lists Find Help

Apache Tomcat/9.0.65

If you're seeing this, you've successfully installed Tomcat. Congratulations!

 Recommended Reading:

- [Security Considerations How-To](#)
- [Manager Application How-To](#)
- [Clustering/Session Replication How-To](#)

Server Status Manager App Host Manager

Developer Quick Start

- [Tomcat Setup](#)
- [First Web Application](#)
- [Realms & AAA](#)
- [JDBC DataSources](#)
- [Examples](#)
- [Servlet Specifications](#)
- [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](#)

[Migration Guide](#)

[Security Notices](#)

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](#)
- [Tomcat 9.0 JavaDocs](#)
- [Tomcat 9.0 Git Repository at GitHub](#)

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
- [tomcat-dev](#)
User support and discussion for Apache Tomcat
- [tomcat-dev](#)
Development mailing list, including commit messages

Activities Google Chrome Thu 10:27

You are signed in as 2010 x Dashboard [Jenkins] x Course: DL DIV-B x /manager

localhost:8081/manager/html/list;sessionId=5457263B7192C504EBF6C29B29BA5A01?org.apache.catalina.filters.CSRF_NONCE=09... Update

Tomcat Web Application Manager

Message: OK

Manager

List Applications HTML Manager Help Manager Help Server Status

Applications					
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 Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/jenkins	None specified	Jenkins v2.346.3	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

Deploy

Deploy directory or WAR file located on server

Conclusion : I understod how to create and build a CI/CD pipeline in Jenkins to test and deploy an application over the tomcat server.