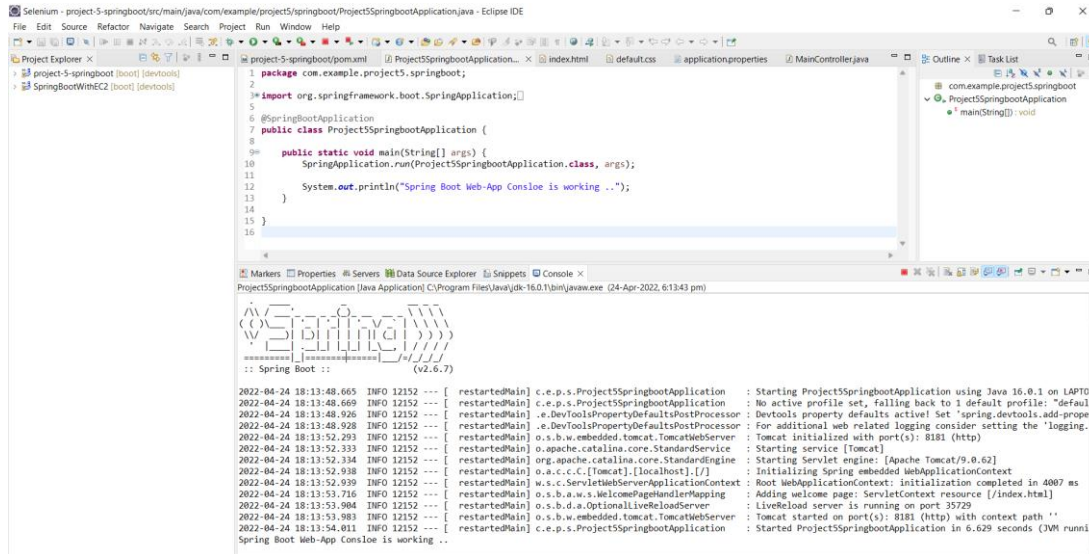


Project: CI/CD Deployment for Spring boot Application

Spring Boot Application (Running in Eclipse)

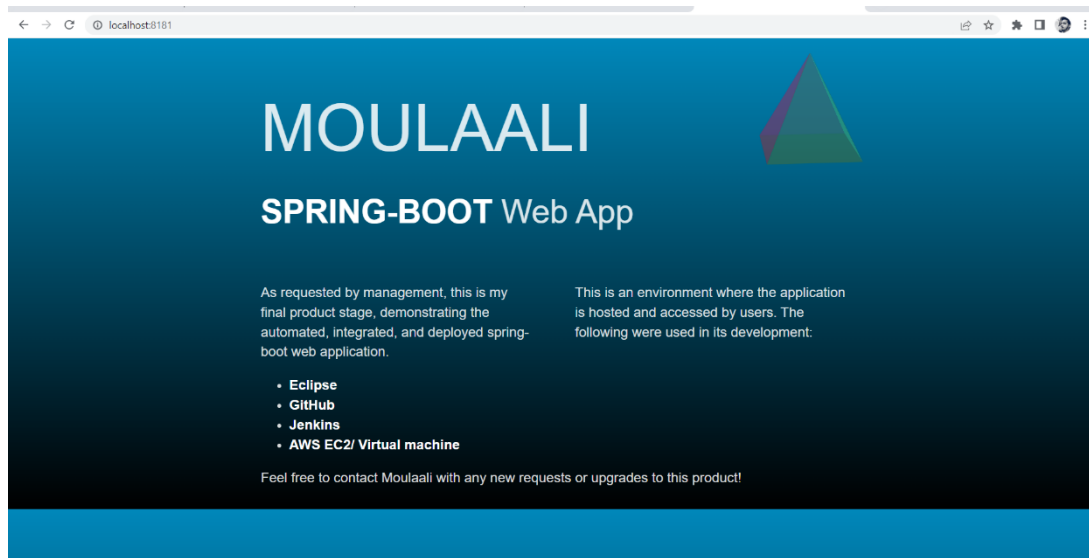


The screenshot shows the Eclipse IDE with the following components:

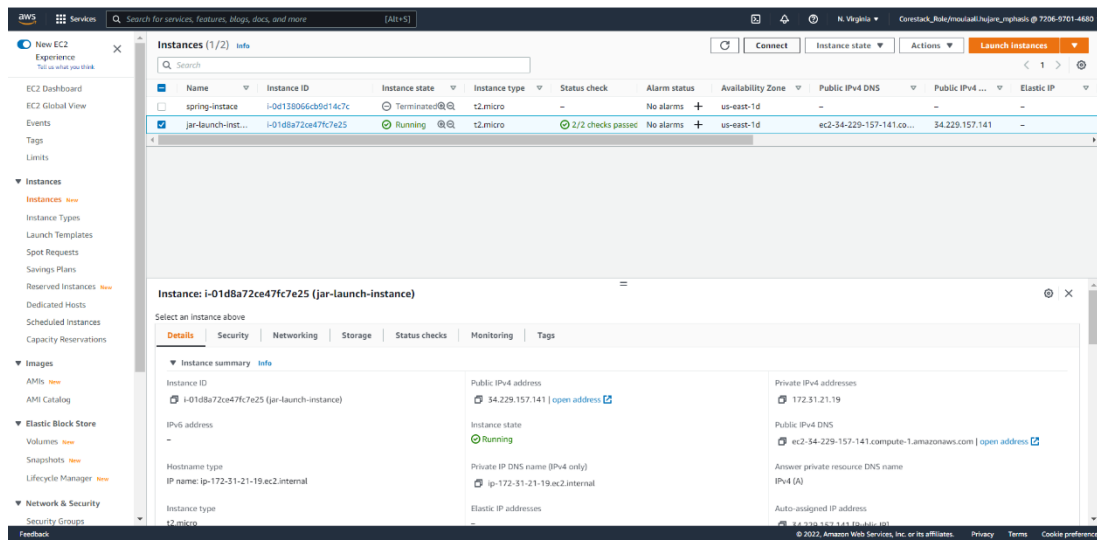
- Project Explorer:** Shows the project structure with 'project-5-springboot' and 'SpringBootWinEC2'.
- Code Editor:** Displays the `Project5SpringbootApplication.java` file. The code is as follows:

```
1 package com.example.project5.springboot;
2
3 import org.springframework.boot.SpringApplication;
4
5 @SpringBootApplication
6 public class Project5SpringbootApplication {
7
8     public static void main(String[] args) {
9         SpringApplication.run(Project5SpringbootApplication.class, args);
10
11         System.out.println("Spring Boot Web-App Console is working ..");
12     }
13 }
14
15
16
```
- Console:** Shows the output of the application. It includes the Spring Boot logo, version (v2.6.7), and a series of log messages indicating the application is starting successfully on a laptop. The messages include: 'Starting Project5SpringbootApplication using Java 16.0.1 on LAPTO', 'No active profile set, falling back to 1 default profile: 'default'', 'Starting service [Tomcat]', 'Starting Servlet engine: [Apache Tomcat/9.0.62]', 'Initializing Spring embedded WebApplicationContext', 'Root WebApplicationContext: initialization completed in 4007 ms', 'Adding welcome page: ServletContext resource [/index.html]', 'LiveReload server is running on port 35729', and 'Started Project5SpringbootApplication in 6.629 seconds (JVM runni'.

Spring Boot Application (Running on localhost: 8181)



Spring Boot Application (EC2 instance creation, running)



The screenshot shows the AWS Management Console with the 'Instances' page selected. A table lists two instances: 'spring-instance' (terminated) and 'jar-launch-inst...' (running). The 'jar-launch-inst...' instance is selected, and its details are shown in the right-hand pane. The details pane includes tabs for 'Details', 'Security', 'Networking', 'Storage', 'Status checks', 'Monitoring', and 'Tags'. The 'Details' tab is active, showing the instance summary for 'i-01d8a72ce47fc7e25 (jar-launch-instance)'. The instance is in the 'Running' state, using the 't2.micro' instance type. It has a public IPv4 address of '54.229.157.141' and a private IPv4 address of '172.31.21.19'. The instance is located in the 'us-east-1d' availability zone. The instance's IP address is '54.229.157.141' and its public IP address is '54.229.157.141'. The instance's private IP address is '172.31.21.19'. The instance's public DNS name is 'ec2-54-229-157-141.compute-1.amazonaws.com' and its private DNS name is 'ip-172-31-21-19.ec2.internal'. The instance's elastic IP address is '54.229.157.141'.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
spring-instance	i-0d138066c9d914c7c	Terminated	t2.micro	2/2 checks passed	No alarms	us-east-1d	-	-	-
jar-launch-inst...	i-01d8a72ce47fc7e25	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-54-229-157-141.co...	54.229.157.141	-

Instance: i-01d8a72ce47fc7e25 (jar-launch-instance)

Select an instance above

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

Instance summary | Info

Instance ID: i-01d8a72ce47fc7e25 (jar-launch-instance)

Public IPv4 address: 54.229.157.141 | [open address](#)

Private IPv4 addresses: 172.31.21.19

Instance state: **Running**

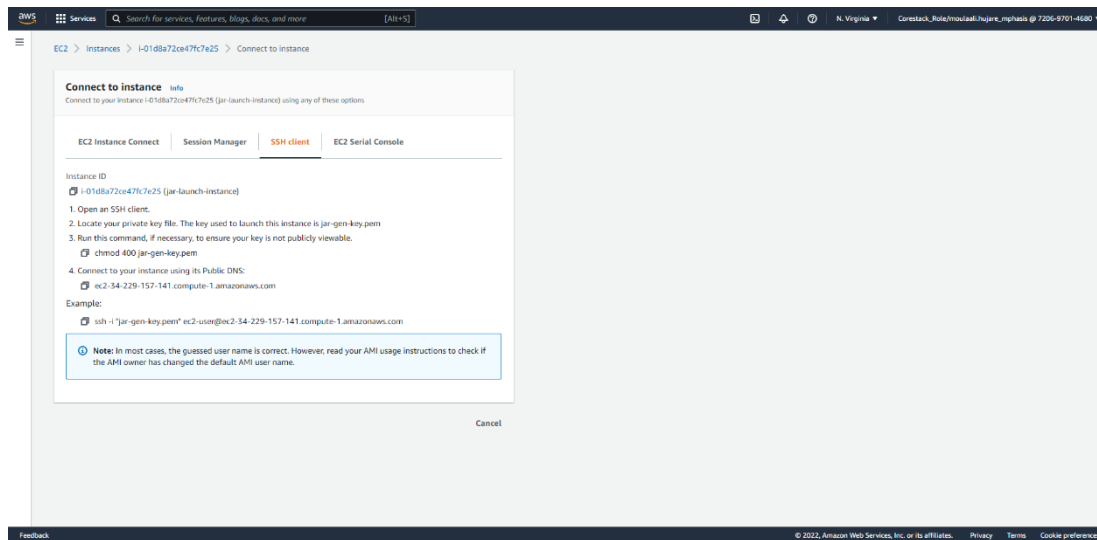
Public IPv4 DNS: ec2-54-229-157-141.compute-1.amazonaws.com | [open address](#)

Private IP DNS name (IPv4 only): ip-172-31-21-19.ec2.internal

Answer private resource DNS name: IPV4 (A)

Elastic IP address: Auto-assigned IP address

Spring Boot Application (EC2 SSH key)



The screenshot shows the 'Connect to instance' dialog in the AWS Management Console. The dialog is titled 'Connect to instance' and provides instructions on how to connect to the instance. It lists four steps: 1. Open an SSH client. 2. Locate your private key file. The key used to launch this instance is jar-gen-key.pem. 3. Run this command, if necessary, to ensure your key is not publicly viewable. 4. Connect to your instance using its Public DNS. The dialog also provides an example command: `ssh -i "jar-gen-key.pem" ec2-user@ec2-54-229-157-141.compute-1.amazonaws.com`. A note states: 'Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.'

Connect to instance | Info

Connect to your instance i-01d8a72ce47fc7e25 (jar-launch-instance) using any of these options

EC2 Instance Connect | Session Manager | **SSH client** | EC2 Serial Console

Instance ID: i-01d8a72ce47fc7e25 (jar-launch-instance)

1. Open an SSH client.

2. Locate your private key file. The key used to launch this instance is jar-gen-key.pem

3. Run this command, if necessary, to ensure your key is not publicly viewable.

4. Connect to your instance using its Public DNS:

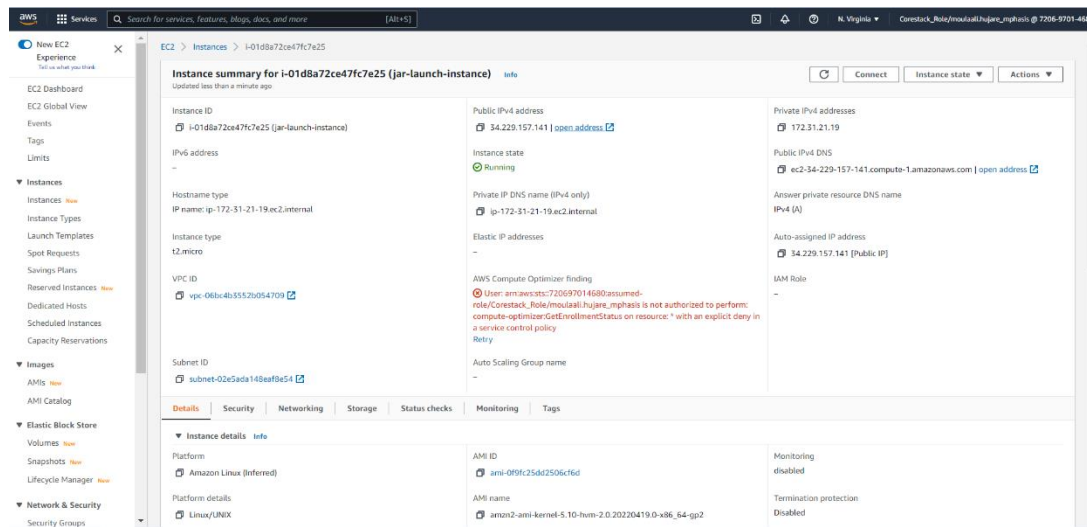
Example:

```
ssh -i "jar-gen-key.pem" ec2-user@ec2-54-229-157-141.compute-1.amazonaws.com
```

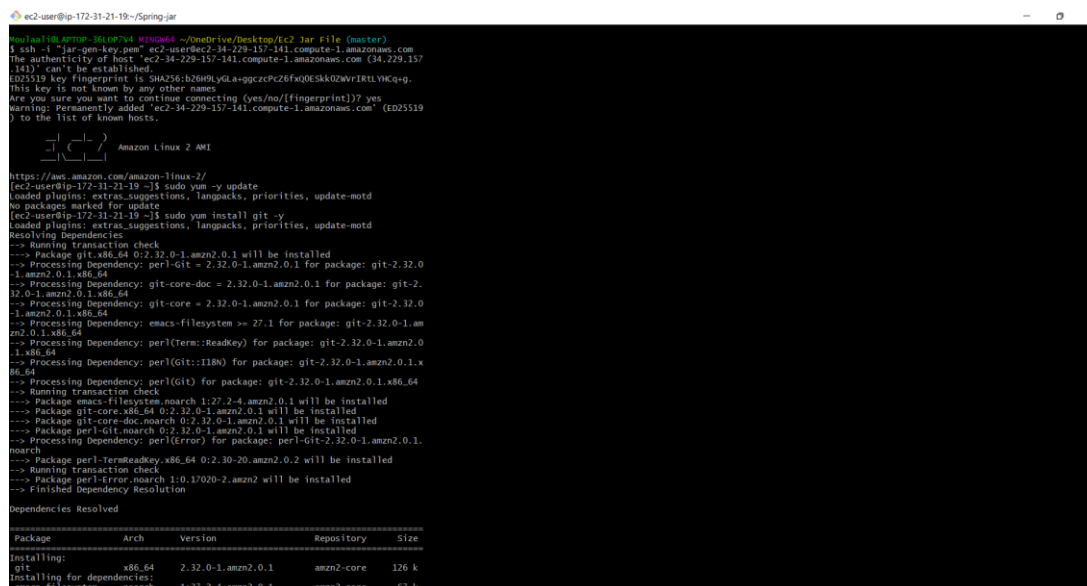
Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

Cancel

Spring Boot Application (EC2 Instance Summary)



Spring Boot Application (EC2 console in git bash)



Spring Boot Application (jdk installation in EC2 instance)

```
ec2-user@ip-172-31-21-19:~/Spring-jar
pcsc-lite-libs.x86_64 0:1.8.8-7.amzn2
pcreman.x86_64 0:0.34.0-1.amzn2.0.2
python-javapackages.noarch 0:3.4.1-11.amzn2
python-lxml.x86_64 0:3.2.1-4.amzn2.0.3
tkfdir.x86_64 0:0.9.0-2.amzn2.0.2
tzdata-java.noarch 0:2021c-1.amzn2
xorg-x11-font-util.x86_64 1:7.5-21.amzn2
xorg-x11-fonts-type1.noarch 0:7.5-9.amzn2

Complete!
[ec2-user@ip-172-31-21-19 ~]$ sudo yum install java-1.8.0-openjdk-devel
Loaded plugins: extras_suggestions, langpacks, priorities, update-notif
Resolving Dependencies
-> Running transaction check
-> Package java-1.8.0-openjdk-devel.x86_64 1:1.8.0.312.b07-1.amzn2.0.2 will be
  installed
-> Finished Dependency Resolution

Dependencies Resolved

=====================================================================================================================================
 Package               Arch      Version                                Repository      Size
=====================================================================================================================================
Installing:
 java-1.8.0-openjdk-devel.x86_64 1:1.8.0.312.b07-1.amzn2.0.2  amzn2-core     9.7 M
Transaction Summary
=====================================================================================================================================
Install 1 Package

Total download size: 9.7 M
Installed size: 40 M
Is this ok [y/d/N]: y
Downloading packages:
 java-1.8.0-openjdk-devel-1.8.0.312.b07-1.amzn2.0.2.x86_64 | 9.7 MB 00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction:
  Installing : 1:java-1.8.0-openjdk-devel-1.8.0.312.b07-1.amzn2.0.2.x86_6 1/1
  verifying  : 1:java-1.8.0-openjdk-devel-1.8.0.312.b07-1.amzn2.0.2.x86_6 1/1
Installed:
 java-1.8.0-openjdk-devel.x86_64 1:1.8.0.312.b07-1.amzn2.0.2
Complete!
[ec2-user@ip-172-31-21-19 ~]$ java -version
openjdk version "1.8.0.312"
OpenJDK Runtime Environment (build 1.8.0.312-b07)
OpenJDK 64-bit Server VM (build 25.312-b07, mixed mode)
[ec2-user@ip-172-31-21-19 ~]$ git clone https://github.com/moulaalthijare/Spring
-jar.git
Cloning into 'Spring-jar'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: total 3 (delta 0), reused 3 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), 15.04 MiB | 33.69 MiB/s, done.
[ec2-user@ip-172-31-21-19 ~]$ cd Spring-jar
[ec2-user@ip-172-31-21-19 ~]$ mv project-5-springboot-0.0.1-SNAPSHOT.jar
[ec2-user@ip-172-31-21-19 ~]$ java -jar project-5-springboot-0.0.1-SNAPSHOT.jar
```

Spring Boot Application (EC2 Running on port no :8181)

```
ec2-user@ip-172-31-21-19:~/Spring-jar
OpenJDK 64-bit Server VM (build 25.312-b07, mixed mode)
[ec2-user@ip-172-31-21-19 ~]$ git clone https://github.com/moulaalthijare/Spring
-jar.git
Cloning into 'Spring-jar'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Compressing objects: 100% (3/3), done.
remote: total 3 (delta 0), reused 3 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), 15.04 MiB | 33.69 MiB/s, done.
[ec2-user@ip-172-31-21-19 ~]$ cd Spring-jar
[ec2-user@ip-172-31-21-19 ~]$ mv project-5-springboot-0.0.1-SNAPSHOT.jar
[ec2-user@ip-172-31-21-19 ~]$ java -jar project-5-springboot-0.0.1-SNAPSHOT.jar

Spring Boot 1.5.3 (v2.0.7)
2022-04-24 10:54:45.626 INFO 4780 --- [main] c.e.p.s.ProjectSpringbootApplication : Starting ProjectSpringbootAppl
ication v0.0.1-SNAPSHOT using Java 1.8.0.312 on ip-172-31-21-19.ec2.internal with PID 4780 (/home/ec2-user/Spring-jar/project-5-spr
ingboot-0.0.1-SNAPSHOT.jar started by ec2-user in /home/ec2-user/Spring-jar)
2022-04-24 10:54:45.635 INFO 4780 --- [main] c.e.p.s.ProjectSpringbootApplication : No active profile set, falling
back to 1 default profile: 'default'
2022-04-24 10:54:46.436 INFO 4780 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s)
8181 (http)
2022-04-24 10:54:46.468 INFO 4780 --- [main] o.apache.catalina.core.StandardService : Starting service [tomcat]
2022-04-24 10:54:46.468 INFO 4780 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apach
e Tomcat/9.0.62]
2022-04-24 10:54:48.636 INFO 4780 --- [main] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded We
bApplicationContext
2022-04-24 10:54:48.697 INFO 4780 --- [main] w.s.c.ServletWebServerApplicationContext : Root webApplicationContext: ini
tialization completed in 2823 ms
2022-04-24 10:54:50.060 INFO 4780 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8181
(http) with context path '/'
2022-04-24 10:54:50.115 INFO 4780 --- [main] c.e.p.s.ProjectSpringbootApplication : Started ProjectSpringbootAppli
cation in 5.911 seconds (JVM running for 6.904)
Spring Boot WebApp Context is working...
2022-04-24 10:55:40.743 INFO 4780 --- [nio-8181-exec-1] o.apache.coyote.http11.Http11Processor : Error parsing HTTP request header
Note: further occurrences of HTTP request parsing errors will be logged at DEBUG level.
java.lang.IllegalArgumentException: Invalid character found in method name [0x160x030x010x020x000x010x000x010xf0x030x03 0xd]0xf30xe80xec[Defa_0xe4:80xb70x08:-0x090x100xab(0xa30ccA0x8a20xa30x050x080x080x80x8
)]. HTTP method names must be tokens
at org.apache.coyote.http11.Http11InputBuffer.parseRequestLine(Http11InputBuffer.java:419) ~[tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.coyote.http11.Http11Processor.service(Http11Processor.java:271) ~[tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.coyote.AbstractProcessorLight.process(AbstractProcessorLight.java:55) [tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.coyote.AbstractProtocol$Http11ConnectionHandler.process(AbstractProtocol.java:890) [tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.tomcat.util.net.NioEndpoint$SocketProcessor.doRun(SocketProcessor.java:1743) [tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.tomcat.util.net.SocketProcessorBase.run(SocketProcessorBase.java:49) [tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.tomcat.util.threads.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1191) [tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.tomcat.util.threads.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:659) [tomcat-embed-core-9.0.62.jar!/:na]
at org.apache.tomcat.util.threads.TaskThread$WrappingRunnable.run(TaskThread.java:61) [tomcat-embed-core-9.0.62.jar!/:na]
at java.lang.Thread.run(Thread.java:748) [na:1.8.0_312]
```

Spring Boot Application (Running on respective IP address)

