

FINAL LAB EXPERIMENT (BY AMAN TYAGI)

Aim: Create a Simple Jenkins pipeline using Jenkinsfile and create a build using it

1) Start your Jenkins

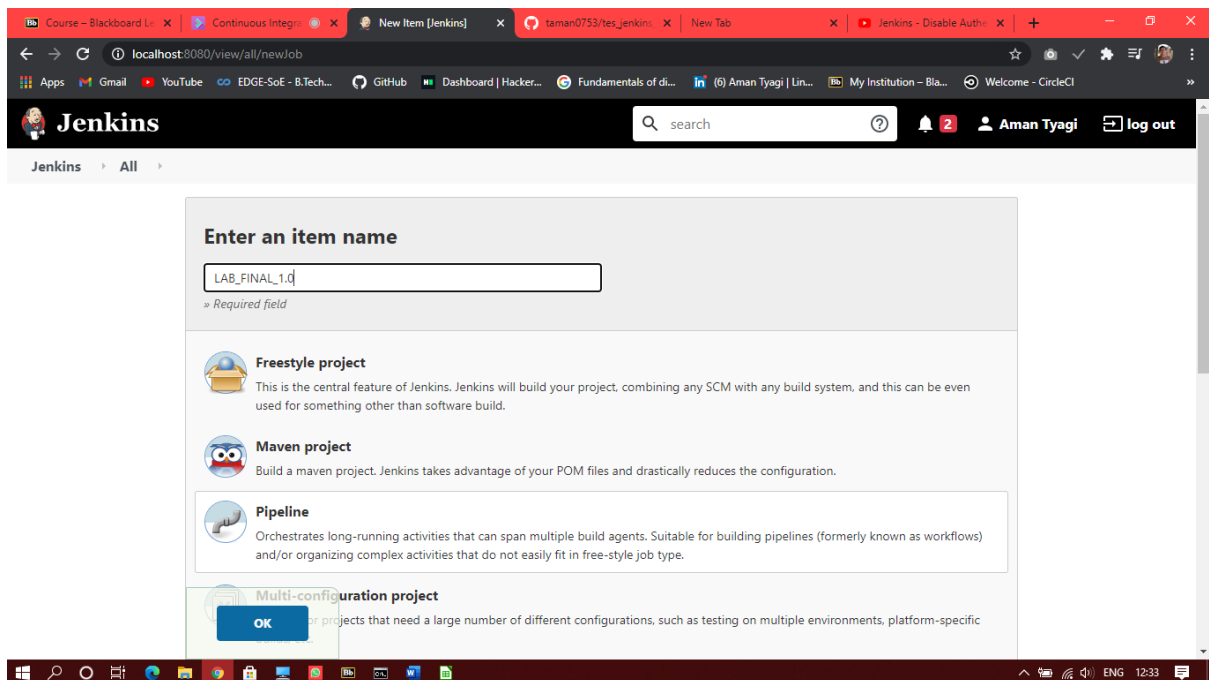
```
Administrator: Command Prompt - java -jar jenkins.war
Microsoft Windows [Version 10.0.18363.1198]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Windows\system32>cd ..

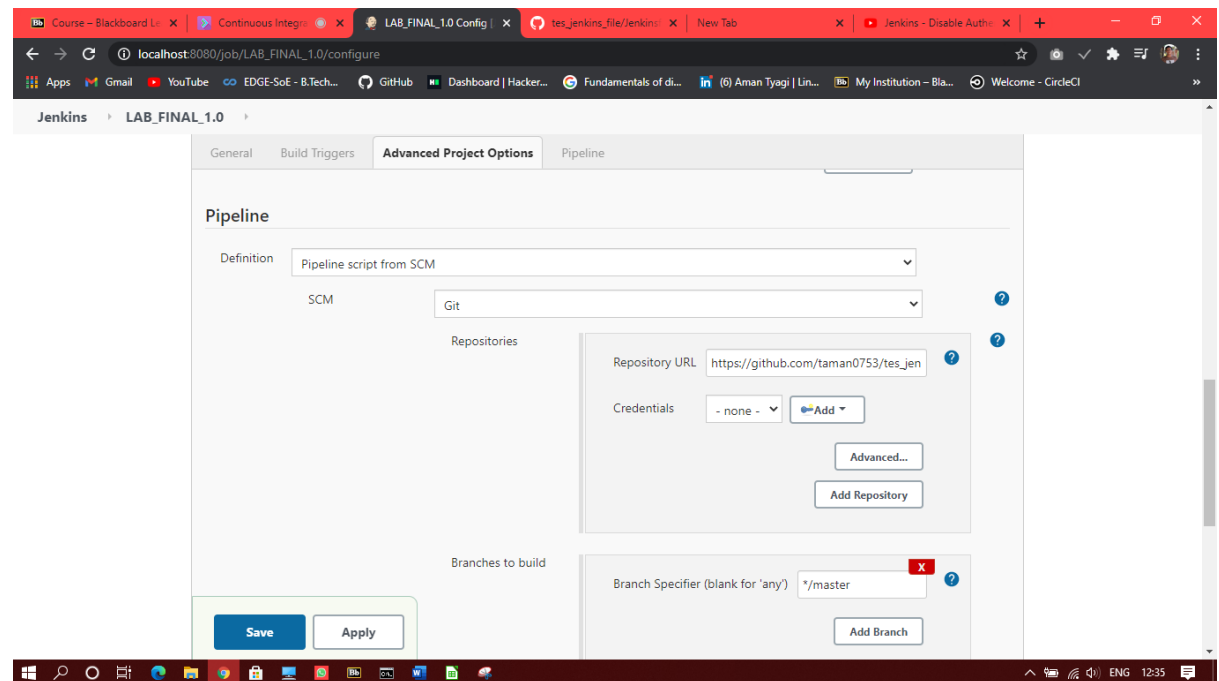
C:\Windows>cd ..

C:\>java -jar jenkins.war
Running from: C:\jenkins.war
webroot: $user.home/.jenkins
2020-12-04 05:48:44.278+0000 [id=1] INFO org.eclipse.jetty.util.log.Log#initialized: Logging initialized @2222ms to org.eclipse.jetty.util.log.JavaUtilLog
2020-12-04 05:48:44.278+0000 [id=1] INFO winstone.Logger#logInternal: Beginning extraction from war file
2020-12-04 05:48:44.810+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2020-12-04 05:48:45.000+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: jetty-9.4.30.v20200611; built: 2020-06-11T12:34:51.929Z; git: 271836e4c1f4612f1
2b7bb13ef5a92a927634b0d; jvm 1.8.0_241-b07
2020-12-04 05:48:50.391+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.JettyJspServlet
2020-12-04 05:48:50.715+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart: DefaultSessionIdManager workerName=node0
2020-12-04 05:48:50.715+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIdManager#doStart: No SessionScavenger set, using defaults
2020-12-04 05:48:50.743+0000 [id=1] INFO o.e.j.server.session.HouseKeeper#startScavenging: node0 Scavenging every 600000ms
2020-12-04 05:48:52.561+0000 [id=1] INFO hudson.WebAppMain#contextInitialized: Jenkins home directory: C:\Users\Aman-Tyagi\.jenkins found at: $user.home/.jenkins
2020-12-04 05:48:53.346+0000 [id=1] INFO o.e.j.s.handler.ContextHandler#doStart: Started w.@f6ac94{Jenkins v2.252.2, file:///C:/Users/Aman-Tyagi/.jenkins/war/,AVA
ILABLE}[C:\Users\Aman-Tyagi\.jenkins\war]
2020-12-04 05:48:53.567+0000 [id=1] INFO o.e.j.server.AbstractConnector#doStart: Started ServerConnector@115b42e(HTTP/1.1, (http/1.1)){0.0.0.0:8080}
2020-12-04 05:48:53.572+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: Started @11519ms
2020-12-04 05:48:53.576+0000 [id=20] INFO winstone.Logger#logInternal: Winstone Servlet Engine running: controlPort=disabled
2020-12-04 05:48:57.625+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: Started initialization
2020-12-04 05:49:12.696+0000 [id=28] INFO jenkins.InitReactorRunner$1#onAttained: Listed all plugins
2020-12-04 05:49:41.266+0000 [id=28] INFO jenkins.InitReactorRunner$1#onAttained: Prepared all plugins
2020-12-04 05:49:41.325+0000 [id=27] INFO jenkins.InitReactorRunner$1#onAttained: Started all plugins
2020-12-04 05:49:49.403+0000 [id=25] INFO jenkins.InitReactorRunner$1#onAttained: Augmented all extensions
2020-12-04 05:49:49.974+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: System config loaded
2020-12-04 05:49:51.912+0000 [id=26] INFO jenkins.InitReactorRunner$1#onAttained: System config adapted
2020-12-04 05:49:51.948+0000 [id=28] INFO jenkins.InitReactorRunner$1#onAttained: Loaded all jobs
2020-12-04 05:49:51.952+0000 [id=27] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for all jobs updated
2020-12-04 05:49:52.076+0000 [id=43] INFO hudson.model.AsyncPeriodicWork#lambda$doRun$0: Started Download metadata
2020-12-04 05:49:52.362+0000 [id=43] INFO hudson.util.Retrier#start: Attempt #1 to do the action check updates server
2020-12-04 05:49:53.696+0000 [id=26] INFO o.j.main.modules.sshd.SSHD#start: Started SSHD at port 55090
2020-12-04 05:49:54.641+0000 [id=28] INFO o.s.c.s.AbstractApplicationContext#prepareRefresh: Refreshing org.springframework.web.context.support.StaticWebApplicationContext@159b676: display name [Root WebApplicationContext]; startup date [Fri Dec 04 11:19:54 IST 2020]; root of context hierarchy
2020-12-04 05:49:54.642+0000 [id=28] INFO o.s.c.s.AbstractApplicationContext#obtainFreshBeanFactory: Bean factory for application context [org.springframework.web.c
ontext.support.StaticWebApplicationContext@159b676]: org.springframework.beans.factory.support.DefaultListableBeanFactory@757804
2020-12-04 05:49:54.713+0000 [id=28] INFO o.s.b.f.s.DefaultListableBeanFactory#preInstantiateSingletons: Pre-instantiating singletons in org.springframework.beans
```

2) Create a pipeline on Jenkins



- 3) In the configuration settings , select “Pipeline from SCM” and add the repo link which has the Maven project and the JenkinsFile



- 4) Add the jenkinsfile and commit

16 lines (16 sloc) | 254 Bytes

```
1 pipeline{
2   agent any
3   stages{
4     stage('CleanStage'){
5       steps{
6         echo 'Build Stage'
7         bat 'mvn clean'
8       }
9     }
10    stage('BuildStage'){
11      steps{
12        bat 'mvn package'
13      }
14    }
15  }
16 }
```

5) Build now

The screenshot shows the Jenkins console output for a build named 'LAB_FINAL_1.0 #1'. The output is a log of Maven commands and their results. It starts with '[INFO] Compiling 1 source file to C:\Users\Aman-Tyagi\.jenkins\workspace\LAB_FINAL_1.0\target\classes'. It then shows various Maven plugins being executed: maven-resources-plugin, maven-compiler-plugin, and maven-surefire-plugin. The build is successful, with the message '[INFO] BUILD SUCCESS'. The total time for the build is 18.667 seconds, and it finished at 2020-12-04T12:39:33+05:30. The console output is displayed in a monospaced font within a web browser window.

```
[INFO] Compiling 1 source file to C:\Users\Aman-Tyagi\.jenkins\workspace\LAB_FINAL_1.0\target\classes
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ test.jenkinsfile ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory C:\Users\Aman-Tyagi\.jenkins\workspace\LAB_FINAL_1.0\src\test\resources
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ test.jenkinsfile ---
[INFO] No sources to compile
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ test.jenkinsfile ---
[INFO] No tests to run.
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ test.jenkinsfile ---
[INFO] Building jar: C:\Users\Aman-Tyagi\.jenkins\workspace\LAB_FINAL_1.0\target\test.jenkinsfile-0.0.1-SNAPSHOT.jar
[INFO] BUILD SUCCESS
[INFO] Total time: 18.667 s
[INFO] Finished at: 2020-12-04T12:39:33+05:30
[INFO]
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

The screenshot shows the Jenkins Pipeline LAB_FINAL_1.0 dashboard. The left sidebar contains navigation links: Back to Dashboard, Status, Changes, Build Now, Configure, Delete Pipeline, Full Stage View, Open Blue Ocean, Rename, and Pipeline Syntax. The main content area displays the Pipeline LAB_FINAL_1.0 with a 'Recent Changes' section showing a change on Dec 04 at 12:38. Below this is the 'Stage View' section, which shows a table of stage times. The table has three columns: Declarative: Checkout SCM, CleanStage, and BuildStage. The average stage times are 21s, 17s, and 30s respectively. The average full run time is ~1min 22s. The 'Permalinks' section is also visible at the bottom.

Stage	Declarative: Checkout SCM	CleanStage	BuildStage
Average stage times:	21s	17s	30s
(Average full run time: ~1min 22s)	21s	17s	30s