Project-1
Jenkins

UNDER THE ESTEEMED GUIDANCE OF

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Submitted by
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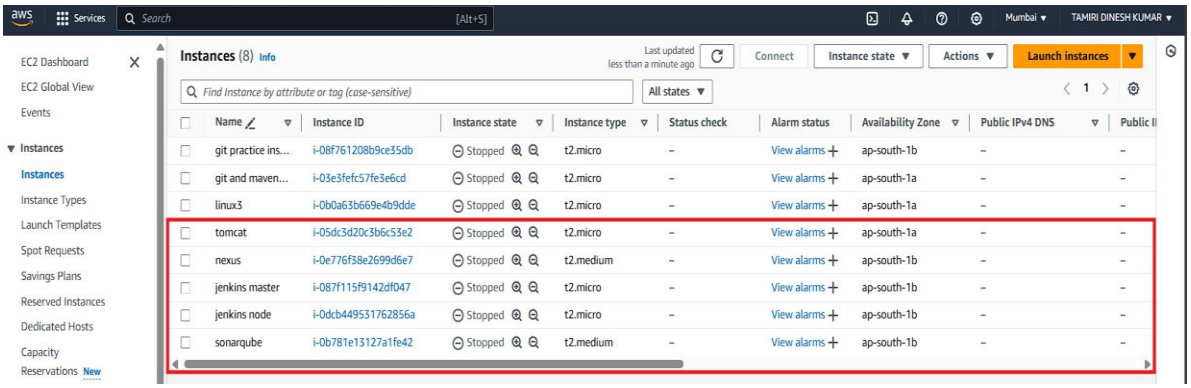
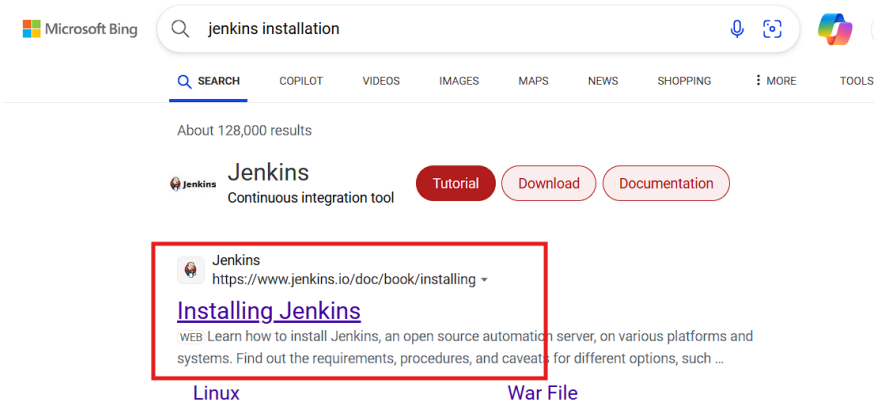
CREATE A INSTANCES

- Now create a 5 instances.
  - Jenkins master server
  - Jenkins node server
  - SonarQube server
  - Nexus server
  - Tomcat server

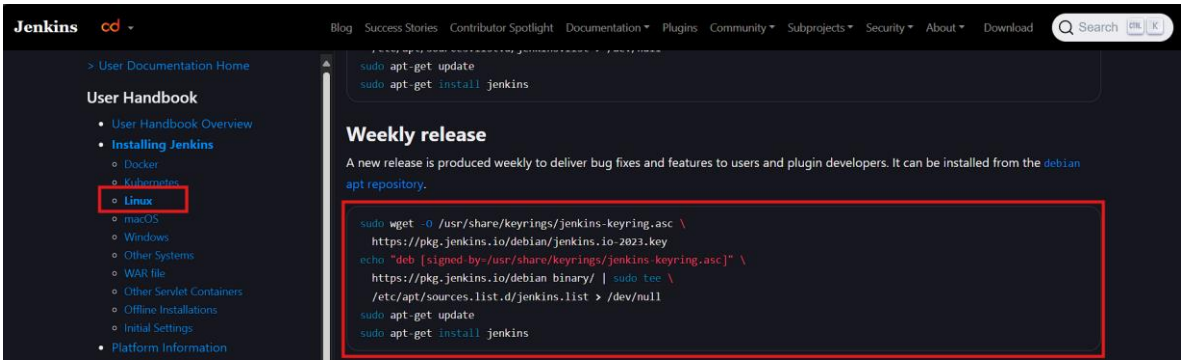


Install Jenkins in Jenkins master server:

- Open Jenkins master server.
- Now search the Jenkins installation.

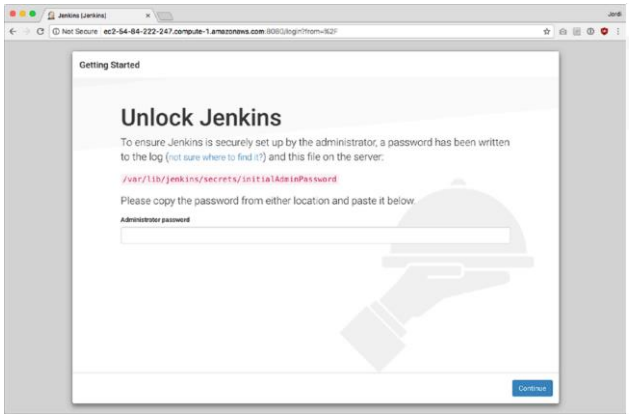


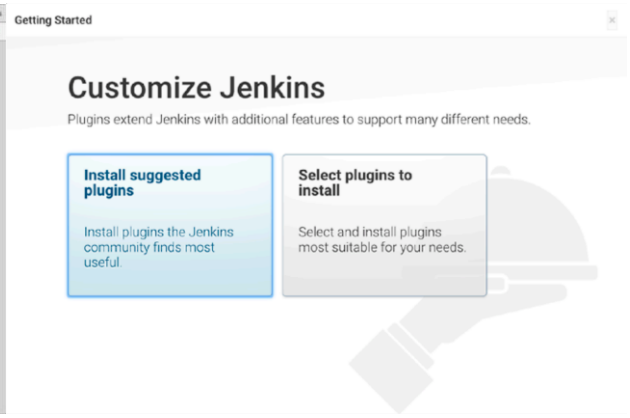
- Open the web site and choose the linux.Copy the commands.

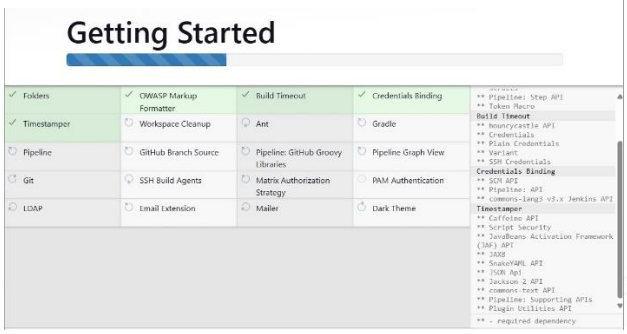


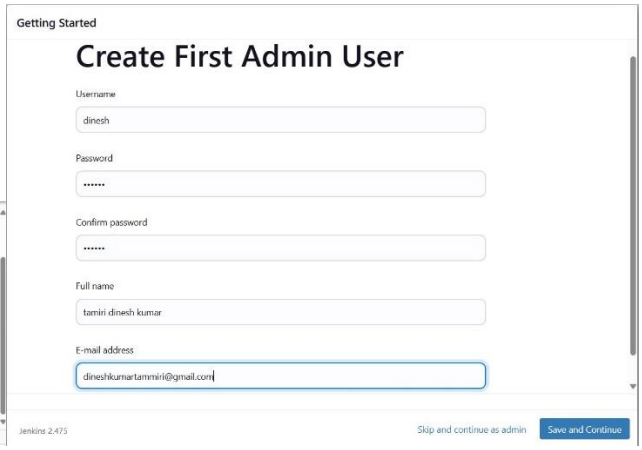
- Go to Jenkins master server.Paste it
- When it is install successfully.

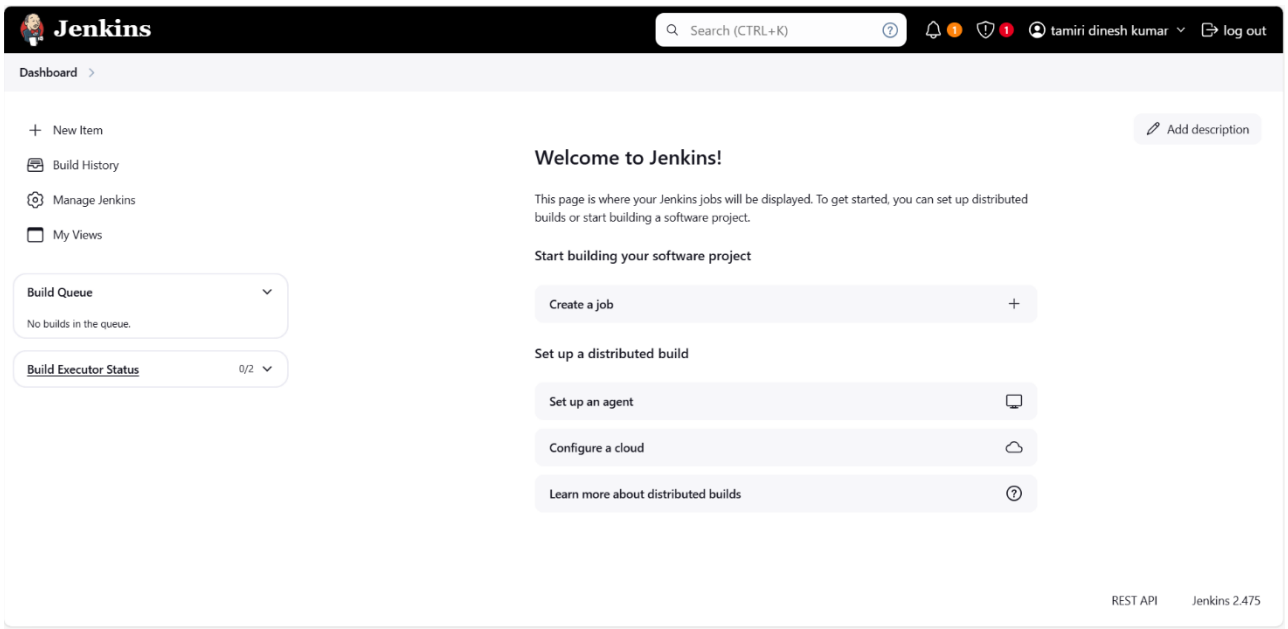
- Now start the Jenkins.
  Command:- **systemctl start jenkins**
  systemctl status jenkins
- Now copy the IP address and Search the IP address with port no:8080
- When it is open the Jenkins server they some process to sign in and install plugins.





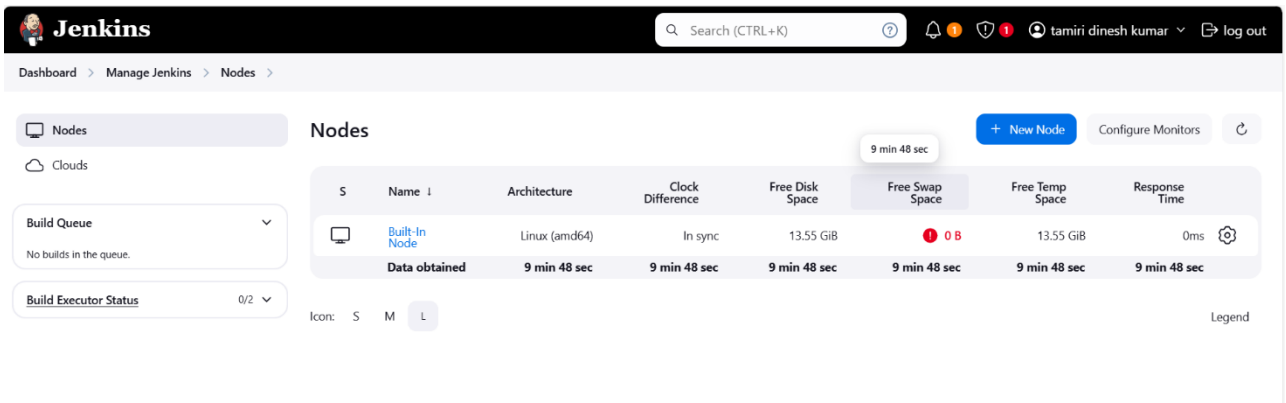


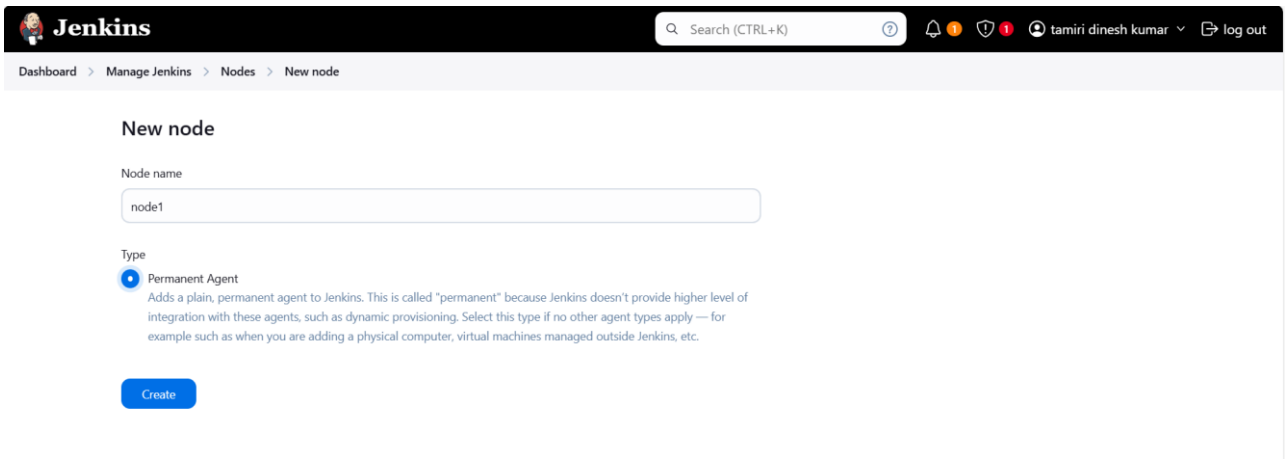


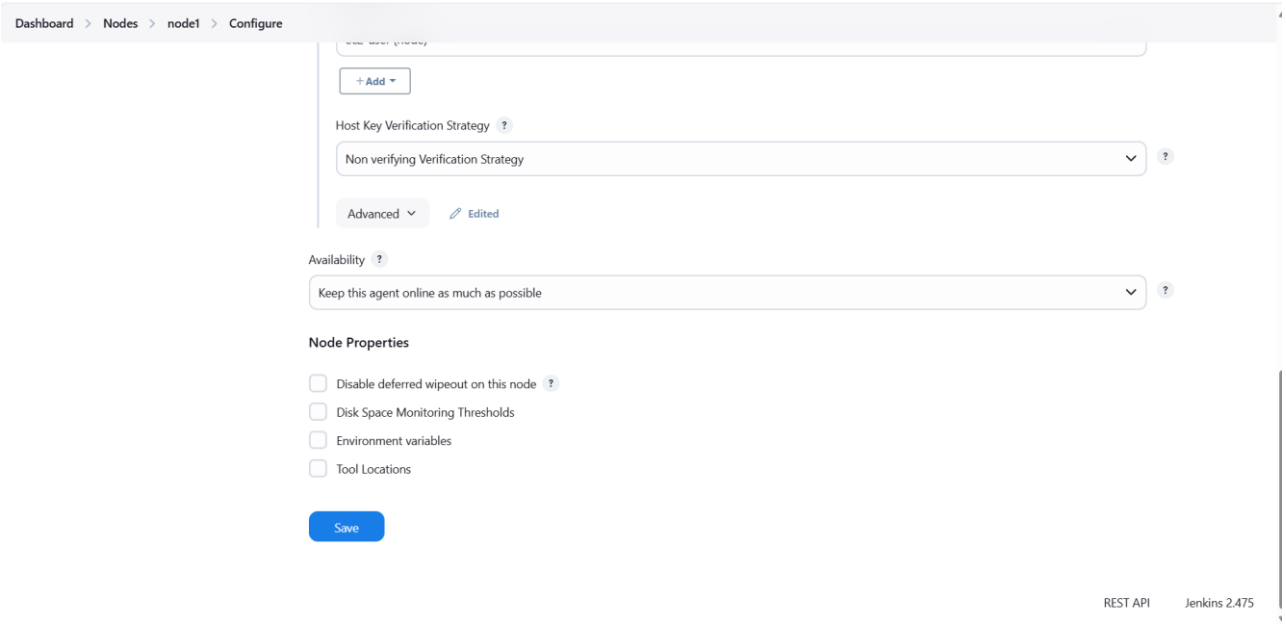


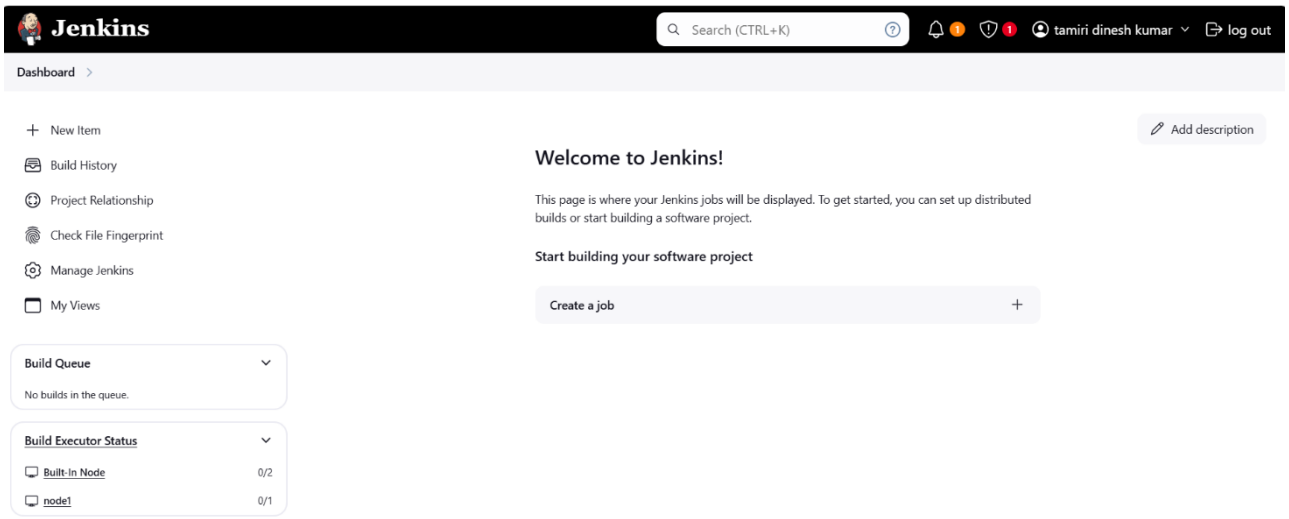
Create a Node:

- For creating node in Jenkins we can follow these steps
  - Click on dashboard→Manage Jenkins→Node
  - Give the name for node
  - And select on permanent Agent
  - Give the required credentials and save it

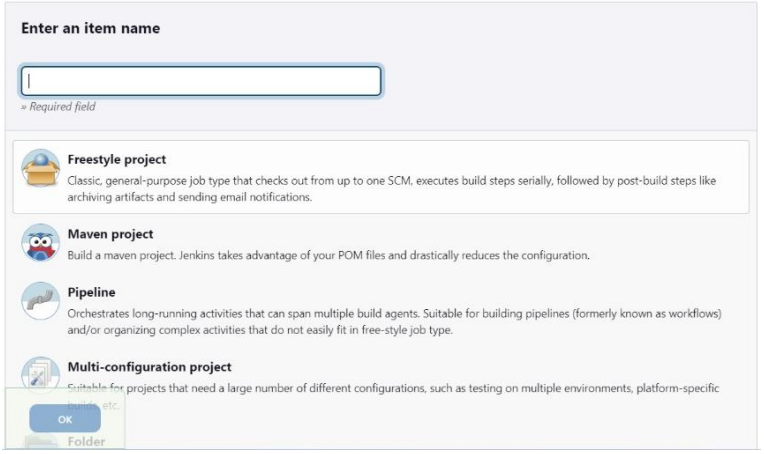






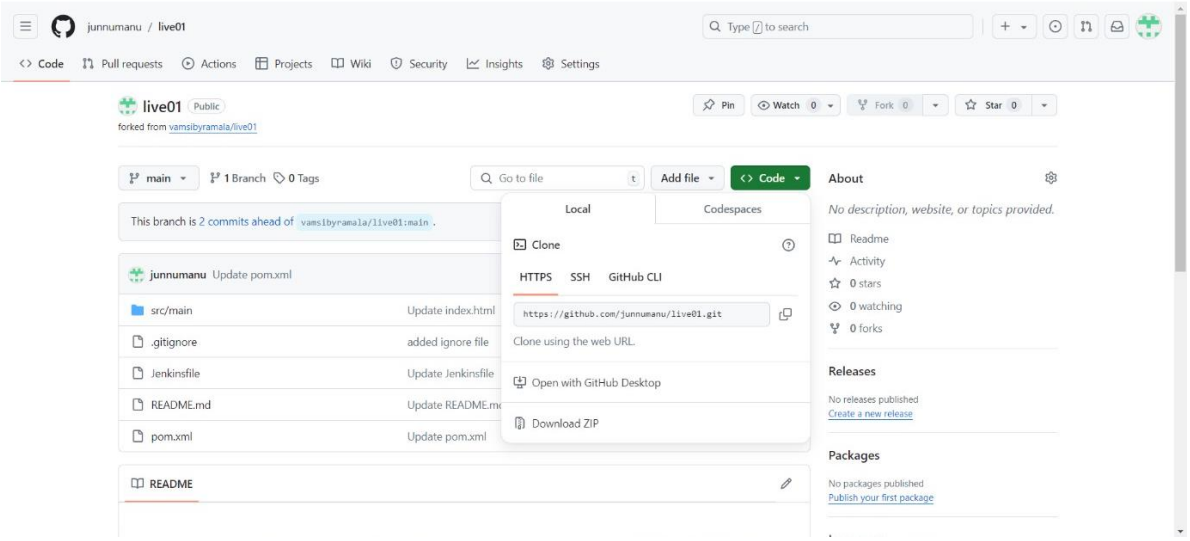


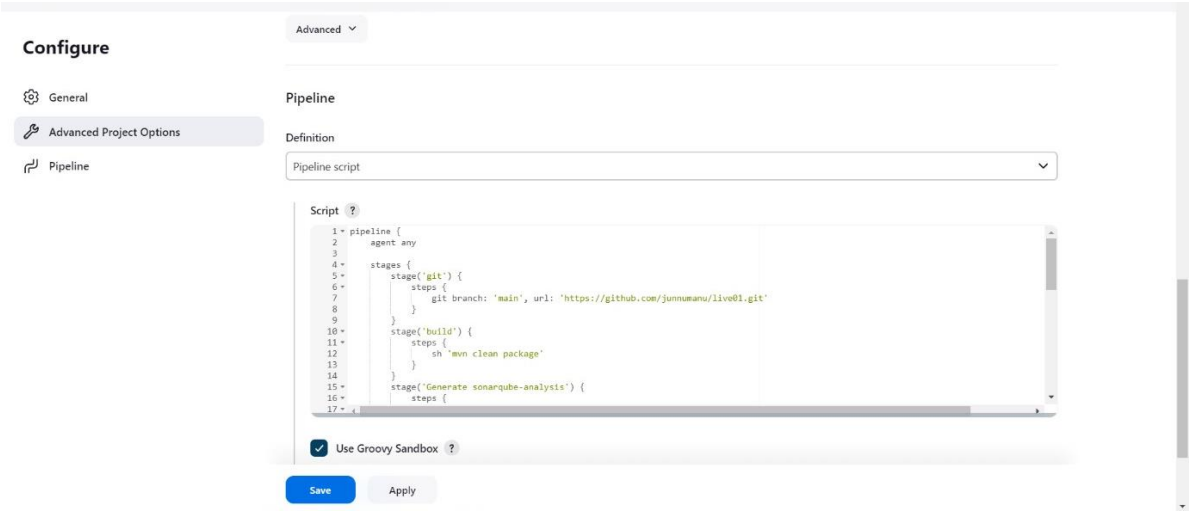
- There is no mandatory in creating node and we can get o/p without creating node
- Its just for keeping balanced load on the Jenkins server.
- Its our wish we want to create we can create otherwise no need.
- In dashboard we can create an new item
- Give the name of project and and select the pipeline and click on ok.
- In script we can select any script called helloworld or scriptedpipeline
- And starting writing the script as per following steps



GIT

Step-1: Go to github and copy the repository url.
Step-2: Go to pipeline syntax and give git on the sample steps and giverequired content on the page and generate it And write the script for git.



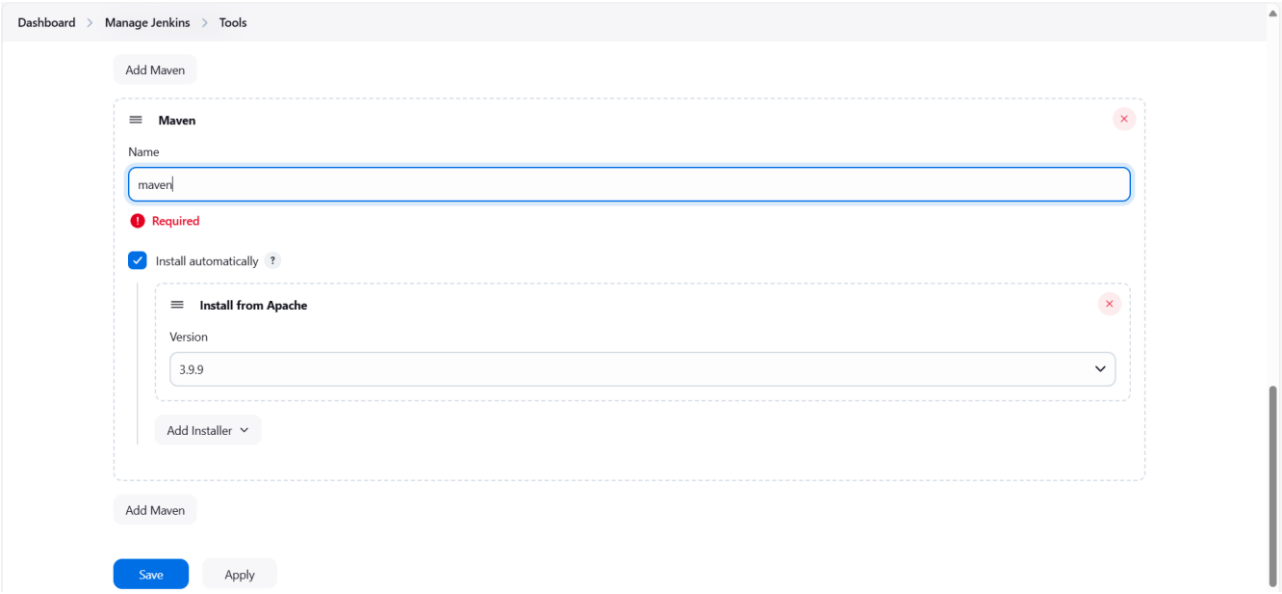


Step-3: Click Apply and Save.
Step-4: Now build the project.
Step-5: It is successfully build.

MAVEN

Step-1: Now set the “Maven Tool”.

Step-2: Open the tools.Click add maven.



Step-3: Click apply and save.

Step-4: Go to pipeline syntax and generate the maven pipeline script.Copy the pipeline script.

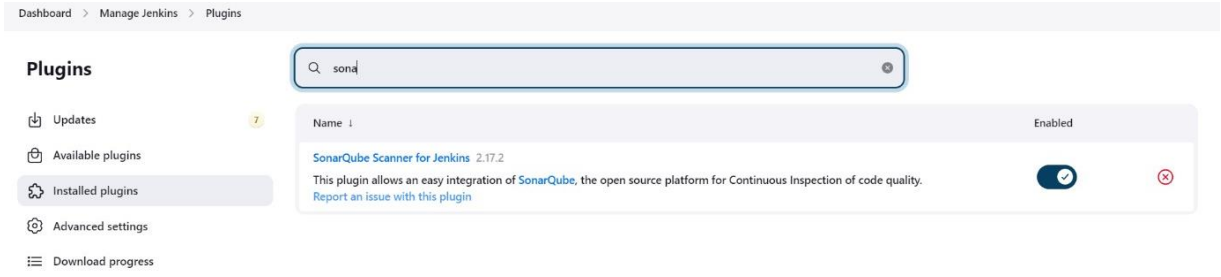
Step-5: Now open the configure and paste the maven pipeline script.

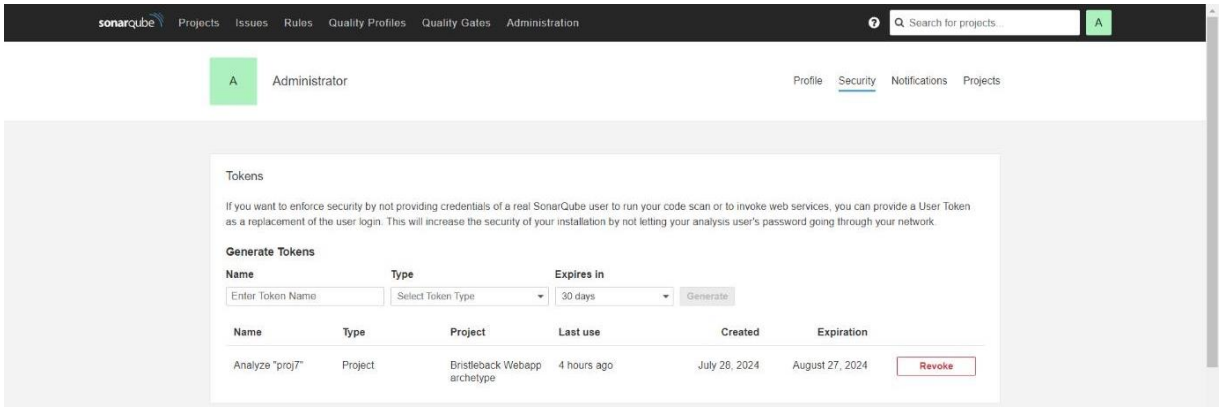
Step-6: Click apply and save.

Step-7: Build now and build success.

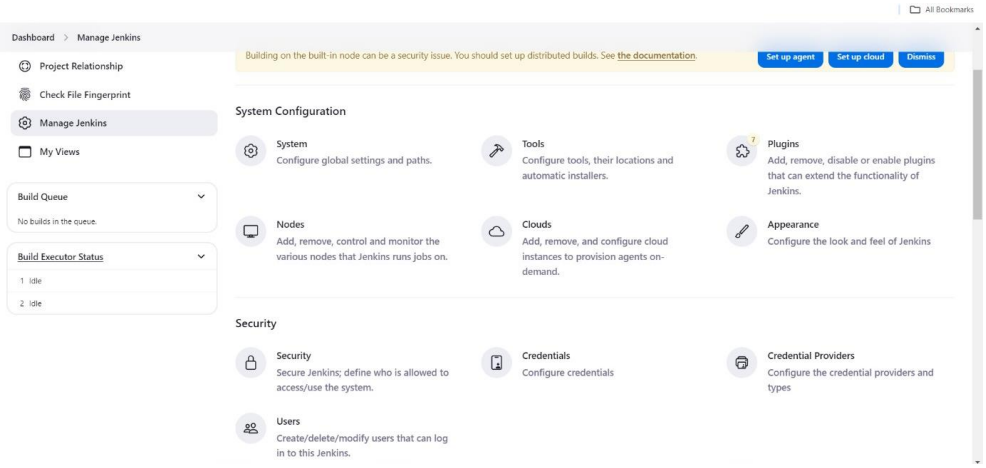
SONARQUBE

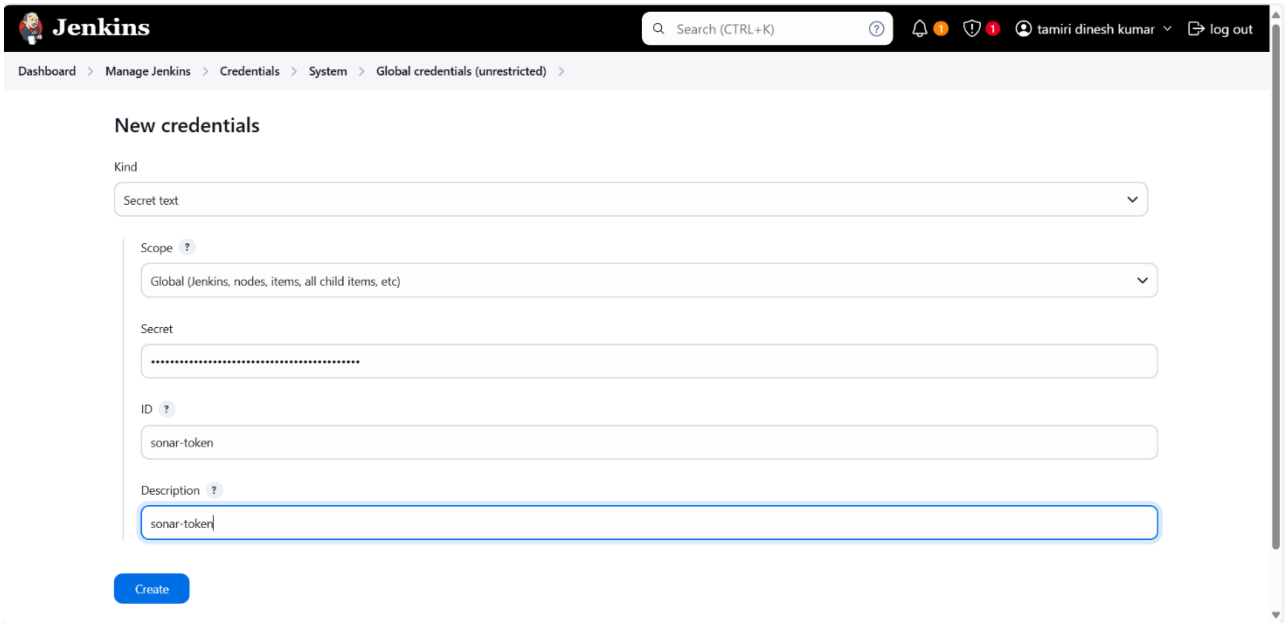
Step-1: In this step we can do the code Analysis that mean packagedcode gets tested here and give reports of that package.
Step-2: Here we can install the plugin called sonarqube scanner.
Step-3: For installing these plugin from dashboard we can go to manageJenkins and go to plugins from there go to available plugins andsearch for sonarqube scanner and install it**.**
Step-4: In this step we can add credentials for sonarqube analysis.
Step-5: Go to sonarqube dashboard in that we have Administration inAdmin we can go to myaccount from that click on security inthat we have any option called generate tokens give the nameand generate the token copy the token.





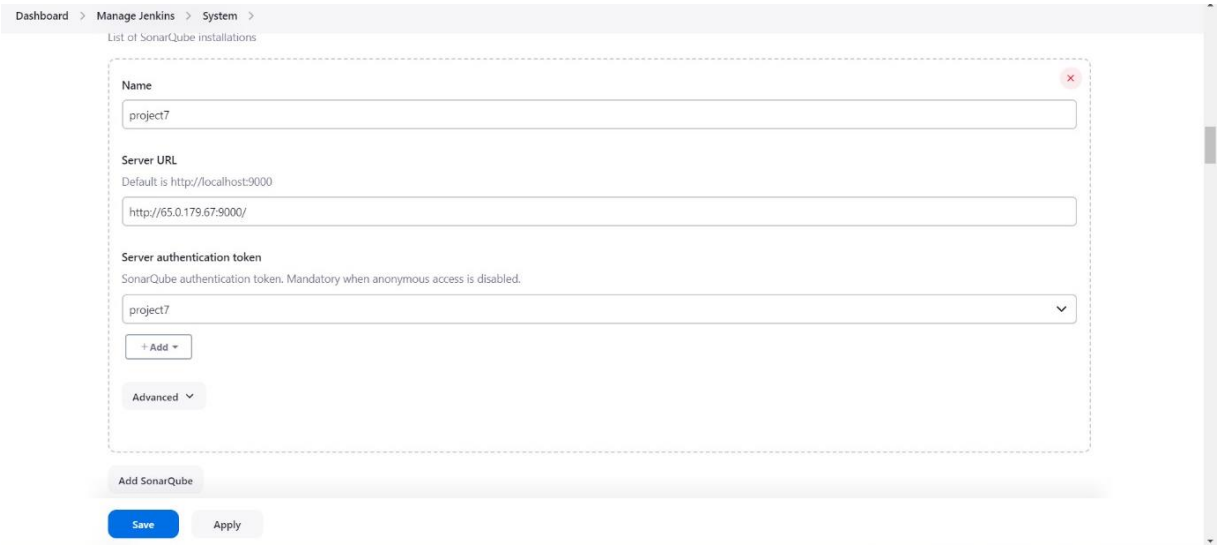
Step-6: After generating token add the sonarqube server for that go to managejenkins and in system configuration click on the systemadd the required content and save it.

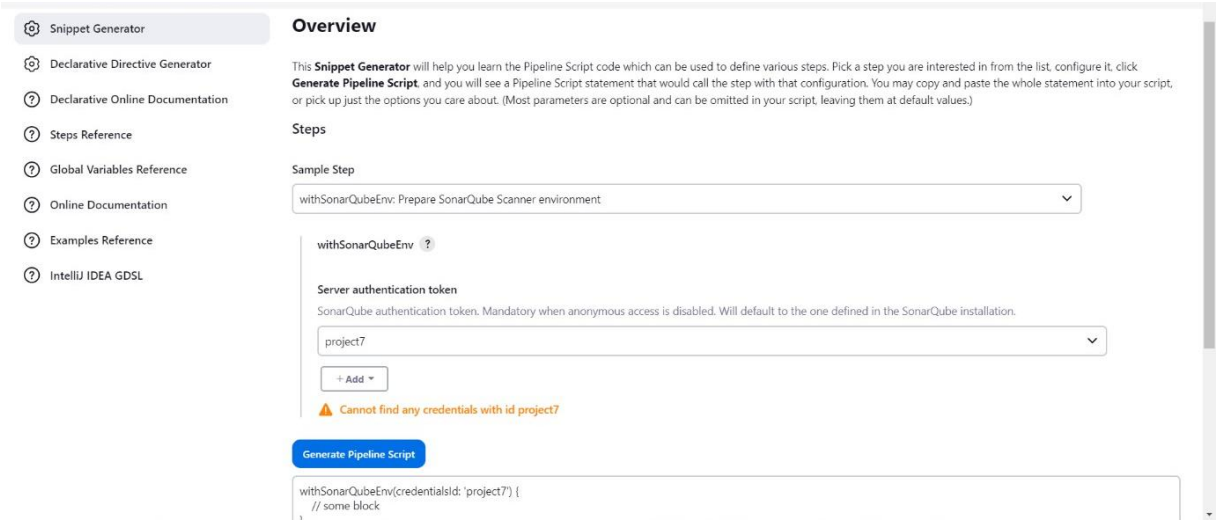




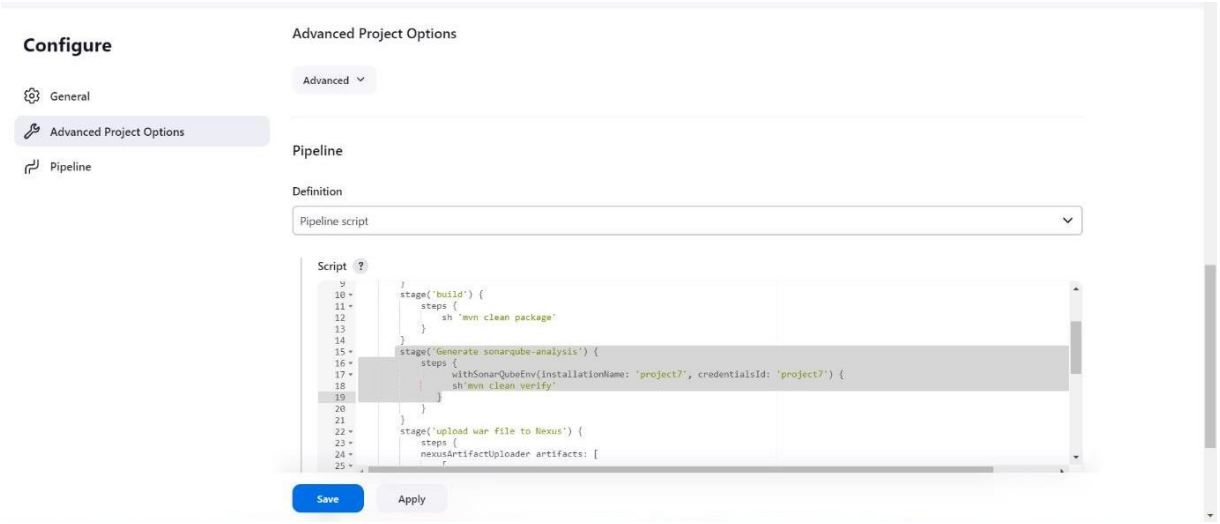
Step-7: Click on add credentials.

Step-8: Give the credentials and create it And then configure the project and add the step name called sonarqube analysis and go to pipeline syntax give the sonarqubescanner and add the credentials and click on generate.





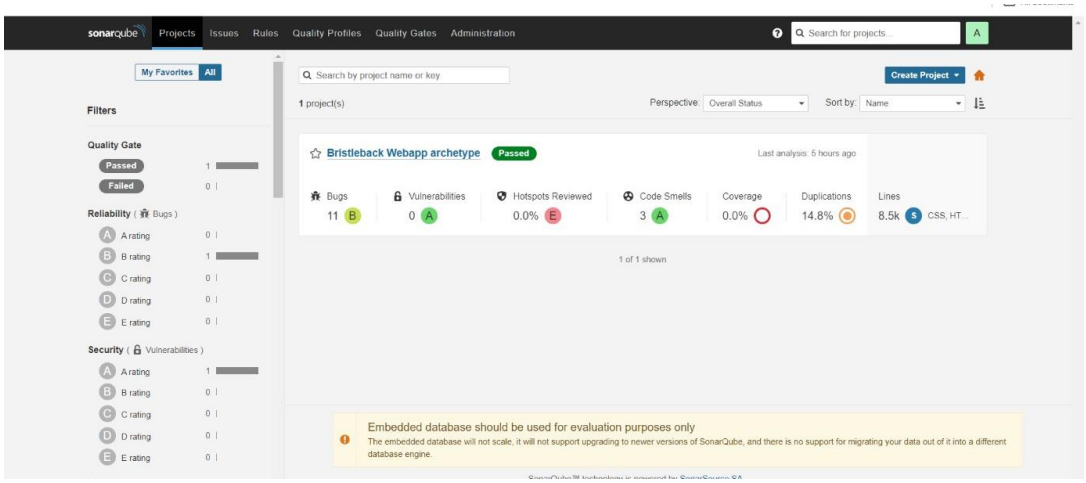
Step-9: copy the generated pipeline script and paste it on the sonarqubescanner step.

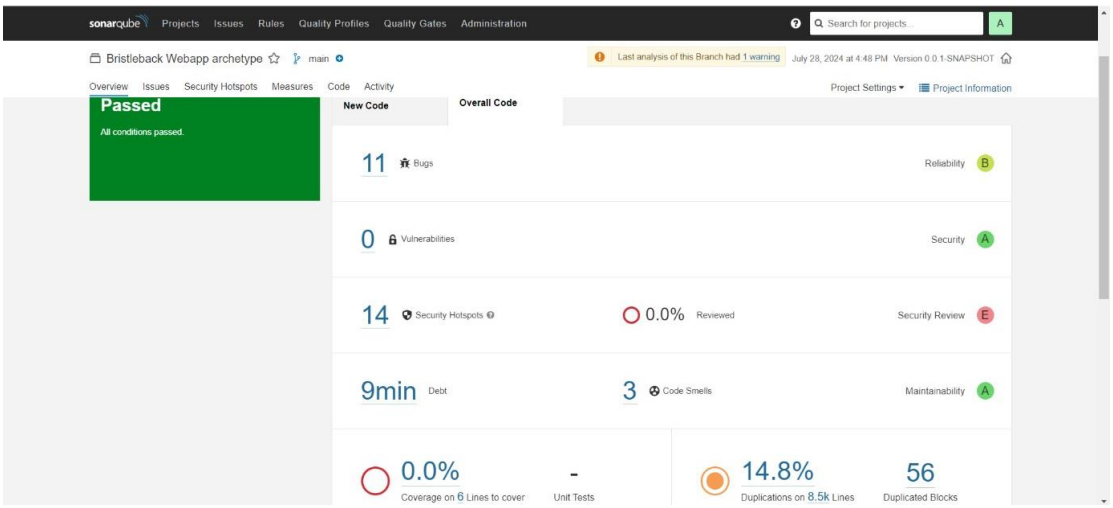


Step-10: copy the generated pipeline script and paste it on the sonarqubescanner step.

Step-11: After completion of script click on save and apply and build the project.

Step-12: Package of code get tested by sonarqube scanner and givesreport about the code.

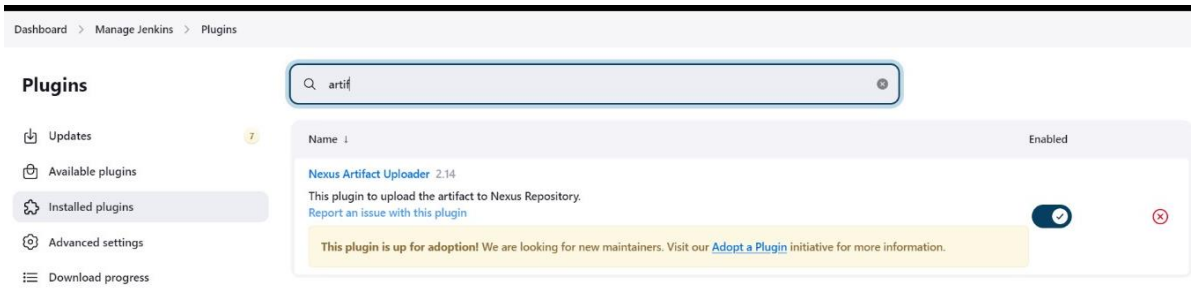




NEXUS

Step-1: In these step we can generate some artifacts.

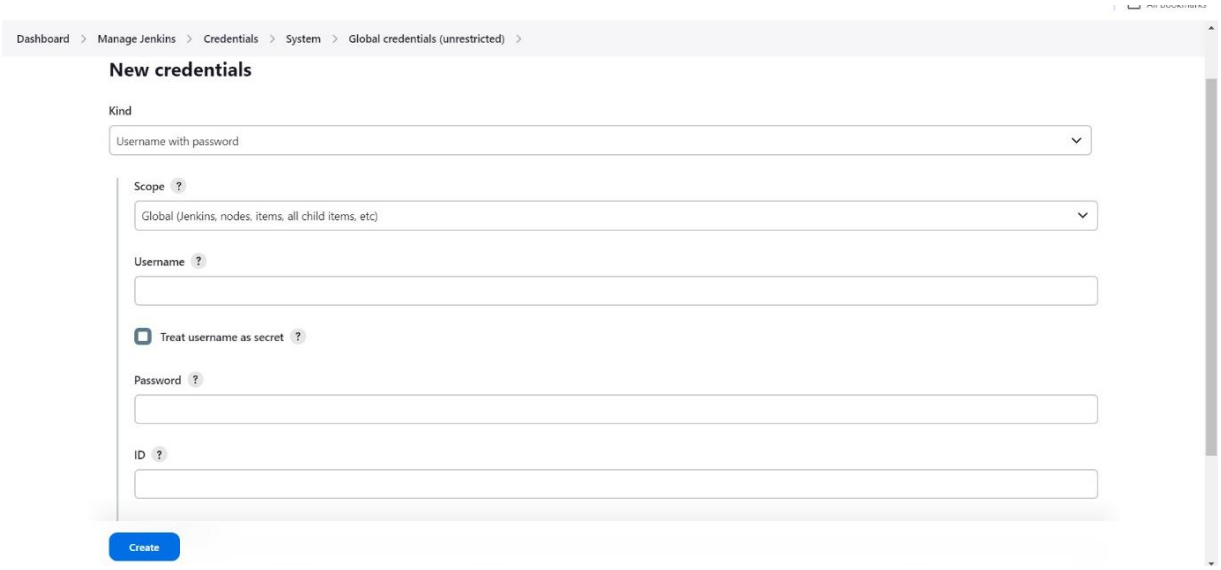
Step-2: Here we can install the plugin for generating artifacts for installing the plugin in dashboard we can go to manage Jenkinsfrom that we can go to plugins and go for available plugins andsearch for plugin called Nexus Artifact uploader.



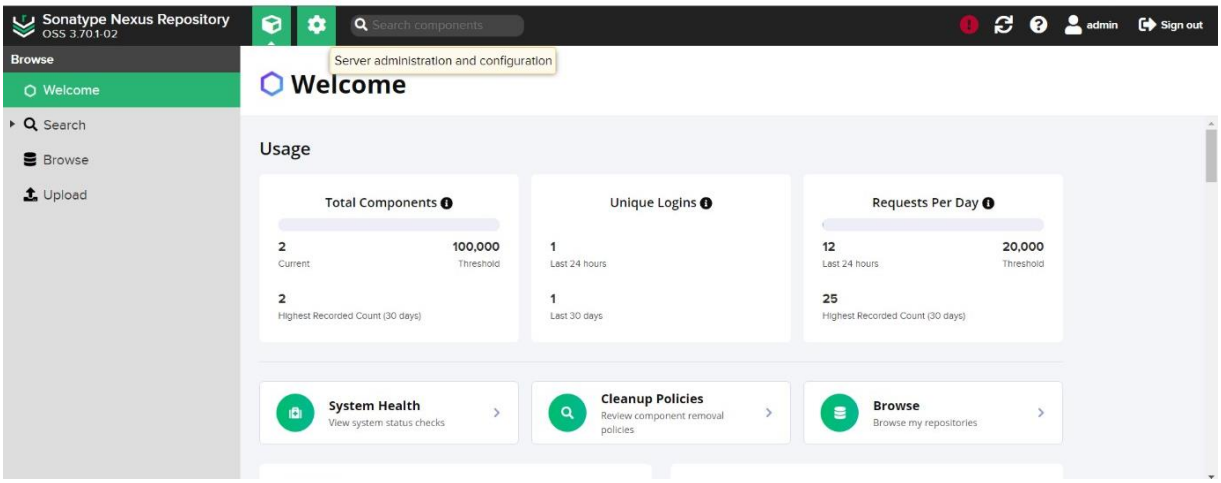
Step-3: After installing the plugin add the credentials in the managecredentials.

Step-4: Go to manage Jenkins and go to manage credentials and add the nexus credentials.

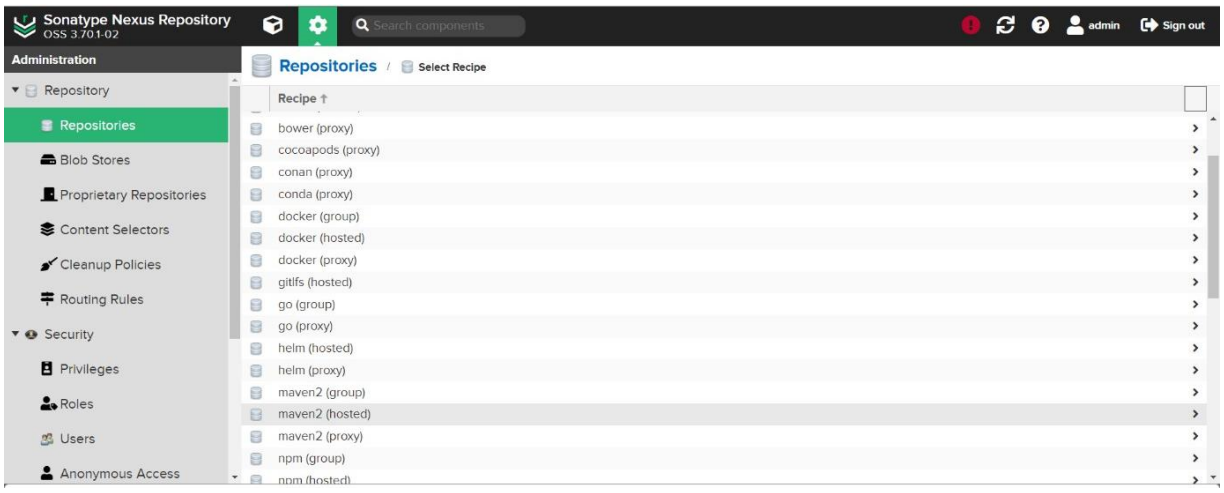
Step-5: After completion of credentials then create the repository in nexus dashboard.

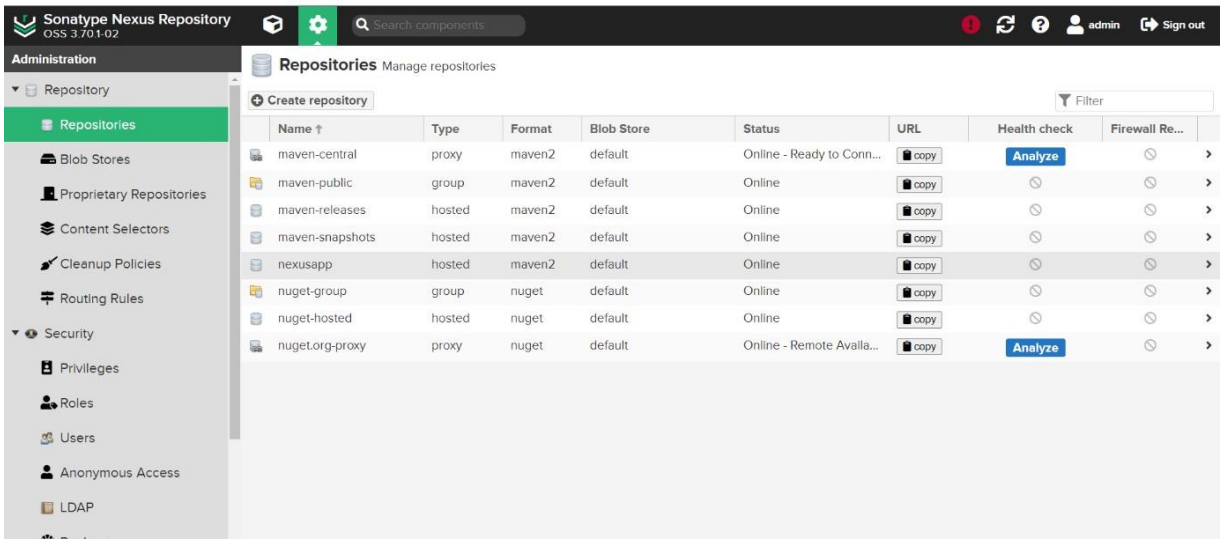


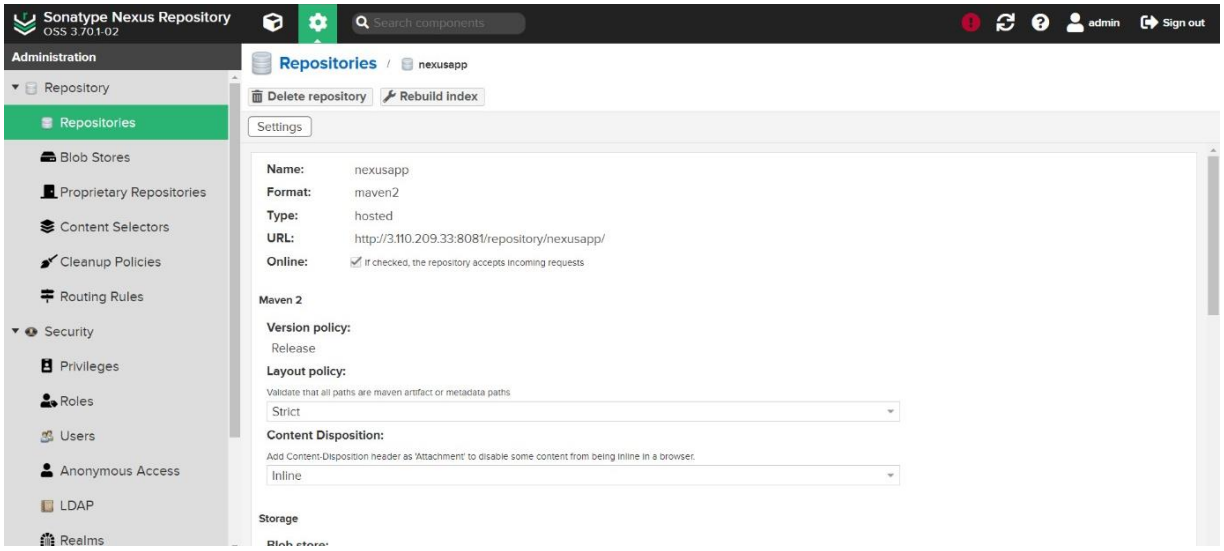
Step-6: For creating the repository go to nexus login page and go tosettings and then go to repository and create new repositoryin the maven2(hosted) repository.



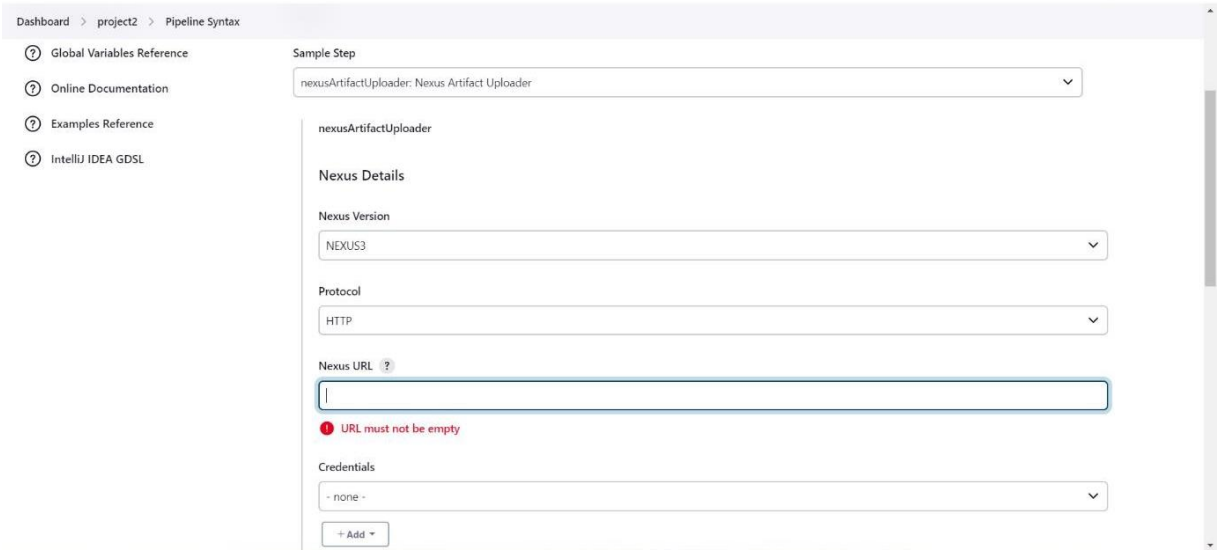
Step-7: Give the content and create the repository.



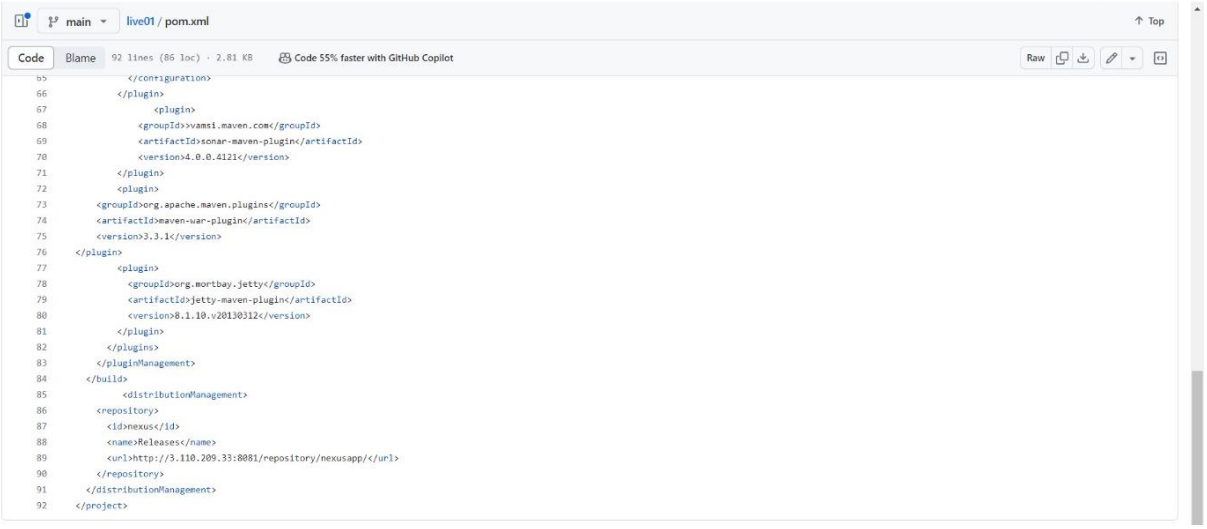




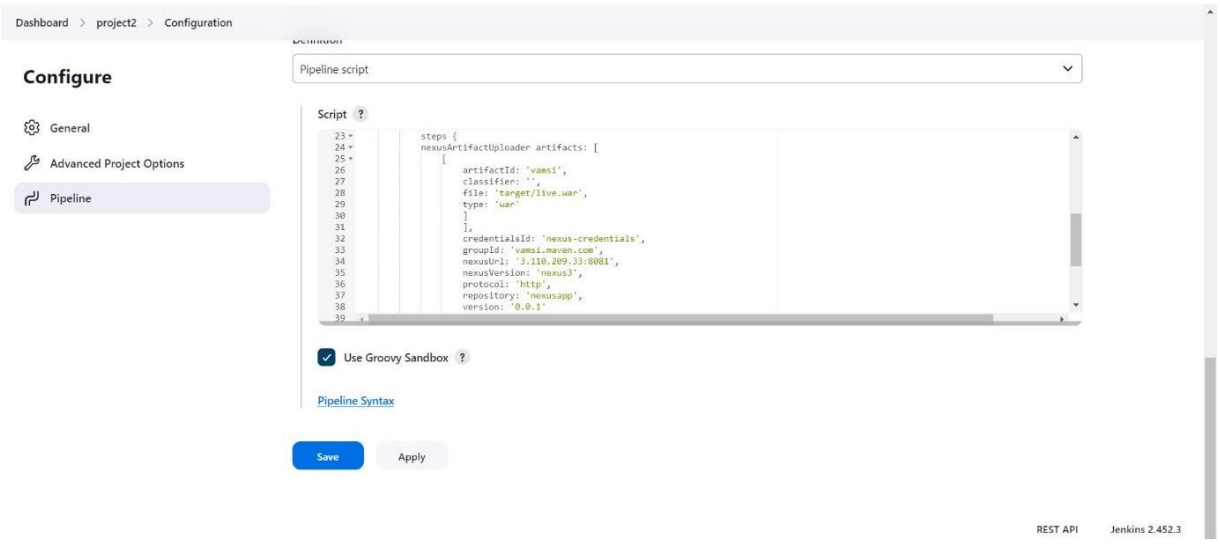
Step-8: Now we can add the stage name called upload war file to nexus.



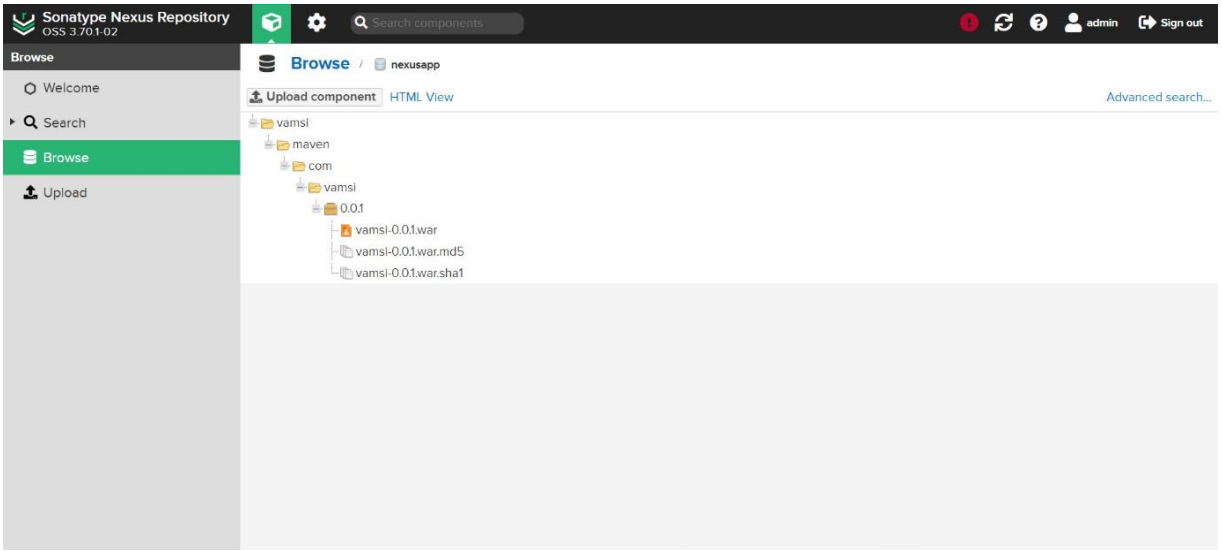
Step-9: Add the required credentials and generate the pipeline script.



Step-10: In the code we add the some lines and we have made somechanges to generate an artifact**.**



Step-11: After adding the generated script click on save&apply and buildthe project**.**



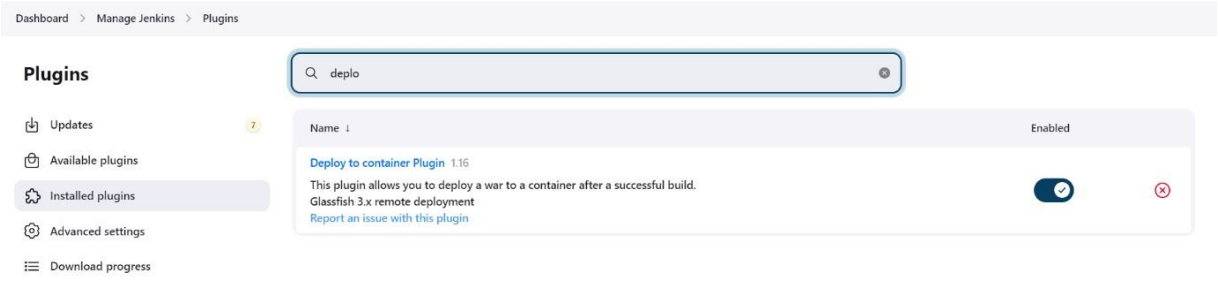
Step-12: Artifacts are generated**.**

TOMCAT

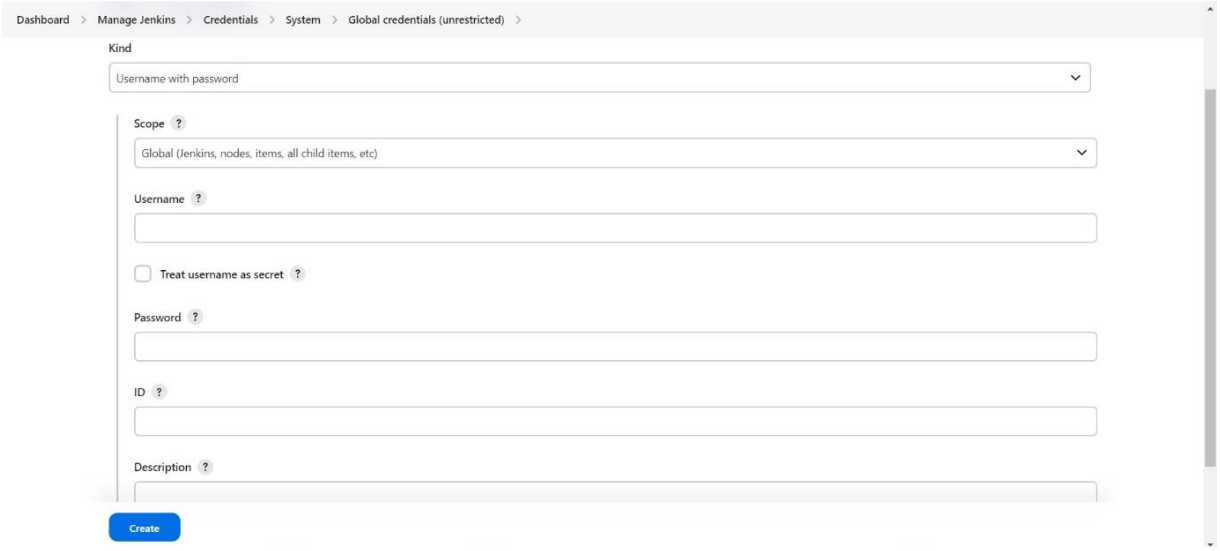
Step-1: In this step we are deploying the war file.

Step-2: For deploying the war file we can install plugin called deploywar/ear to a container.

Step-3: For installing that plugin in the dashboard go to manage Jenkins from that go to available plugins and search for deploy war file to a container.



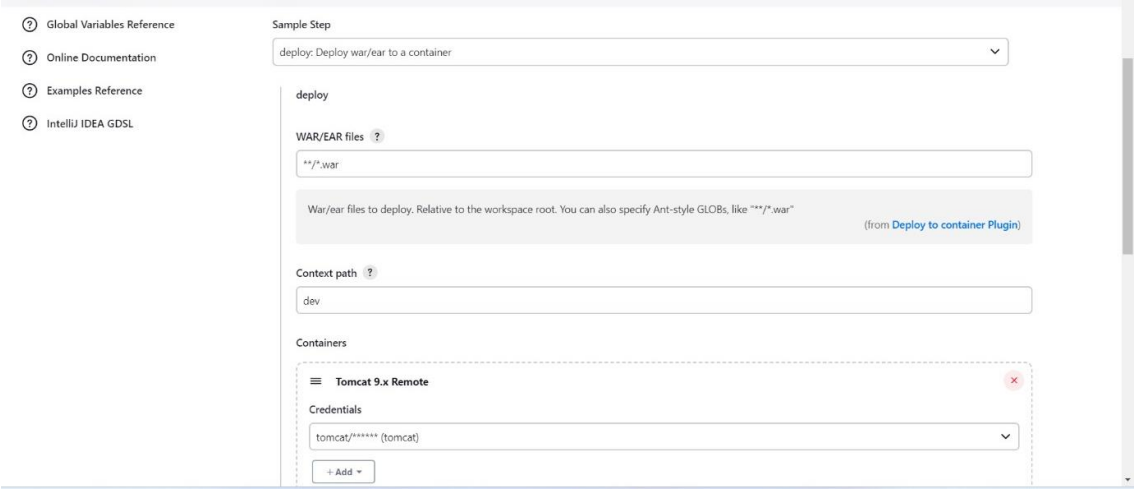
Step-4: And add the credentials for adding that go to manage Jenkinsand go to managecredentials.



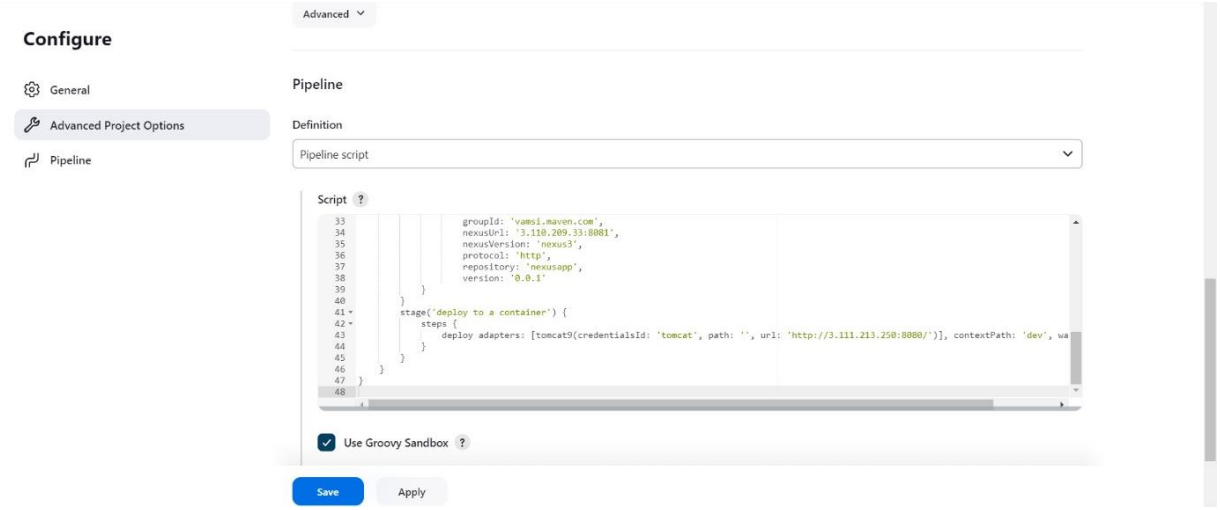
Step-5: Here we can add tomcat credentials and then go to configuration of project.

Step-6: Go to pipeline syntax.

Step-7: Add the Tomcat credentials and generate the script.



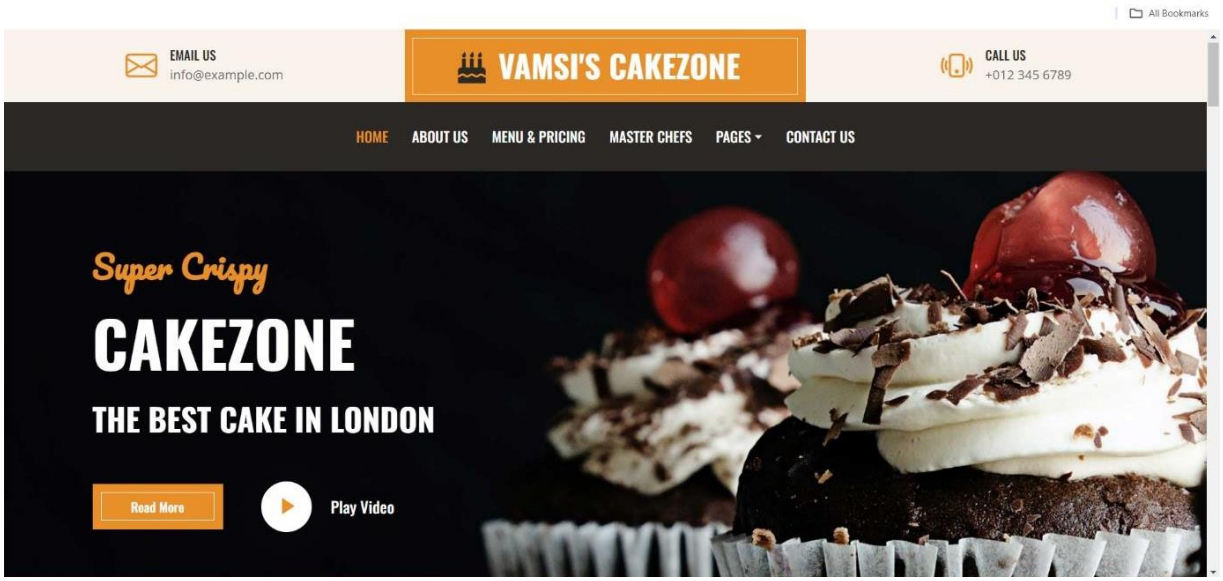
Step-8: Create the stage and add generated script.



Step-9: Click on save&apply and build the project.

Step-10: Build project gets success.

Step-11: In stepno:35 war file get deployed into a container.
Step-12: Give the tomcat url and path in the browser.



Step-13: Deployed into a tomcat server.