What is Jenkins?

Jenkins is an open-source automation tool written in Java with plugins built for continuous integration.

Why do we use Jenkins?

We use Jenkins to automate the CI/CD process.

Without Jenkins:

- Manual build
- Manual testing
- Manual deployment
- Slow and error-prone

With Jenkins:

- Automatic build
- Automatic testing
- Automatic deployment
- Fast and reliable

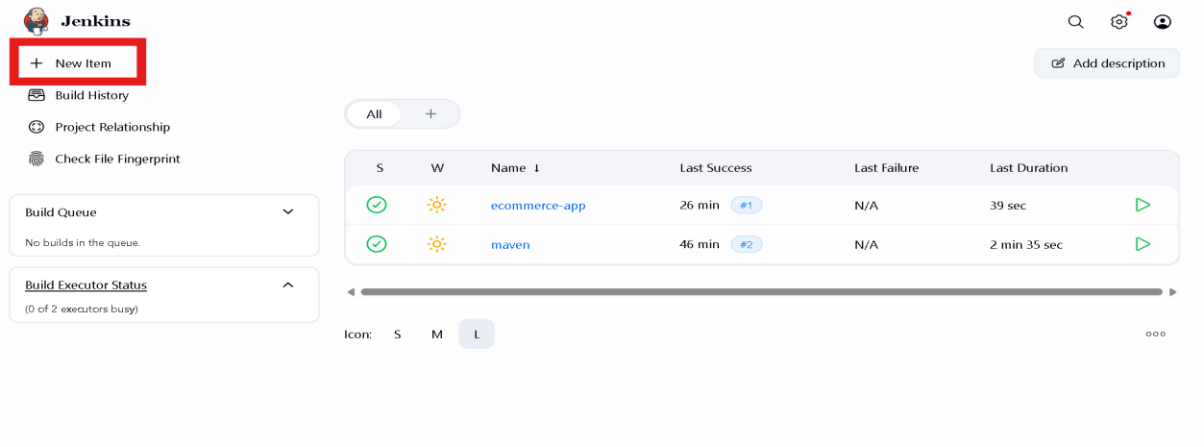
Steps to Open Jenkins and Create a New Pipeline Job

Step 1: Open Jenkins

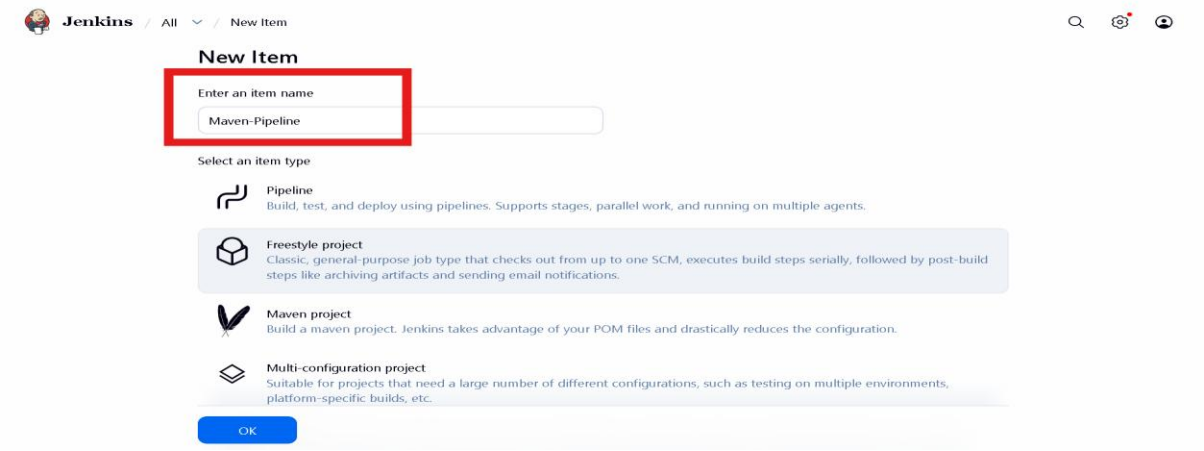
Now:

1. Start Jenkins service.
2. Open a browser.
3. Type the URL: http://localhost:8080
4. Jenkins dashboard will open.
5. Login with username and password.

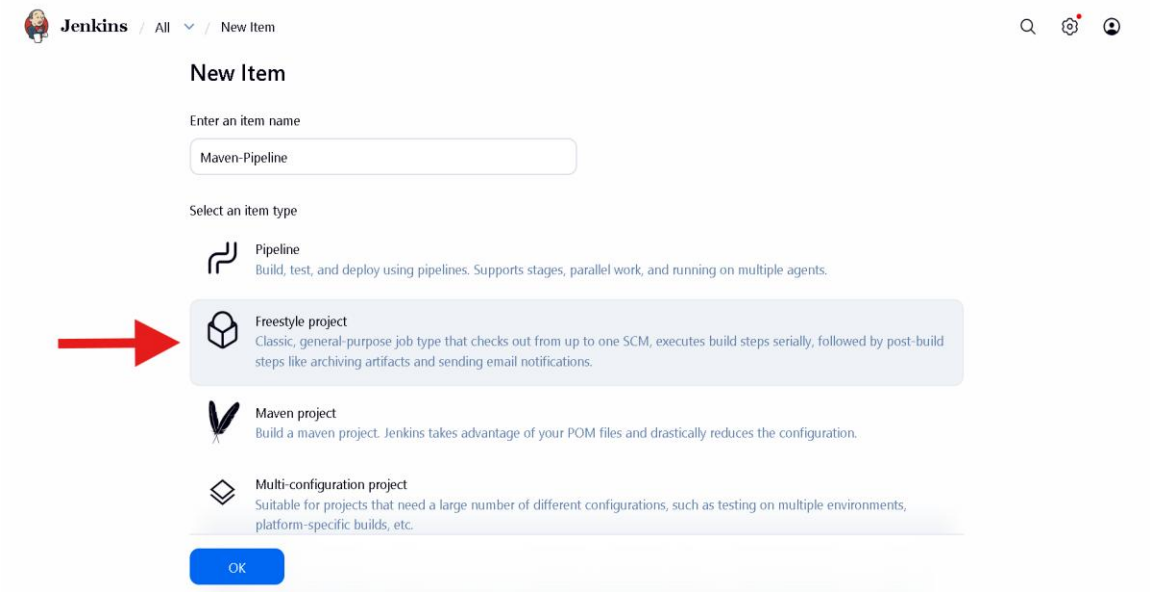
Step 2: Create New Pipeline Job



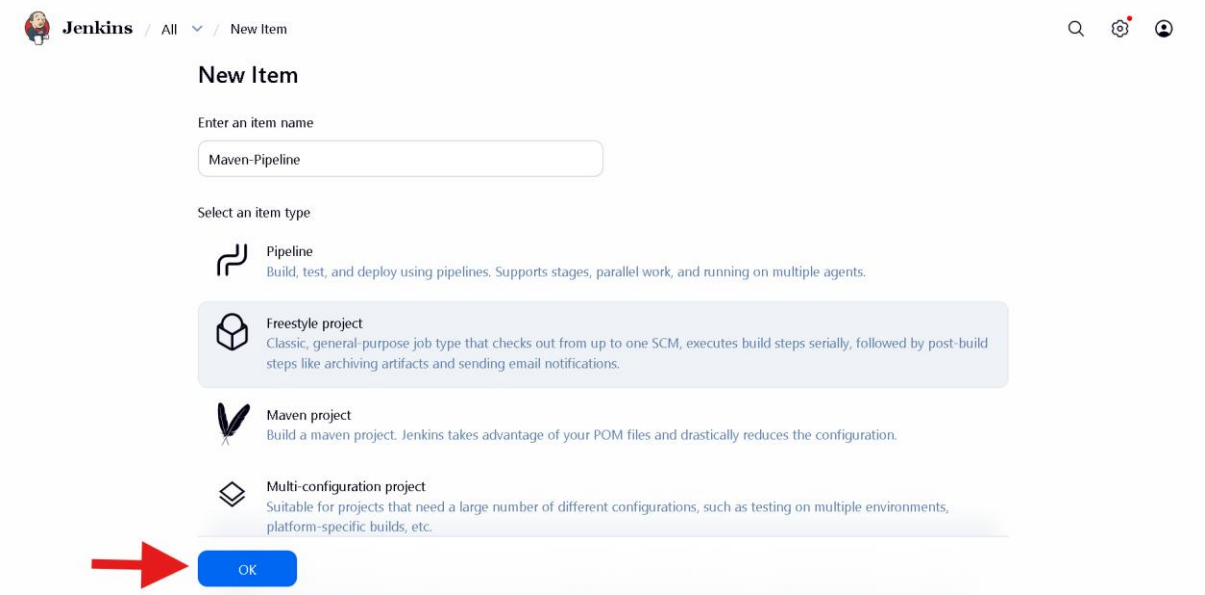
1. On Jenkins dashboard, click on New Item.



2. Enter a job name: Maven-Pipeline.



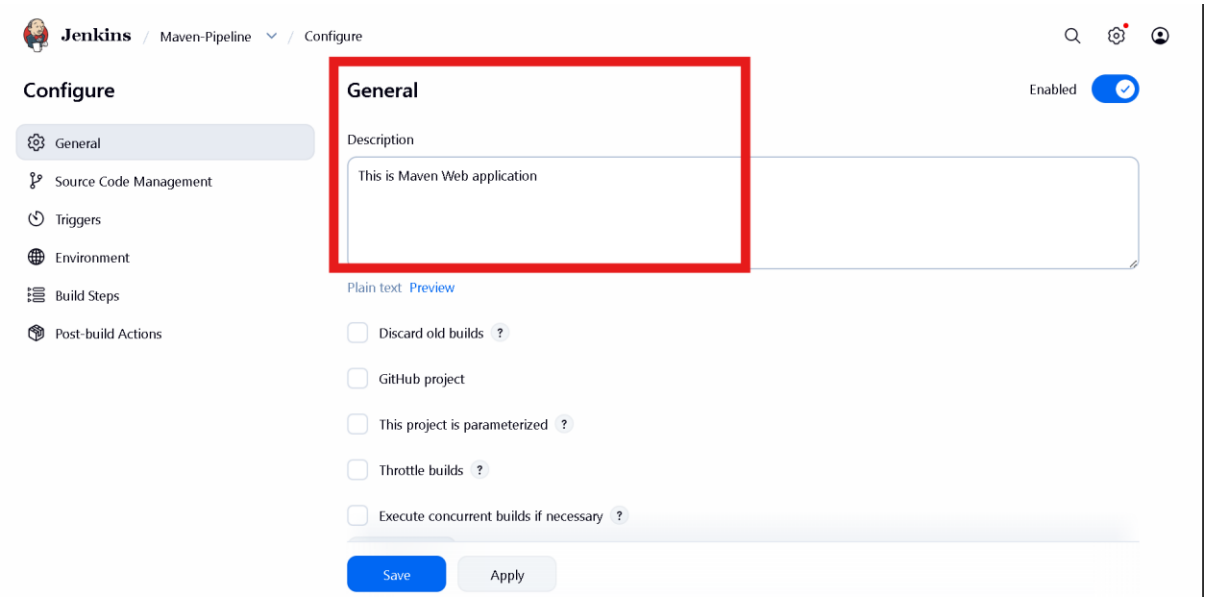
3. Select an item type as Freestyle Project.



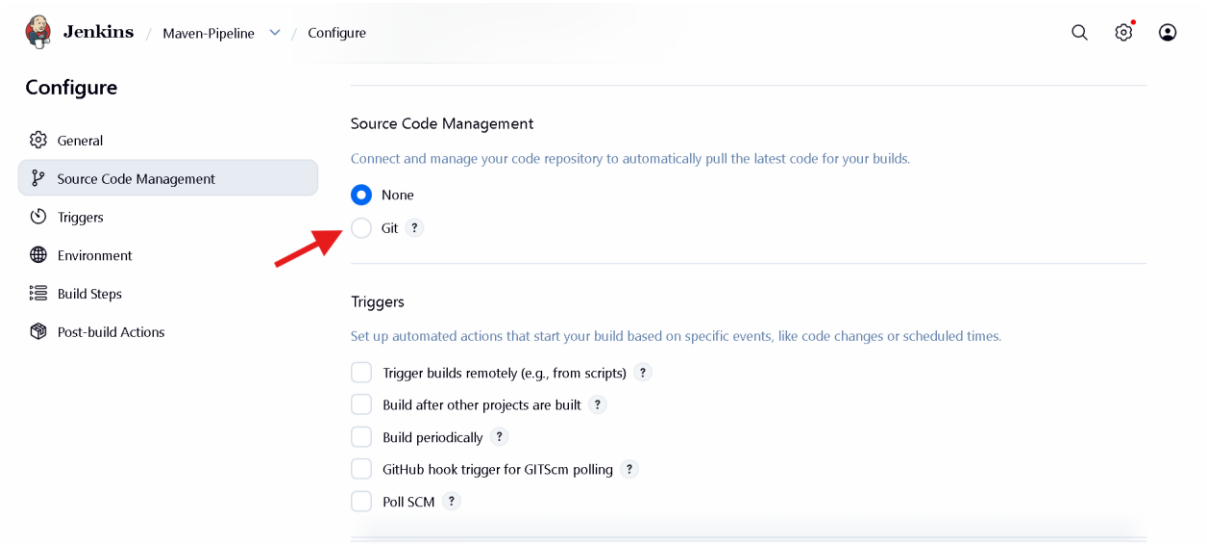
4. Click OK.

Step 3: Configure Job

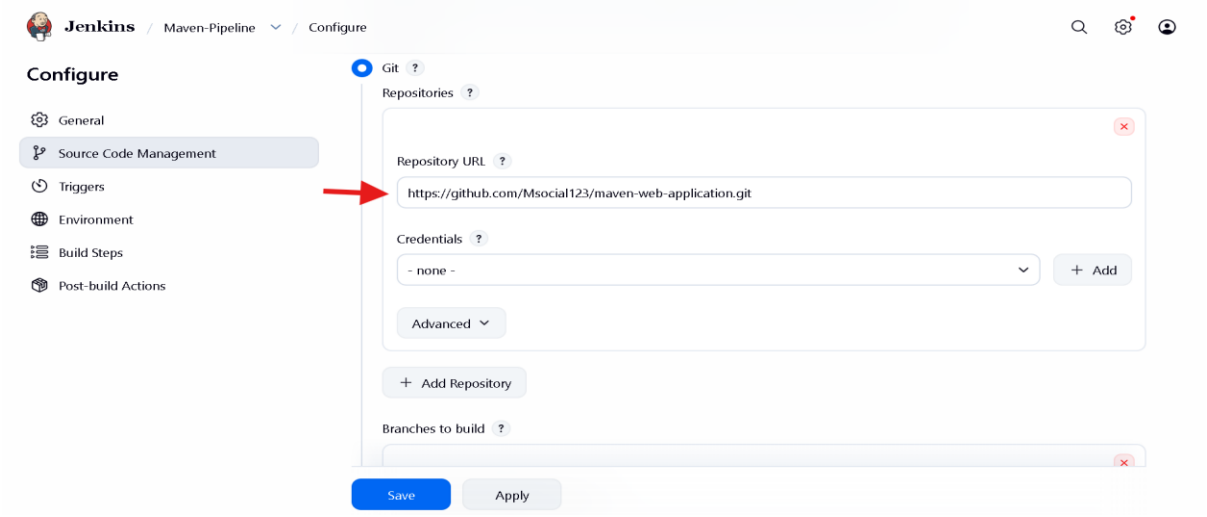
General & Source Code Management

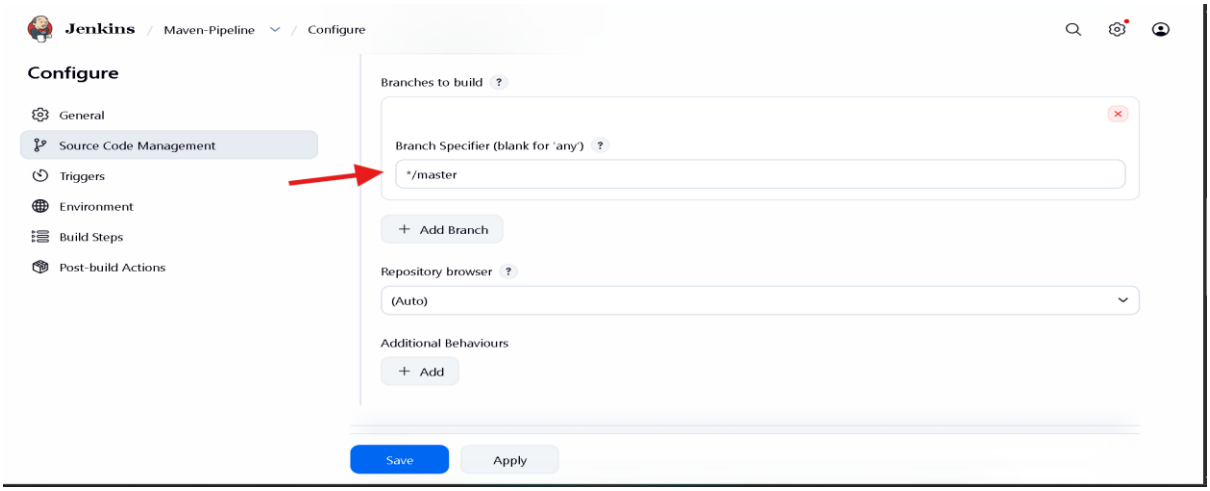


1. Enter job description.

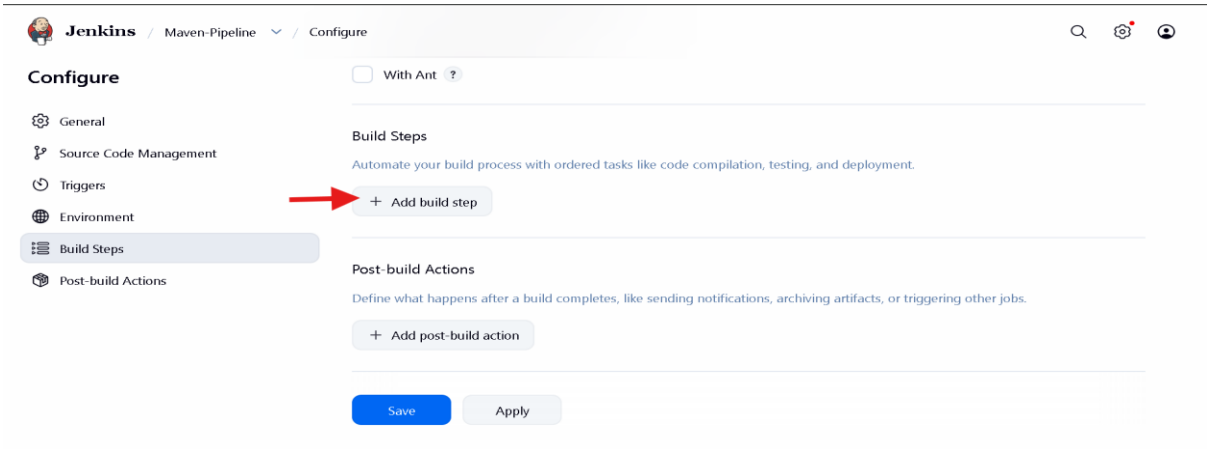


2. Select Git in Source Code Management.



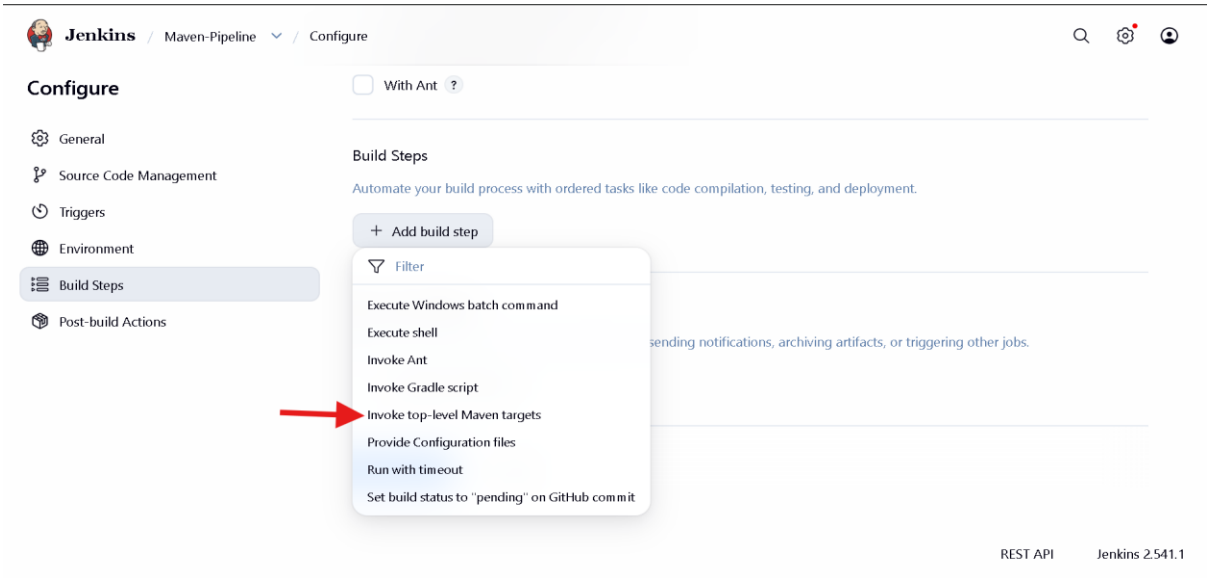


3. Paste GitHub **Repository URL**. Verify branch name (main/master). If incorrect then change it.

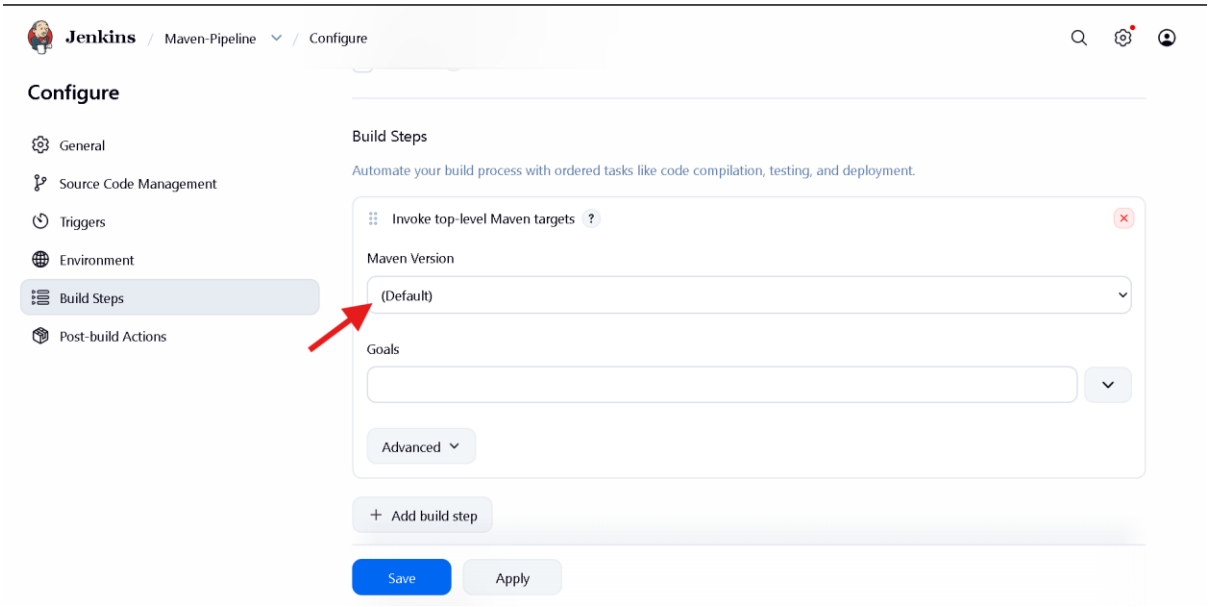


Build Configuration

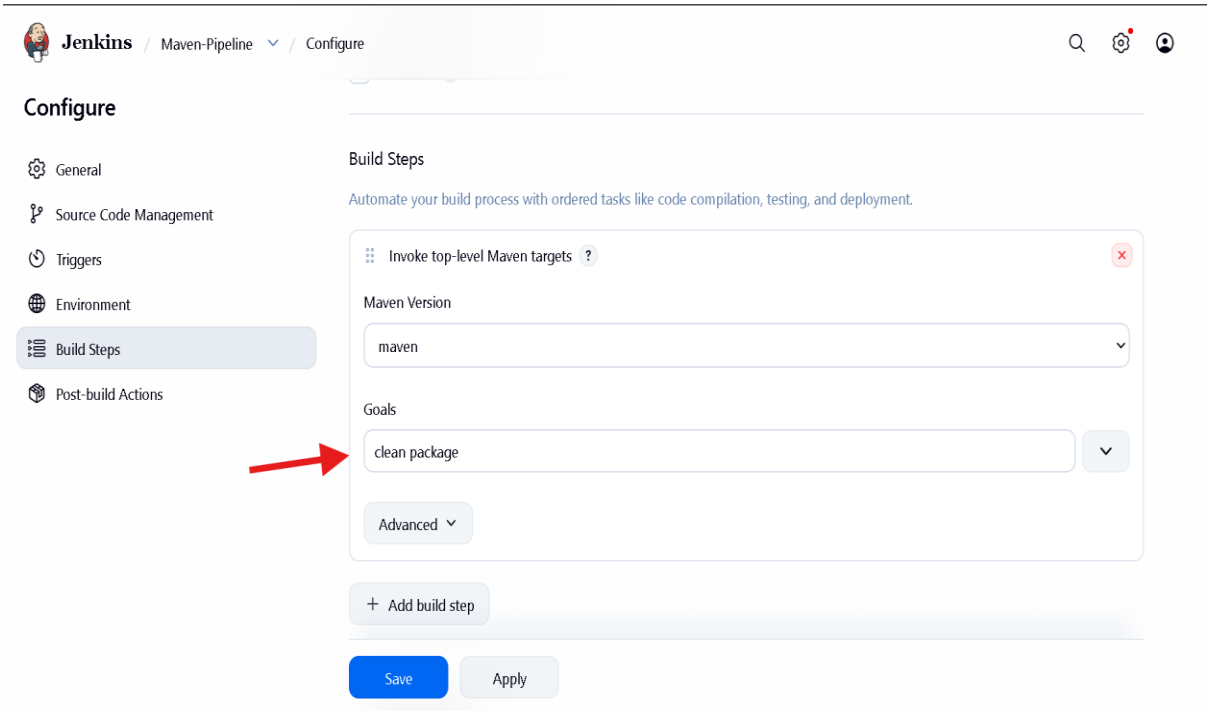
4. Move to Build steps click on add build step.



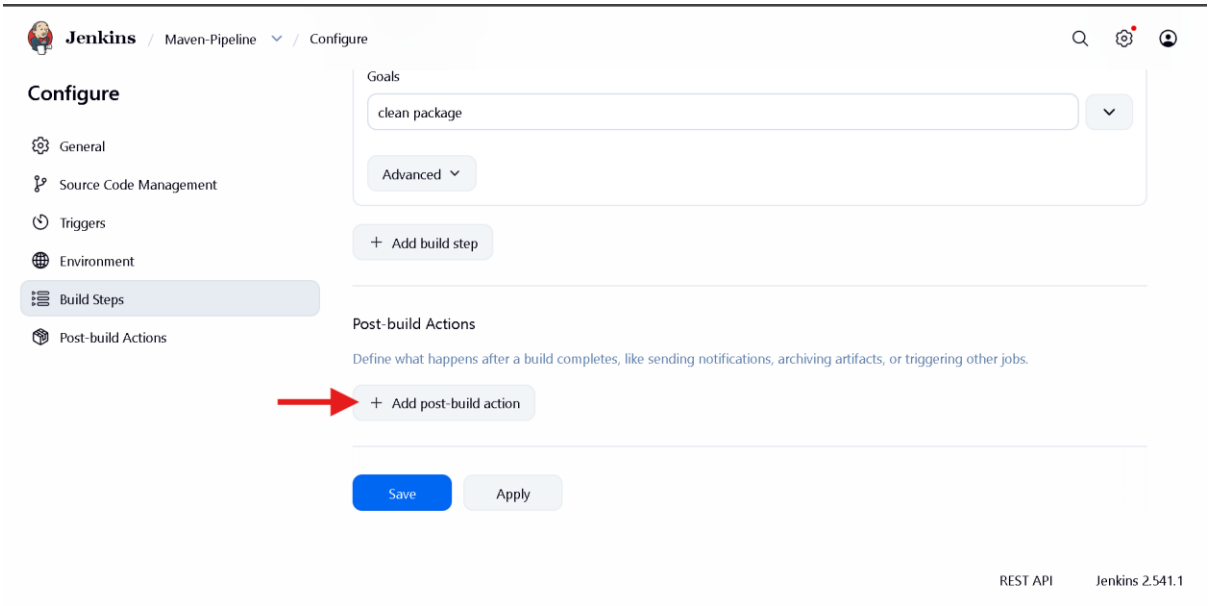
5. In the options Select Invoke top-level Maven Targets.



6. In this Maven version is Default so select it and change to Maven.

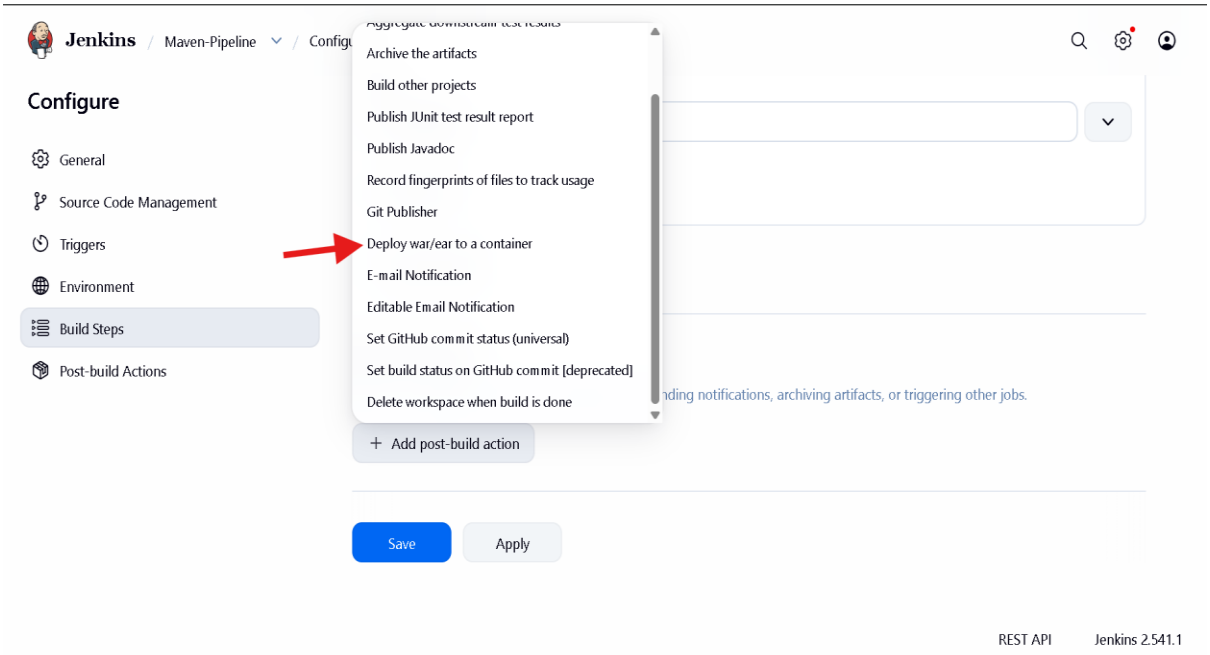


7. Add clean package in Goals and move to next step.

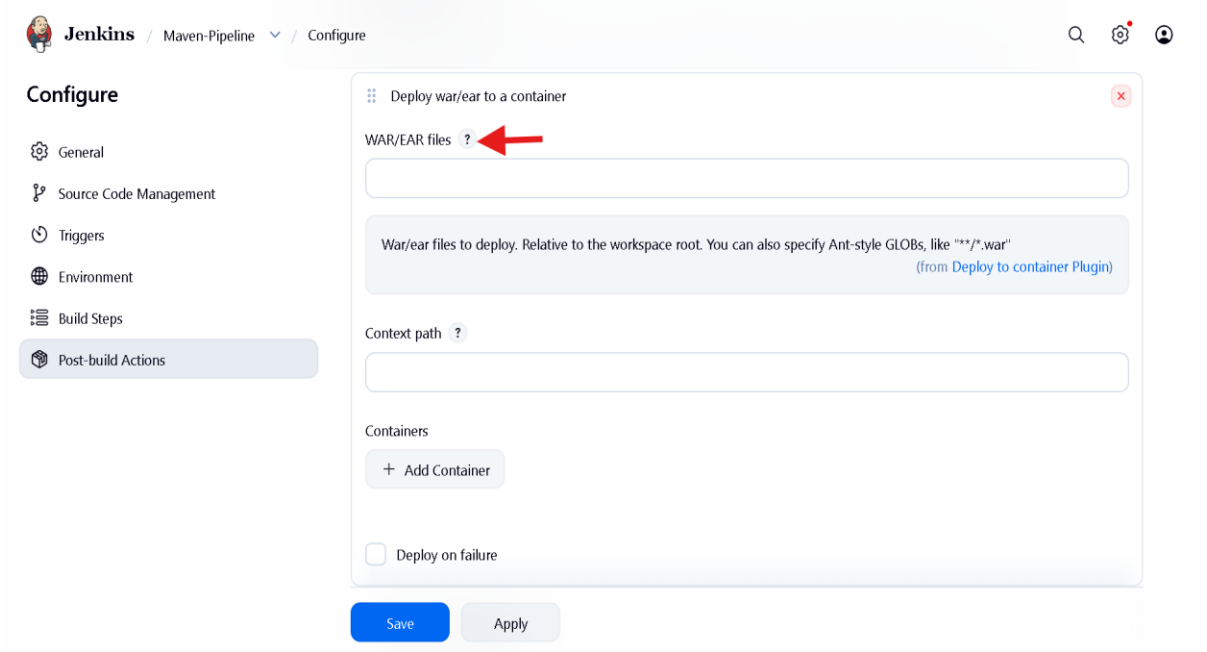


Post-Build Actions:

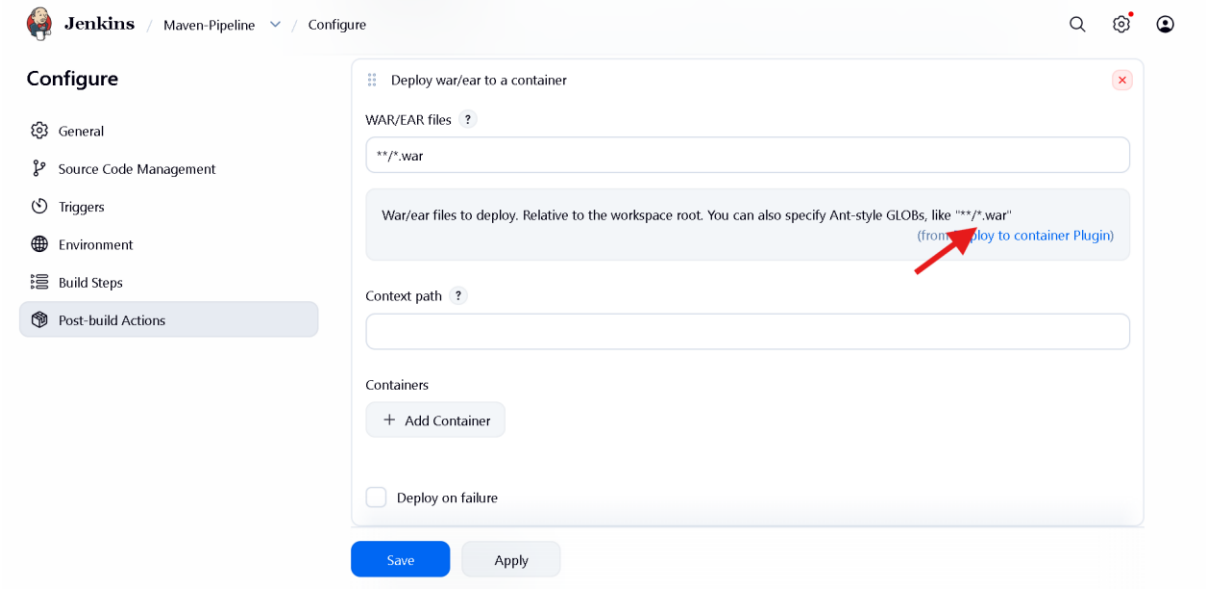
8. In Post – build Actions Click on Add post-build action.



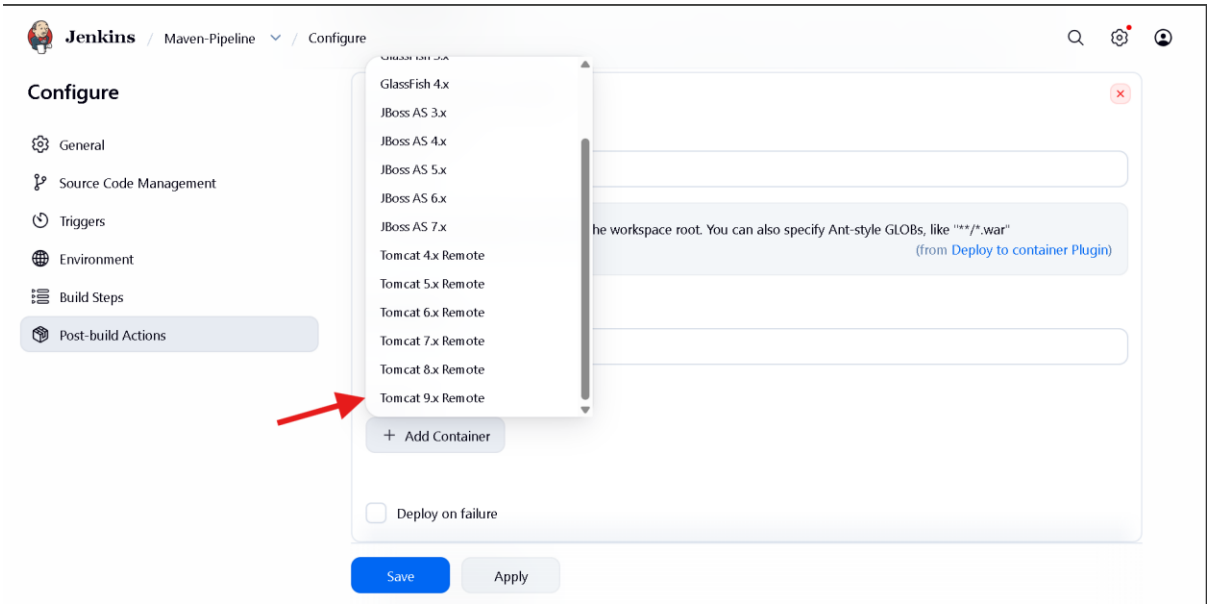
9. In the options Select Deploy war/ear to a container.



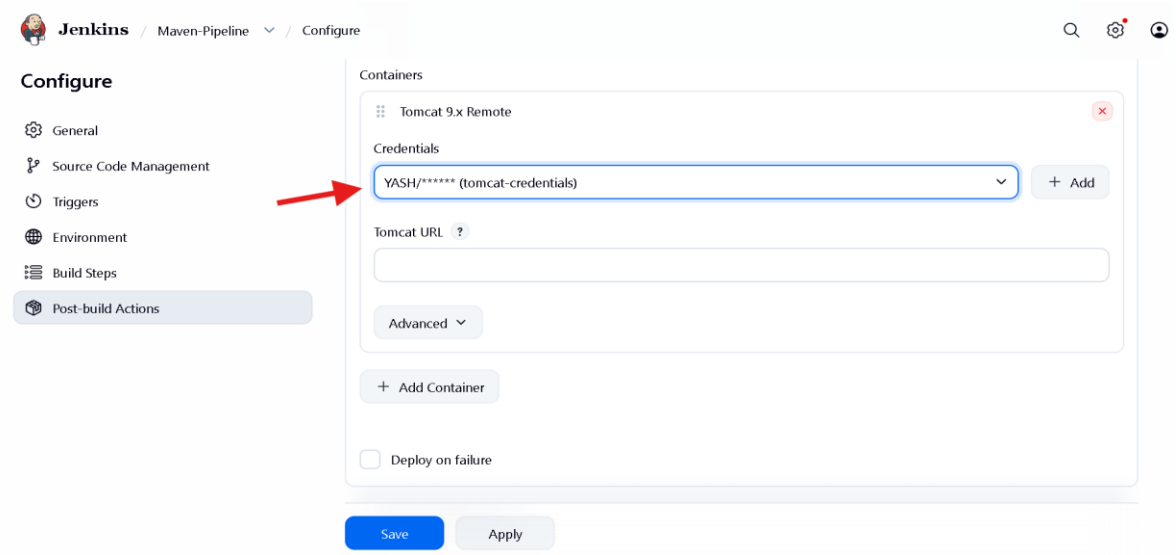
10. Now Click on the symbol ? after WAR/EAR files.



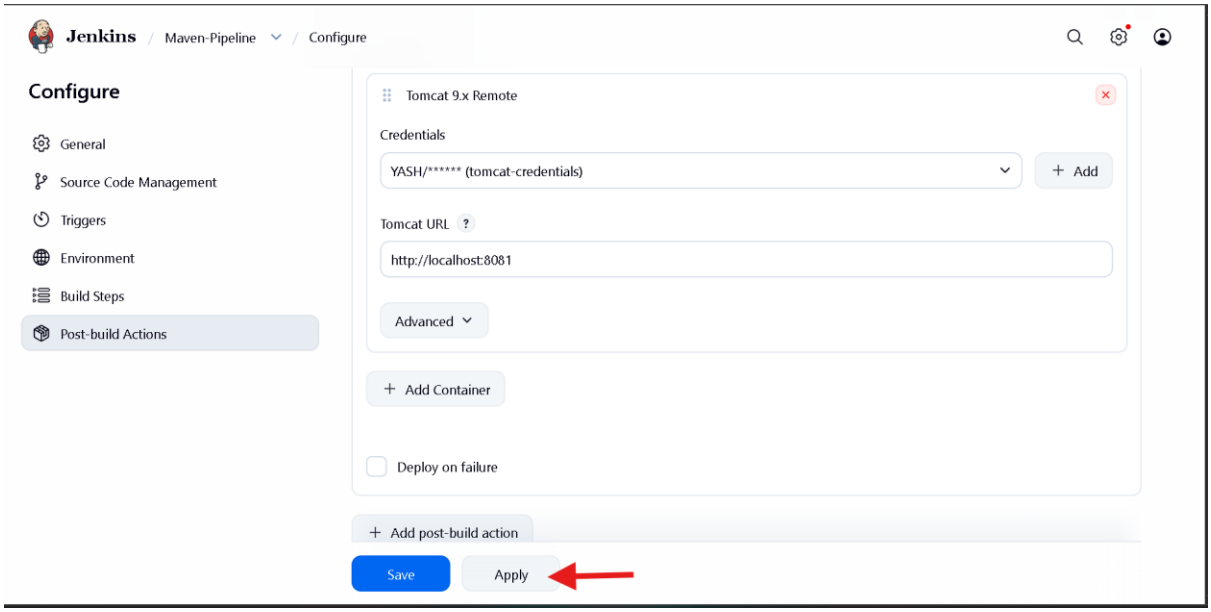
11. Now copy only **/*.war and paste it as shown in above image.



12. Click on Add Container and Choose Tomcat 9.x Remote and in credentials Select the credentials as shown in below image.



13. Now in Tomcat URL add: http://localhost:8081 as shown

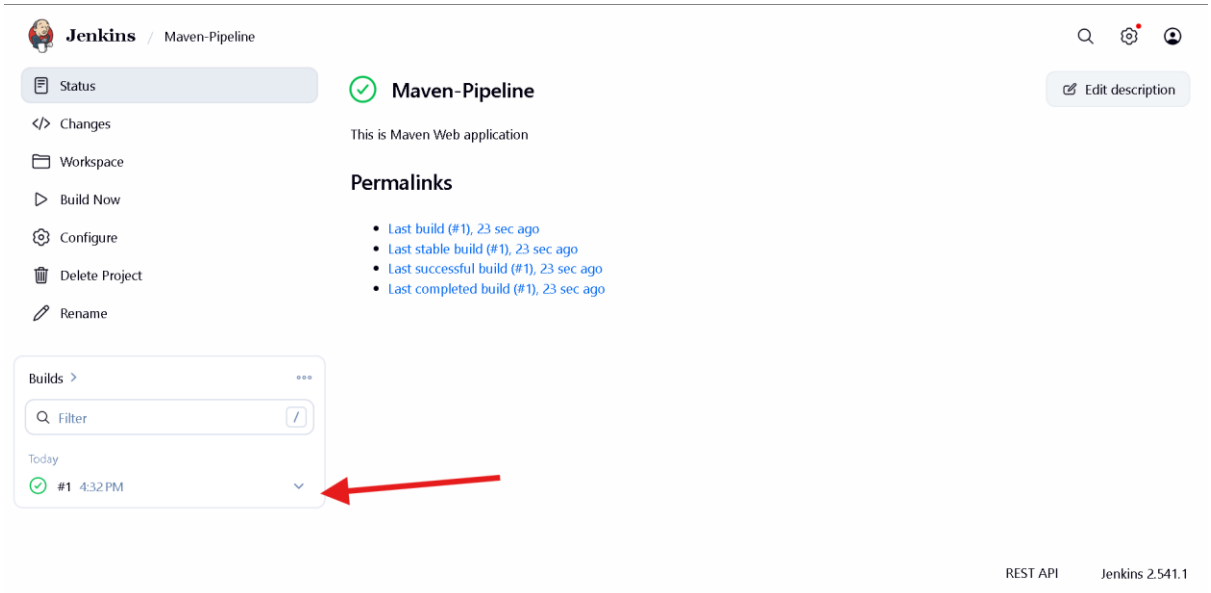


14. After adding Tomcat URL click apply and then save.

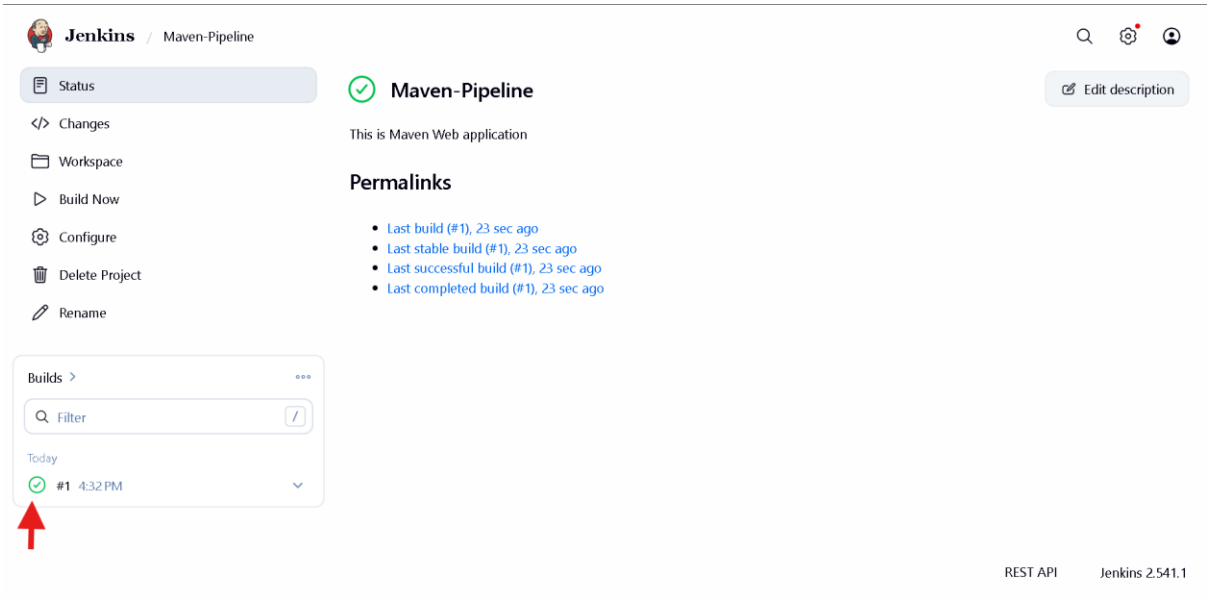
Build Job

Step 4: Build Now

1. Click on Build Now



2. Then Build is created and is Success.

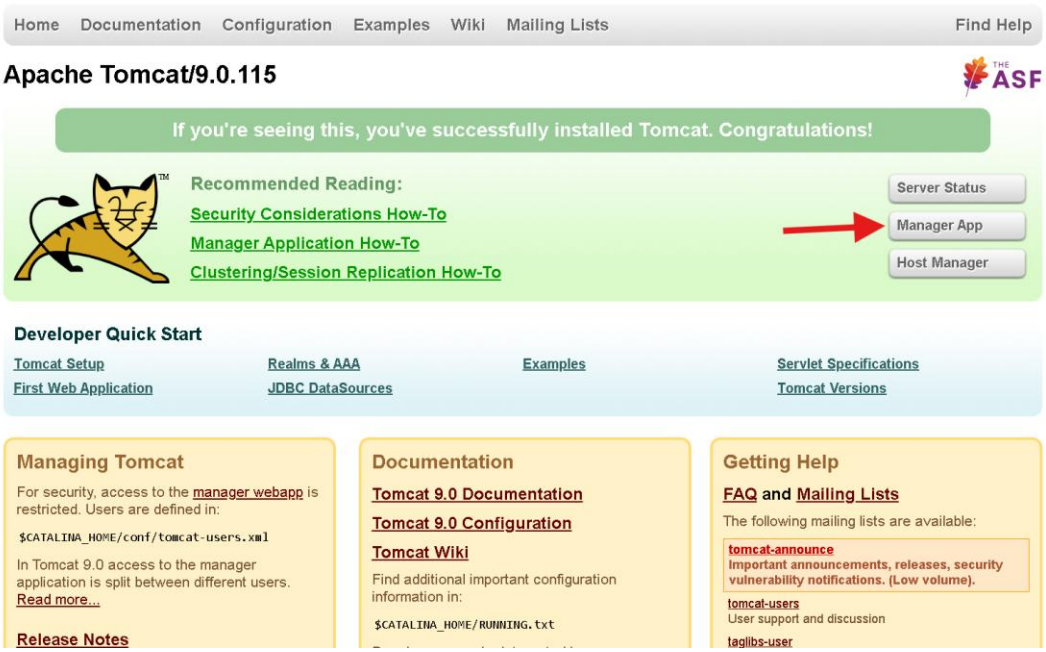


3. To check result click as shown in above image.

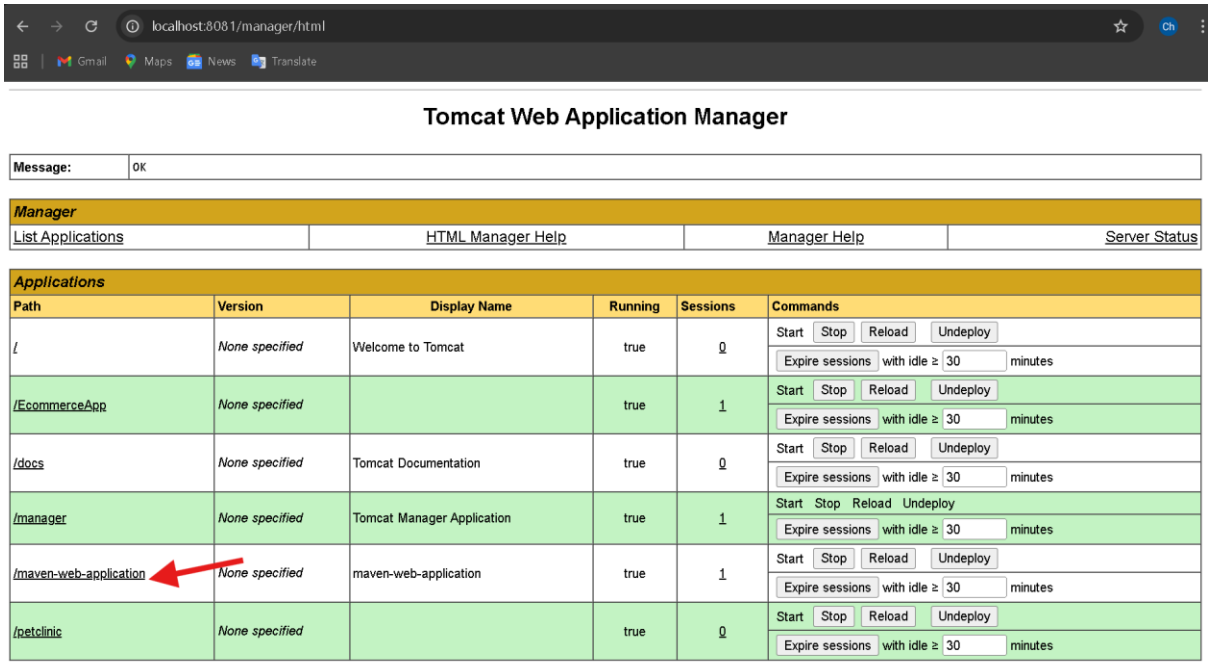
4. The above image shows the result.

Verify in Tomcat

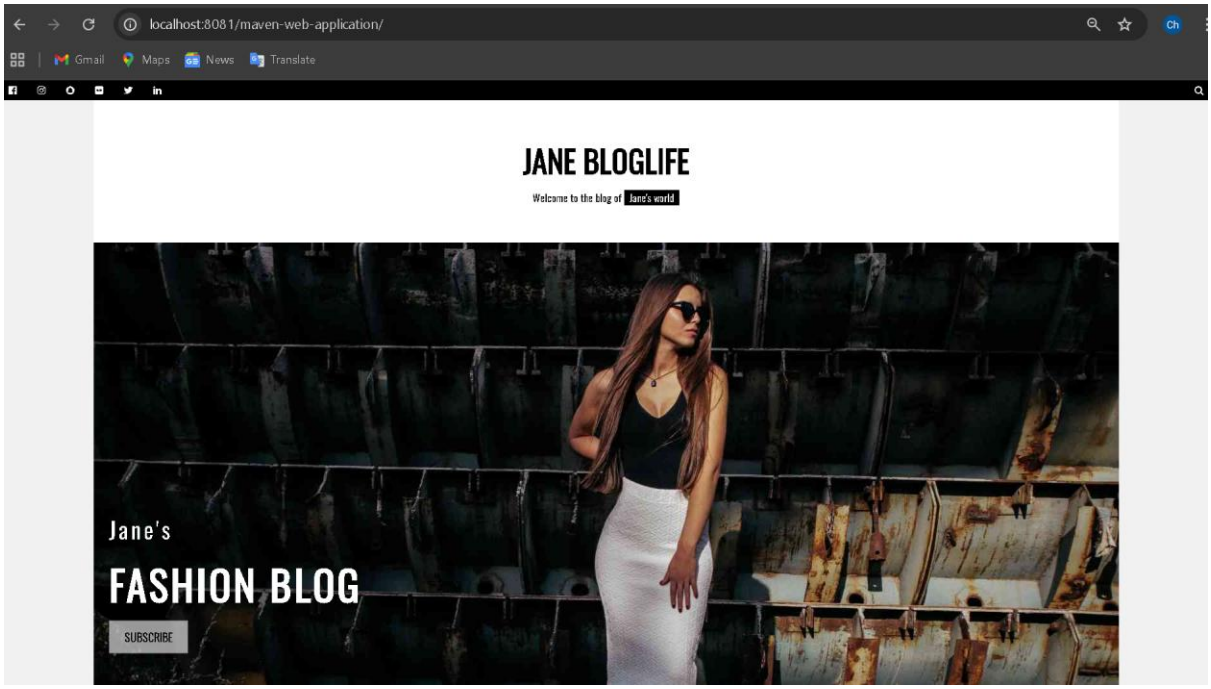
Step 5: Check Final Result in Tomcat Server.



- Open Tomcat and click on Manager App



- Click on the /maven-web-application then the result page is displayed.



The above image is final result in Tomcat Server.