CI-CD-DEPLOYMENT-FOR-SPRINGBOOT-APPLICATION
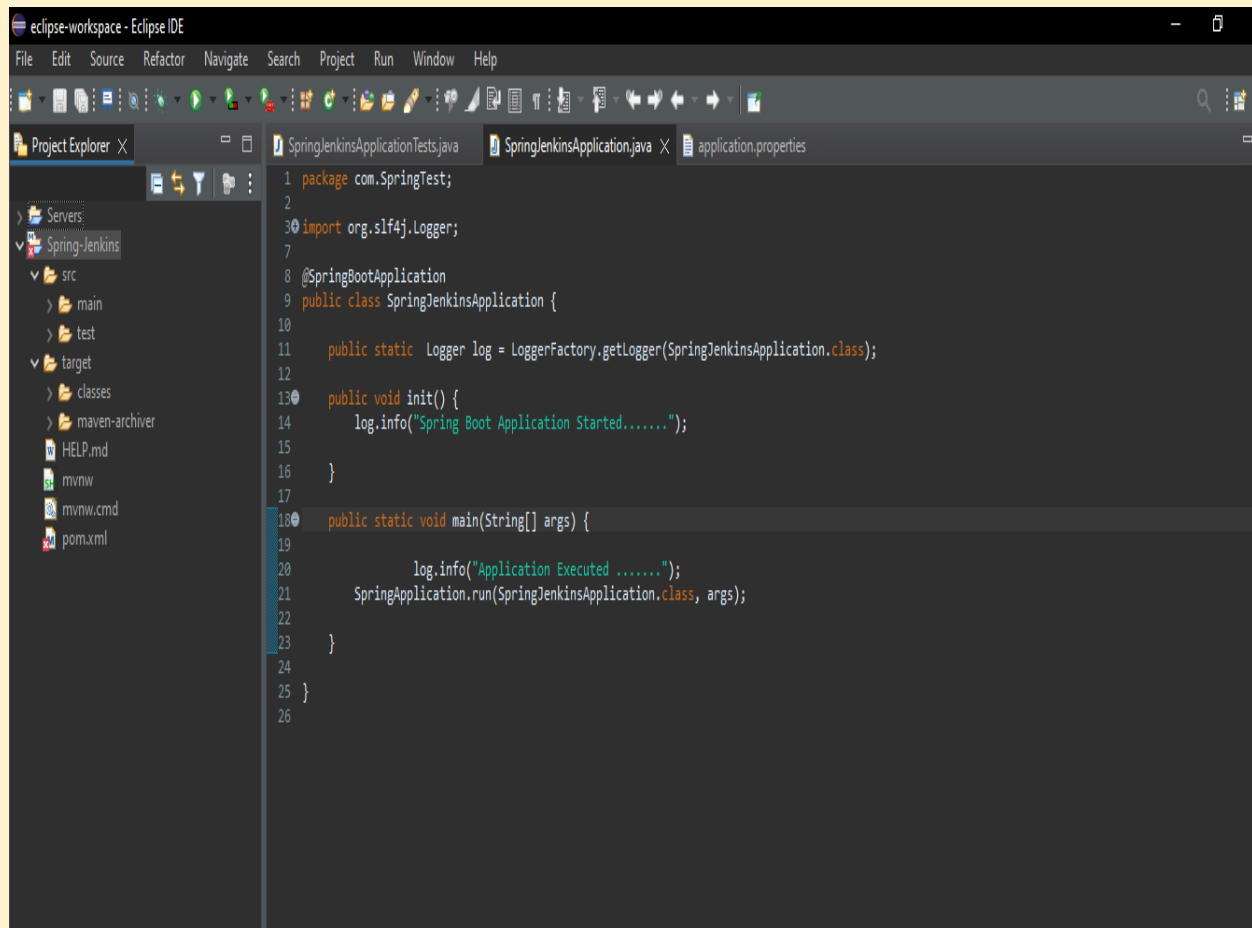
Document type: Write-up

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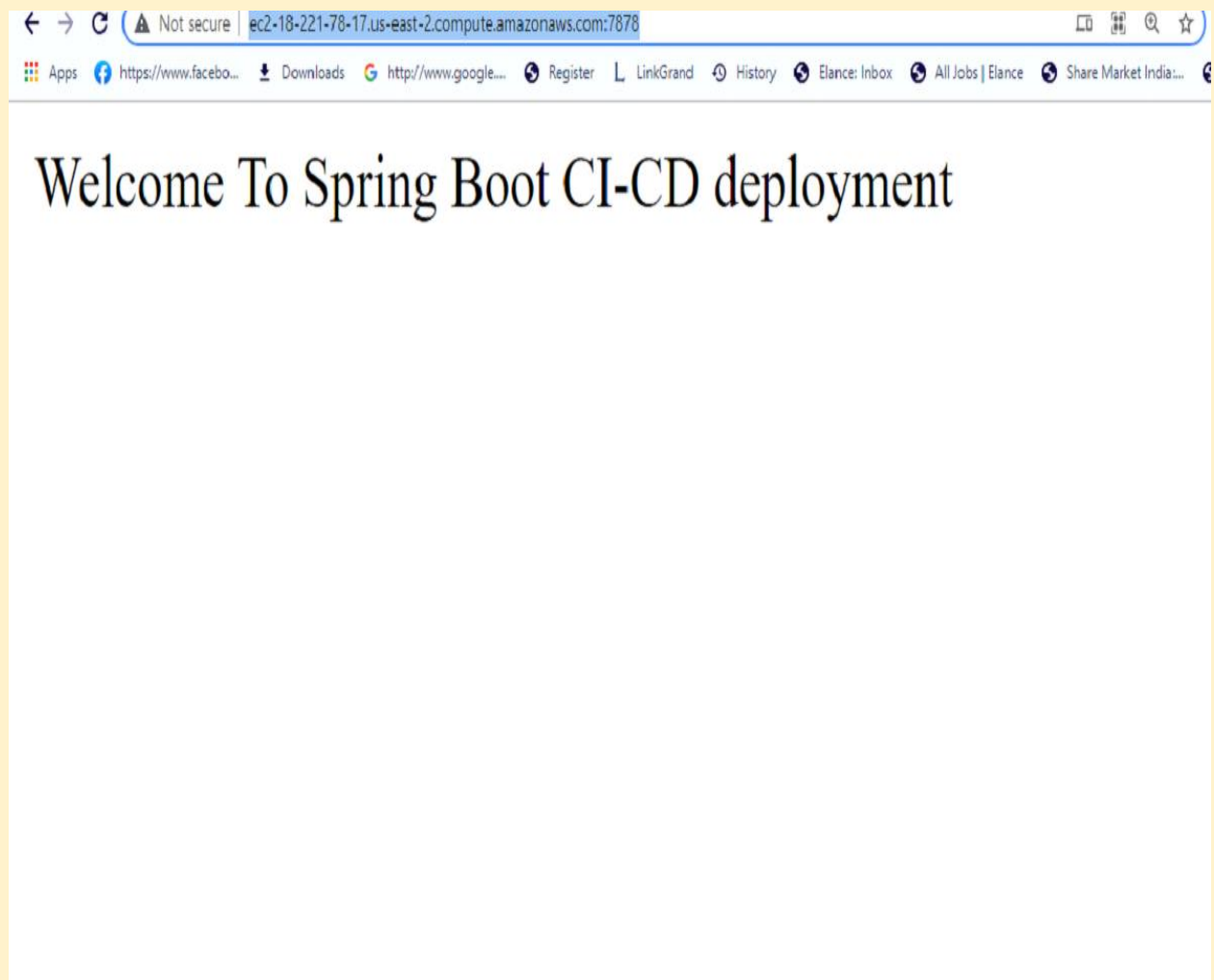GITHUB REPOSITORY: https://github.com/sameerkhan0411/ci-cd-deployment-for-springboot-application.git

Concepts used in project:

- o ECLIPSE: Eclipse is an integrated development environment used in computer programming. It contains a base workspace and an extensible plug-in system for customizing the environment. It is the second-most-popular IDE for Java development, and, until 2016, was the most popular.
- o GITHUB: GitHub, Inc. is a provider of Internet hosting for software development and version control using Git. It offers the distributed version control and source code management functionality of Git, plus its own features.
- o JENKINS: Jenkins is an open-source automation server. It helps automate the parts of software development related to building, testing, and deploying, facilitating continuous integration and continuous delivery. It is a server-based system that runs in servlet containers such as Apache Tomcat.
- o AWS EC2: Amazon Elastic Compute Cloud is a part of Amazon.com's cloud-computing platform, Amazon Web Services, that allows users to rent virtual computers on which to run their own computer applications.
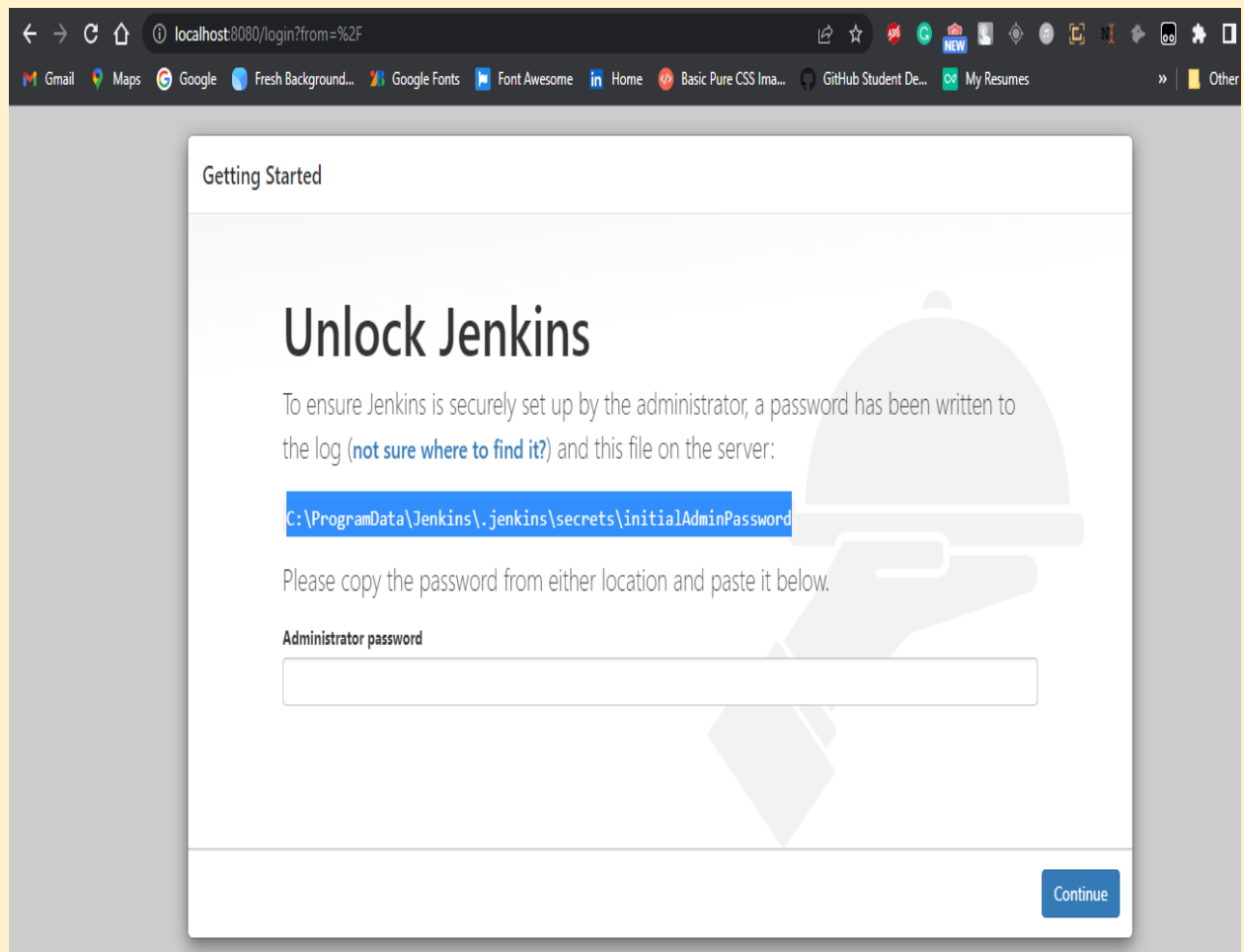
Create a spring project:

Jenkins

Jenkins Console

```
Command Prompt                                                                      —  □  X

C:\Program Files\Jenkins>..\Java\jdk-11.0.15\bin\java -jar jenkins.war --httpPort=8080
Running from: C:\Program Files\Jenkins\Jenkins.war
webroot: $user.home/.jenkins
2022-05-01 06:02:40.068+0000 [id=1]     INFO    org.eclipse.jetty.util.log.Log#initialized: Logging initialized @1513ms to org.eclipse.jetty.util.log.JavaUtilLog
2022-05-01 06:02:40.278+0000 [id=1]     INFO    winstone.Logger#logInternal: Beginning extraction from war file
2022-05-01 06:02:44.934+0000 [id=1]     WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2022-05-01 06:02:45.106+0000 [id=1]     INFO    org.eclipse.jetty.server.Server#doStart: jetty-9.4.43.v20210629; built: 2021-06-30T11:07:22.254Z; git: 526006ecfa3af7f1a
27ef3a288e2bef7ea9dd7e8; jvm 11.0.15+8-LTS-149
2022-05-01 06:02:47.086+0000 [id=1]     INFO    o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.JettyJspServl
et
2022-05-01 06:02:47.227+0000 [id=1]     INFO    o.e.j.s.s.DefaultSessionIdManager#doStart: DefaultSessionIdManager workerName=node0
2022-05-01 06:02:47.227+0000 [id=1]     INFO    o.e.j.s.s.DefaultSessionIdManager#doStart: No SessionScavenger set, using defaults
2022-05-01 06:02:47.233+0000 [id=1]     INFO    o.e.j.server.session.HouseKeeper#startScavenging: node0 Scavenging every 600000ms
2022-05-01 06:02:49.851+0000 [id=1]     INFO    hudson.WebAppMain#contextInitialized: Jenkins home directory: C:\Users\hi\.jenkins found at: $user.home/.jenkins
2022-05-01 06:02:50.373+0000 [id=1]     INFO    o.e.j.s.handler.ContextHandler#doStart: Started w.@2b9f74d0{Jenkins v2.332.2,/,file:///C:/Users/hi/.jenkins/war/,AVAILAB
LE}{C:\Users\hi\.jenkins\war}
2022-05-01 06:02:50.411+0000 [id=1]     INFO    o.e.j.server.AbstractConnector#doStop: Stopped ServerConnector@7756c3cd{HTTP/1.1, (http/1.1)}{0.0.0.0:8080}
2022-05-01 06:02:50.433+0000 [id=1]     INFO    o.e.j.server.session.HouseKeeper#stopScavenging: node0 Stopped scavenging
2022-05-01 06:02:50.454+0000 [id=1]     INFO    hudson.WebAppMain#contextDestroyed: Shutting down a Jenkins instance that was still starting up
java.lang.Throwable: reason
        at hudson.WebAppMain.contextDestroyed(WebAppMain.java:386)
        at org.eclipse.jetty.server.handler.ContextHandler.callContextDestroyed(ContextHandler.java:1074)
        at org.eclipse.jetty.servlet.ServletContextHandler.callContextDestroyed(ServletContextHandler.java:584)
        at org.eclipse.jetty.server.handler.ContextHandler.contextDestroyed(ContextHandler.java:1037)
        at org.eclipse.jetty.servlet.ServletHandler.doStop(ServletHandler.java:319)
        at org.eclipse.jetty.util.component.AbstractLifeCycle.stop(AbstractLifeCycle.java:94)
        at org.eclipse.jetty.util.component.ContainerLifeCycle.stop(ContainerLifeCycle.java:180)
        at org.eclipse.jetty.util.component.ContainerLifeCycle.doStop(ContainerLifeCycle.java:201)
        at org.eclipse.jetty.server.handler.AbstractHandler.doStop(AbstractHandler.java:108)
        at org.eclipse.jetty.security.SecurityHandler.doStop(SecurityHandler.java:437)
        at org.eclipse.jetty.security.ConstraintSecurityHandler.doStop(ConstraintSecurityHandler.java:423)
        at org.eclipse.jetty.util.component.AbstractLifeCycle.stop(AbstractLifeCycle.java:94)
        at org.eclipse.jetty.util.component.ContainerLifeCycle.stop(ContainerLifeCycle.java:180)
        at org.eclipse.jetty.util.component.ContainerLifeCycle.doStop(ContainerLifeCycle.java:201)
        at org.eclipse.jetty.server.handler.AbstractHandler.doStop(AbstractHandler.java:108)
        at org.eclipse.jetty.server.session.SessionHandler.doStop(SessionHandler.java:520)
        at org.eclipse.jetty.util.component.AbstractLifeCycle.stop(AbstractLifeCycle.java:94)
        at org.eclipse.jetty.util.component.ContainerLifeCycle.stop(ContainerLifeCycle.java:180)
        at org.eclipse.jetty.util.component.ContainerLifeCycle.doStop(ContainerLifeCycle.java:201)
        at org.eclipse.jetty.server.handler.AbstractHandler.doStop(AbstractHandler.java:108)
        at org.eclipse.jetty.server.handler.ContextHandler.stopContext(ContextHandler.java:1060)
        at org.eclipse.jetty.servlet.ServletContextHandler.stopContext(ServletContextHandler.java:386)
        at org.eclipse.jetty.webapp.WebAppContext.stopWebapp(WebAppContext.java:1454)
        at org.eclipse.jetty.webapp.WebAppContext.stopContext(WebAppContext.java:1420)
        at org.eclipse.jetty.server.handler.ContextHandler.doStop(ContextHandler.java:1114)
        at org.eclipse.jetty.servlet.ServletContextHandler.doStop(ServletContextHandler.java:297)
```

Jenkins Output

```
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] skip non existing resourceDirectory C:\Users\ hi \.jenkins\workspace\Spring Jenkins ci-cd\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ Auth ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to C:\Users\ hi \.jenkins\workspace\Spring Jenkins ci-cd\target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.22.2:test (default-test) @ Auth ---
[INFO] Skipping execution of surefire because it has already been run for this configuration
[INFO]
[INFO] --- maven-jar-plugin:3.2.0:jar (default-jar) @ Auth ---
[INFO] Building jar: C:\Users\ hi \.jenkins\workspace\Spring Jenkins ci-cd\target\Auth-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- spring-boot-maven-plugin:2.5.4:repackage (repackage) @ Auth ---
[INFO] Replacing main artifact with repackaged archive
[INFO]
[INFO] --- maven-install-plugin:2.5.2:install (default-install) @ Auth ---
[INFO] Installing C:\Users\ hi \.jenkins\workspace\Spring Jenkins ci-cd\target\Auth-0.0.1-SNAPSHOT.jar to C:\Users\ hi \.m2\repository\com\ci\cd-
dep\Auth\0.0.1-SNAPSHOT\Auth-0.0.1-SNAPSHOT.jar
[INFO] Installing C:\Users\ hi \.jenkins\workspace\Spring Jenkins ci-cd\pom.xml to C:\Users\ hi \.m2\repository\com\ci\cd-dep\Auth\0.0.1-SNAPSHOT\Auth-
0.0.1-SNAPSHOT.pom
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  39.186 s
[INFO] Finished at: 2022-05-02T18:30:19+05:30
[INFO] ------------------------------------------------------------------------
Triggering a new build of Testing Spring Jenkins
Finished: SUCCESS
```

Dashboard ›

Hello I Am OC

Edit description

All	CI-CD Pipeline Spring-Jenkins	+				
S	W	Name ↓	Last Success	Last Failure	Last Duration	
✓	⚙	Deployment Spring Jenkins ci-cd	1 hr 32 min - #22	N/A	58 sec	↻
✓	⚙	Production Spring Jenkins	1 hr 30 min - #8	N/A	54 sec	↻
✓	⚙	Testing Spring Jenkins	1 hr 31 min - #8	N/A	37 sec	↻

Icon: S M L   Icon legend   Atom feed for all   Atom feed for failures   Atom feed for just latest builds

New Item
People
Build History
Project Relationship
Check File Fingerprint
Manage Jenkins
My Views
Lockable Resources
New View

Build Queue ︿
No builds in the queue.

Build Executor Status ︿

```
18:30:45.729 [main] DEBUG org.springframework.test.context.support.TestPropertySourceUtils - Adding inlined properties to environment.
{spring.jmx.enabled=false, org.springframework.boot.test.context.SpringBootTestContextBootstrapper=true}

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 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::          (v2.5.4)

2022-05-02 18:30:47.111  INFO 15660 --- [           main] com.testAuth.SpringCiCdApplicationTests  : Starting SpringCiCdApplicationTests using Java
11.0.12 on DESKTOP-LBUFTMI with PID 15660 (started by Dell in C:\Users\ hi \.jenkins\workspace\Testing Spring Jenkins)
2022-05-02 18:30:47.123  INFO 15660 --- [           main] com.testAuth.SpringCiCdApplicationTests  : No active profile set, falling back to default
profiles: default
2022-05-02 18:30:54.842  INFO 15660 --- [           main] com.testAuth.SpringCiCdApplicationTests  : Started SpringCiCdApplicationTests in 9.085 seconds
(JVM running for 12.535)
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 11.737 s - in com.testAuth.SpringCiCdApplicationTests
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:resources (default-resources) @ Auth ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
[INFO] Copying 1 resource
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ Auth ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:3.2.0:resources (default-resources) @ Auth ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Using 'UTF-8' encoding to copy filtered properties files.
```