WriteUp

My Movie Plan is a dynamic and responsive web application for booking movie tickets online for different genres and languages.

Requirements:

- Java - 1.8
- Maven - 3.x.x
- Spring Boot - 2.2.1.RELEASE
- Spring Security
- JWT (Json Web Token package)
- Spring Data JPA
- MySQL
- H2-Database
- PostgreSQL
- Lombok
- Git and GitHub
- Agile Scrum Methodology
- Docker
- Jenkins

Steps to Set up

NOTE:

- Please do remember to change the 'spring.datasource.url' property value in application-prod.properties file where your database is running.
- Also do change the ip address of backend in the front-end application as well.

1.0 Go to official Amazon Web Services site
https://console.aws.amazon.com/ec2

2.0 Create New Instance

3.0 Connect to the Instance

4.0 Open Command Prompt in your machine and navigate to the path where you have downloaded the pem file.
cd Downloads

5.0 Connect to EC2 Instance by executing the '3rd and example' commands in the ec2 instance
chmod 400 my-movie-plan.pem
ssh -i "my-movie-plan.pem" ec2-user@ec2-54-172-237-186.compute-1.amazonaws.com
App Screenshot

6.0 Update the Instance Once connected using the following command
sudo yum update -y

7.0 After updating the instance, install Java using the following command
sudo yum install java-1.8.0-openjdk

7.1 Check if Java is installed or not by executing the java version command
sudo java -version

8.0 Install Maven
sudo yum install maven

8.1 Check Maven version
sudo mvn -v

9.0 Install Git
sudo yum install git

9.1 Check Git Version
sudo git --version

10.0 Install Jenkins. By executing the following commands one by one. For more details visit this link: https://pkg.jenkins.io/redhat-stable/
sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
sudo yum install jenkins

10.1 Start Jenkins after installing
sudo systemctl start jenkins

10.2 Check if Jenkins is running on port 8080 along with Public IPv4 addresses like:
Example:
The IPv4 addresses of my instance is: 54.172.237.186
The Jenkins is running on 8080 port: 8080
Finally, use both to view jenkins: '54.172.237.186:8080'

10.3 For the first time Jenkins will ask for password, to find the password, execute the following command in the EC2 Instance console
sudo cat /var/lib/jenkins/secrets/initialAdminPassword

10.4 Install the recommended plugins in the jenkins after logging in. After installing plugins, jenkins will prompt to create an admin user, go-head and create the user
sudo cat /var/lib/jenkins/secrets/initialAdminPassword

11.0 Open EC2 Instance console and Install Docker
11.1 Amazon Linux 2
sudo amazon-linux-extras install docker

11.2 Amazon Linux
sudo yum install docker

11.3 Start Docker
sudo systemctl start docker

11.4 Add the ec2-user to the docker group so you can execute Docker commands without using sudo.
sudo usermod -a -G docker ec2-user

11.5 The user jenkins needs to be added to the group docker. For more details, please refer:
https://docs.aws.amazon.com/AmazonECS/latest/developerguide/docker-basics.html ,
https://gist.github.com/npearce/6f3c7826c7499587f00957fee62f8ee9 ,
https://portal.cloud303.io/forum/aws-1/question/i-want-to-install-docker-compose-on-an-amazon-linux-2-ec2-instance-9

sudo usermod -a -G docker jenkins

11.6 Reboot the EC2 instance to pick up the new docker group permissions.
sudo reboot

12.0 After rebooting the EC2 Instance, execute the following commands.
12.1 Start Docker
sudo systemctl start docker

12.2 Verify that the ec2-user can run Docker commands without sudo.
docker info

12.3 Start Jenkins
sudo systemctl start jenkins

13.0 Add Maven to Jenkins Global tool Configuration
sudo systemctl start jenkins

14.0 Open Jenkins and create a pipeline job for MYSQL
15.0 Open Jenkins and create a pipeline job for Spring Boot
15.1 Add Maven to Jenkins
16.0 Open Jenkins and create a pipeline job for Angular
17.0 Connect all the three job and build them
18. Check if the app is running

The IPv4 addresses of EC2 instance and the port on which the angular app is running:
http://54.172.237.186:4040/