Project - CI/CD Deployment for Spring boot Application.

Git Repository link: https://github.com/moulaalihujare/Simplilearn-Phase-5-Projects.git

Spring Boot Application Jar file pushed repository link: https://github.com/moulaalihujare/Spring-Boot-Application-Running-EC2.git

DESCRIPTION:

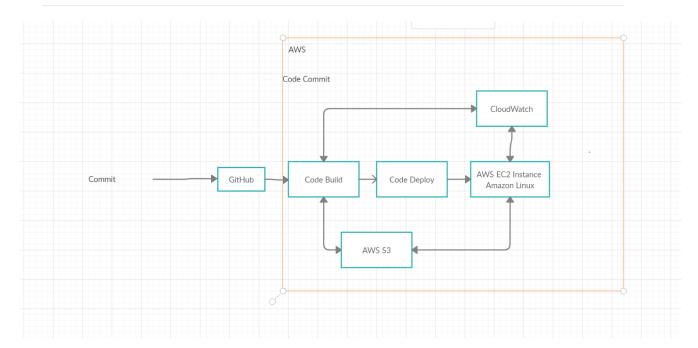
Project Objective:

In this project building a CI/CD pipeline to demonstrate continuous deployment and host the application on AWS EC2 instance.

Following flow used:

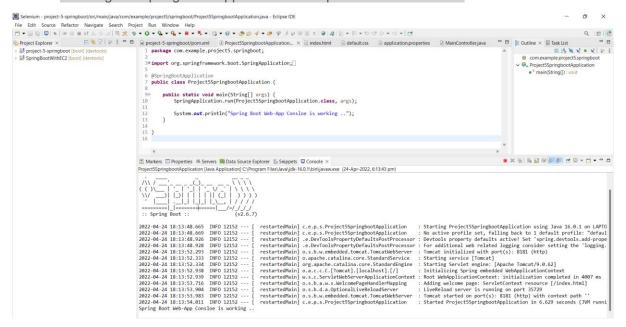
- Eclipse
- GitHub
- Jenkins
- AWS EC2/ Virtual machine

Representing visually what we are doing here.



Following steps are used while making a Project:

- Eclipse: Creating / build the Spring boot Application inside an Eclipse workspace.
- Running the Spring boot Application on respective Tomcat server.

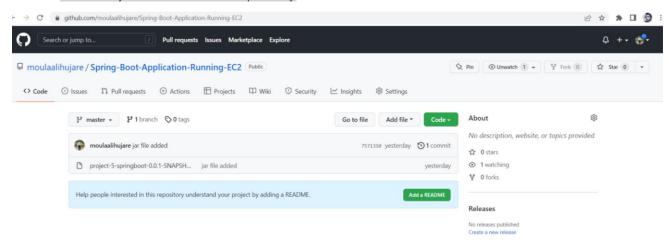


Spring boot application running on https localhost port number: 8181.

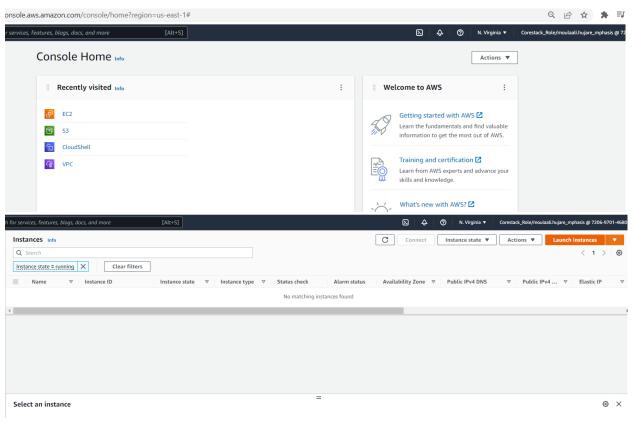


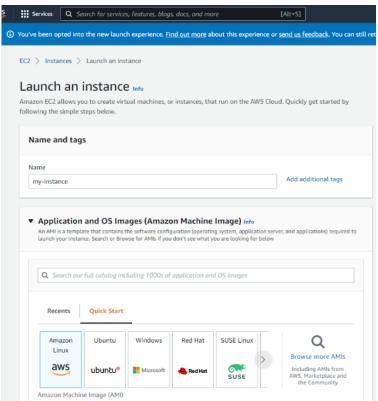
Creating the jar file for the Spring boot application by using following command.
 cmd: mvn package

Push the jar file into GitHub repository.

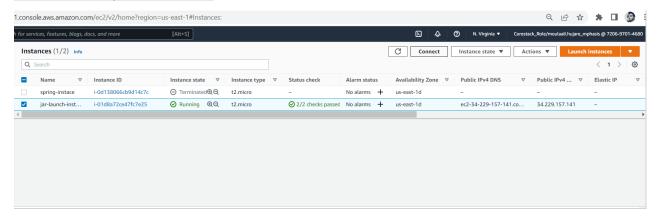


- Launch the AWS.
- Next launch the new EC2 instance.

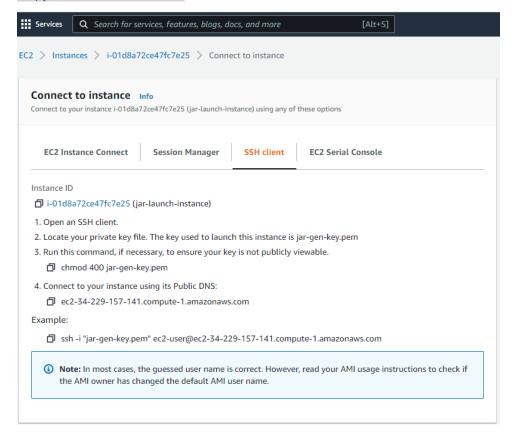




Connect the respective instance.



Copy the EC2 ssh client ID.



Open the git bash and paste the ssh ID.

```
ec2-user@ip-172-31-21-19:~/Spring-jar
```

- Following commands, we have to run in git bash:
- > sudo yum -y update
- > sudo yum install git -y
- ▶ git --version
- > sudo yum install java-1.8.0-openjdk
- > sudo yum install java-1.8.0-openjdk-devel
- java -version
- > git clone https://github.com/moulaalihujare/SpringBootEC2.git
- > cd SpringBootEC2
- ▶ ls

- > java -jar spring-boot-ec2.jar
- Here spring boot application is running through the AWS EC2 instance, with receptive IP

```
MINGW64:/c/Users/moula/OneDrive/Desktop/Ec2 Jar File
                            s://aws.amazon.com/amazon-linux-2/
-user@ip-172-31-11-200 ~]$ sudo yum -y update
de plugins: extras_suggestions, langpacks, priorities, update-motd
| 3.7 kB 00:00
     oaded plugins: extras_suggestions, langpacks, priorities, update_metcd
o packages marked for update
ec2-user@ip=172-31-11-200 ~]$
ec2-user@ip=172-31-11-200 ~]$
ec2-user@ip=172-31-11-200 ~]$ sudo yum install git -y
oaded plugins: extras_suggestions, langpacks, priorities, update-motd
ackage git=2.32.0-1.amzn2.0.1.x86_64 already installed and latest version
othing to do
ec2-user@ip=172-31-11-200 ~]$ java -version
penjdk version "1.8.0.312"
penjDK Ruttime Environment (build 1.8.0_312-b07)
penjDK 64-Bit Server VM (build 25.312-b07, mixed mode)
ec2-user@ip=172-31-11-200 ~]$ git clone https://github.com/moulaalihujare/Sprin
|-jar.git
                                          iscrep 17.2 of the control of the co
     .
ec2-user@ip-172-31-11-200 ~]$ cd ^C
ec2-user@ip-172-31-11-200 ~]$ cd Spring-jar
ec2-user@ip-172-31-11-200 Spring-jar]$ ls
resect 5. sprindhogt-0.0.1-SNAPSHOT.jar
                                                   -5-springboot-0.0.1-SNAPSHOT.jar
er@ip-172-31-11-200 Spring-jar]$ java -jar project-5-springboot-0.0.1-SNAPSHOT.jar
               22-04-24 09:34:00.835 INFO 13985 --- [ main] c.e.p.s.Project5SpringbootApplication : Starting Pr ect5SpringbootApplication v0.0.1-SNAPSHOT using Java 1.8.0_312 on ip-172-31-11-200.ec2.internal with PID 13985 /home/ec2-user/Spring-jar/project-5-springboot-0.0.1-SNAPSHOT.jar started by ec2-user in /home/ec2-user/Spring
       jary
022-04-24 09:34:00.852 INFO 13985 --- [ main] c.e.p.s.Project5SpringbootApplication : No active p
ofile set, falling back to 1 default profile: "default"
main] w.s.c.ServletWebServerApplicationContext : Root WebApp
022-04-24 09:34:03.763 INFO 1985 --- [ main] w.s.c.ServletWebServerApplicationContext : Root WebApp
022-04-24 09:34:05 and a server and application completed in 2721 ms
       UZZ-04-24 09:34:05.205 INFO 13985 --- [ main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat star
od on port(s): 8181 (http) with context path ''
022-04-24 09:34:05 286 TNFO 12085
       022-04-24 09:34:05.286 INFO 13985 --- [ main] c.e.p.s.Project5SpringbootApplication : Started Pro ect5SpringbootApplication in 6.043 seconds (JVM running for 7.072) pring Boot Web-App Consloe is working .. lient_loop: send disconnect: Connection reset by peer
                                              64-Bit Server VM (build 25.312-b07, mixed mode)
er@ip-172-31-21-19 ~]$ git clone https://github.com/moulaalihujare/Spring
                                          into 'Spring-jar'...

j into 'Spring-jar'...

counting objects: 3, done.

counting objects: 100% (3/3), done.

compressing objects: 100% (3/3), done.

Total 3 (delta 0), reused 3 (delta 0), pack-reused 0

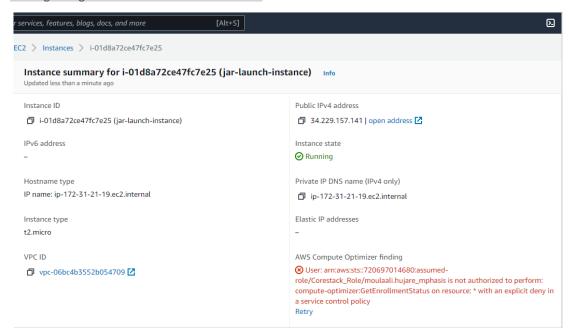
ing objects: 100% (3/3), 15, 04 Mis | 33,69 Mis/s, done.

ser@ip-172-31-21-19 -]$ cd Spring-jar

ser@ip-172-31-21-19 Spring-jar|$ Is

the spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-spring-sp
             oject-3-springboot-0.0.1-shapshor.jar
c2-user@ip-172-31-21-19 Spring-jar]$ java -jar project-5-springboot-0.0.1-SNAPSHOT.jar
           page 424 10:54:45.626 INFO 4787 --- [ main] c.e.p.s.Project5SpringbootApplication : Starting Project5SpringbootApplication : one of the project5SpringbootApplication : Starting Project5SpringbootApplication : Starting Project5SpringbootApplication : No active project-5-springboot-0.0.1-SNAPSHOT, jar started by ec2-user in /home/ec2-user/Spring-jar/Project-5-springbootApplication : No active profile set, falling ck to 1 default profile: "default" | main] c.e.p.s.Project5SpringbootApplication : No active profile set, falling ck to 1 default profile: "default" | main] c.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | main | o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s) | o.s.b.w.
     ick to 1 deriant, press
122-04-24 10:54-48.436 INFO 4787 --- [
8181 (http)
122-04-24 10:54-48.468 INFO 4787 --- [
122-04-24 10:54-48.468 INFO 4787 --- [
Tomcaty9, 0.62]
102-04-24 10:54-48.626 INFO 4787 --- [
102-04-24 10:54-48.627 INFO 4787 --- [
141ization completed in 2823 ms
102-04-24 10:54-50.060 INFO 4787 --- [
161typ with context path ''
161typ with context path ''
162-04-24 10:54-50.135 INFO 4787 --- [
161typ with context path ''
162-04-24 10:54-50.135 INFO 4787 --- [
161typ with context path ''
162-04-24 10:54-50.135 INFO 4787 --- [
161typ with context path ''
161typ with con
                                                                                                                                                                                                                                                                                                                          main] o.apache.catalina.core.StandardService : Starting service [Tomcat]
main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apach
                       2-04-24 10:54:50.135 INFO 4787 --- [ main] c.e.p.s.Project5SpringbootAppli : Started Project5SpringbootAppli in in 5.933 seconds (JWM running for 6.904) ing Boot Web-App Consloe is working .. 2-04-24 10:55:40.743 INFO 4787 --- [nio-8181-exec-1] o. apache.coyote.http11.Http11Processor : Error parsing HTTP request header te: further occurrences of HTTP request parsing errors will be logged at DEBUG level.
                   a. lang.IllegalArgumentException: Invalid character found in method name [0x160x030x0010x020x000x010xf00x500x500x6] 0xf30x630x60xec[0 HTTP method names must be tokens at org.apache.coyote.httpl1.Httpl1InputBuffer.parseRequestLine(Httpl1InputBuffer.java:419) ~[tomcat-embed-core-9.0.62.jar!/:na] at org.apache.coyote.httpl1.Httpl1Processor.service(Httpl1IProcessor.java:271) ~[tomcat-embed-core-9.0.62.jar!/:na] at org.apache.coyote.AbstractProcessorLight.process(AbstractProcessorLight.java:65) [tomcat-embed-core-9.0.62.jar!/:na] at org.apache.coyote.AbstractProtocolSconnectionHandler.process(AbstractProce).java:890) [tomcat-embed-core-9.0.62.jar!/:na] at org.apache.tomcat.util.net.NioEndpointSocketProcessor.doRun(NioEndpoint.java:1743) [tomcat-embed-core-9.0.62.jar!/:na] at org.apache.tomcat.util.net.NioEndpointSocketProcessorBase.run(SocketProcessorBase.java:191) [tomcat-embed-core-9.0.62.jar!/:na] at org.apache.tomcat.util.threads.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:191) [tomcat-embed-core-9.0.62.jar!/:na] at org.apache.tomcat.util.threads.ThreadPoolExecutor.Worker.run(ThreadPoolExecutor.java:619) [tomcat-embed-core-9.0.62.jar!/:na] at org.apache.tomcat.util.threads.ThreadPoolExecutor.processor.docs.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.processor.pr
```

Next go to given the Public IPv4 address:



Application is running on respective IP Address:

