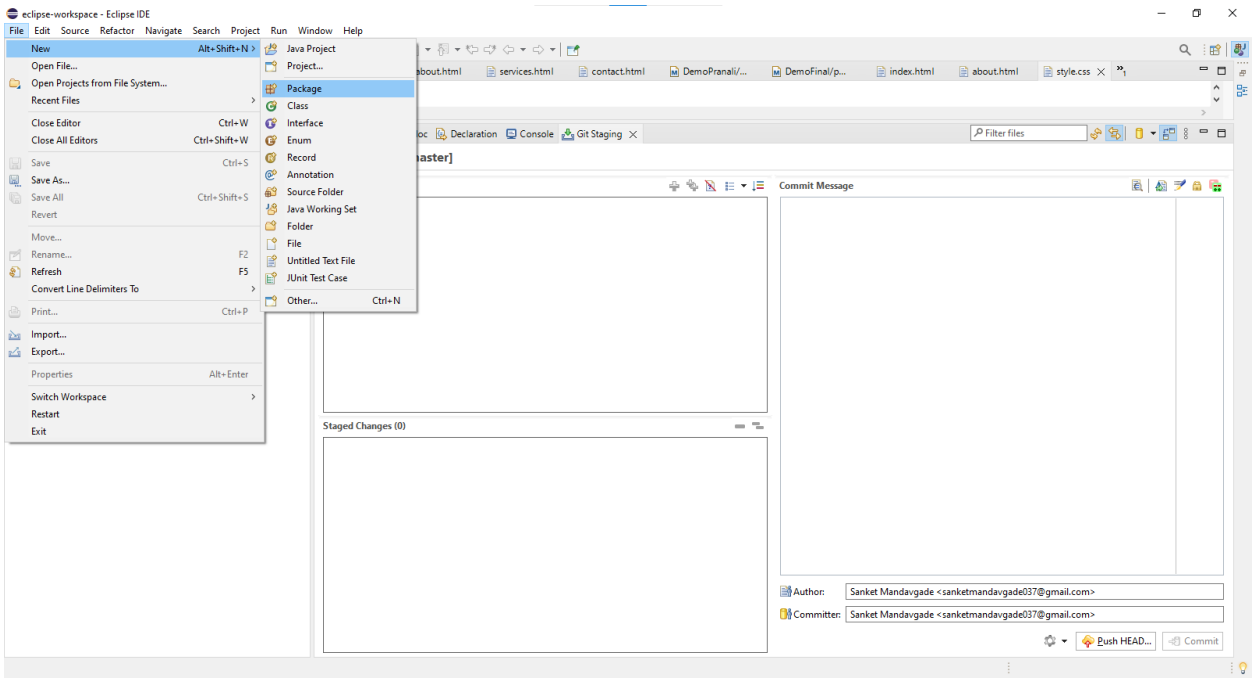
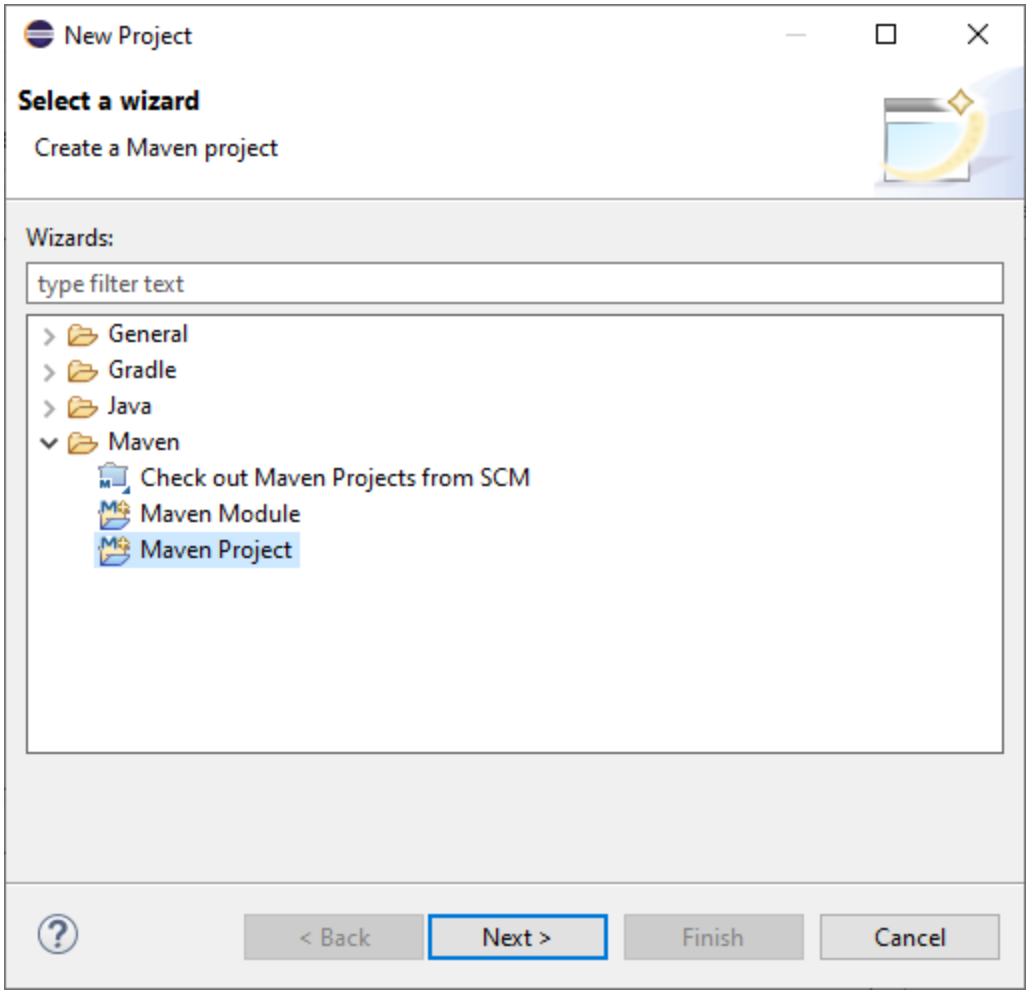
Name : Vedika Adheli
Roll No : 01
Devops Assignment : 06

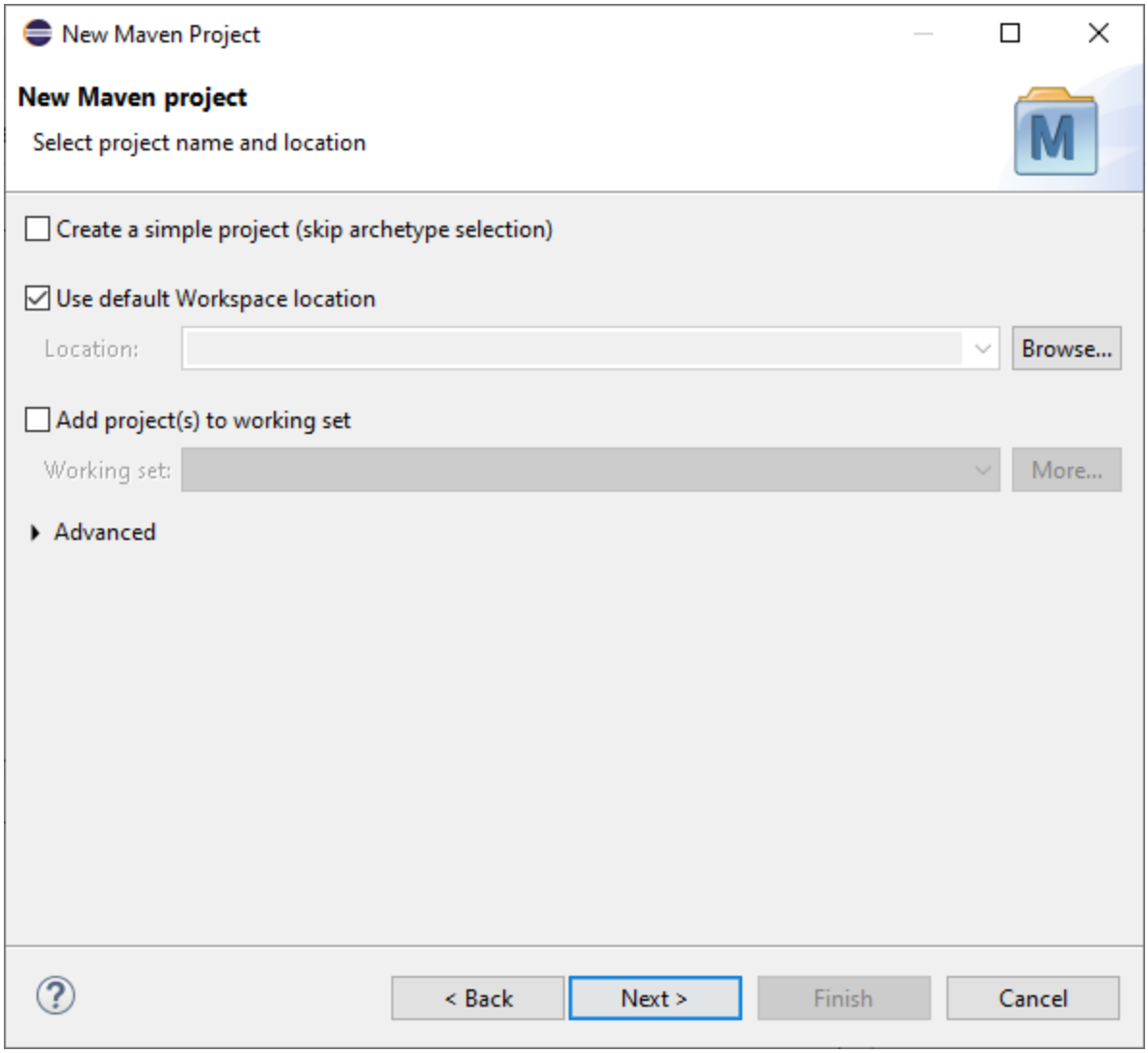
Create a web application & Commit changes to GitHub/GitLab repository. Use GitHub/GitLab, Maven, Tomcat with Jenkins. Automate Deployment of the above-mentioned application to a container using Jenkins plugin,"Deploy to container".

● Download Apache Maven stable version as zip and extract it into ‘C:/program files’ folder
● Download Apache Tomcat installer and install it,change the port to 8081 because jenkins is running on port 8080

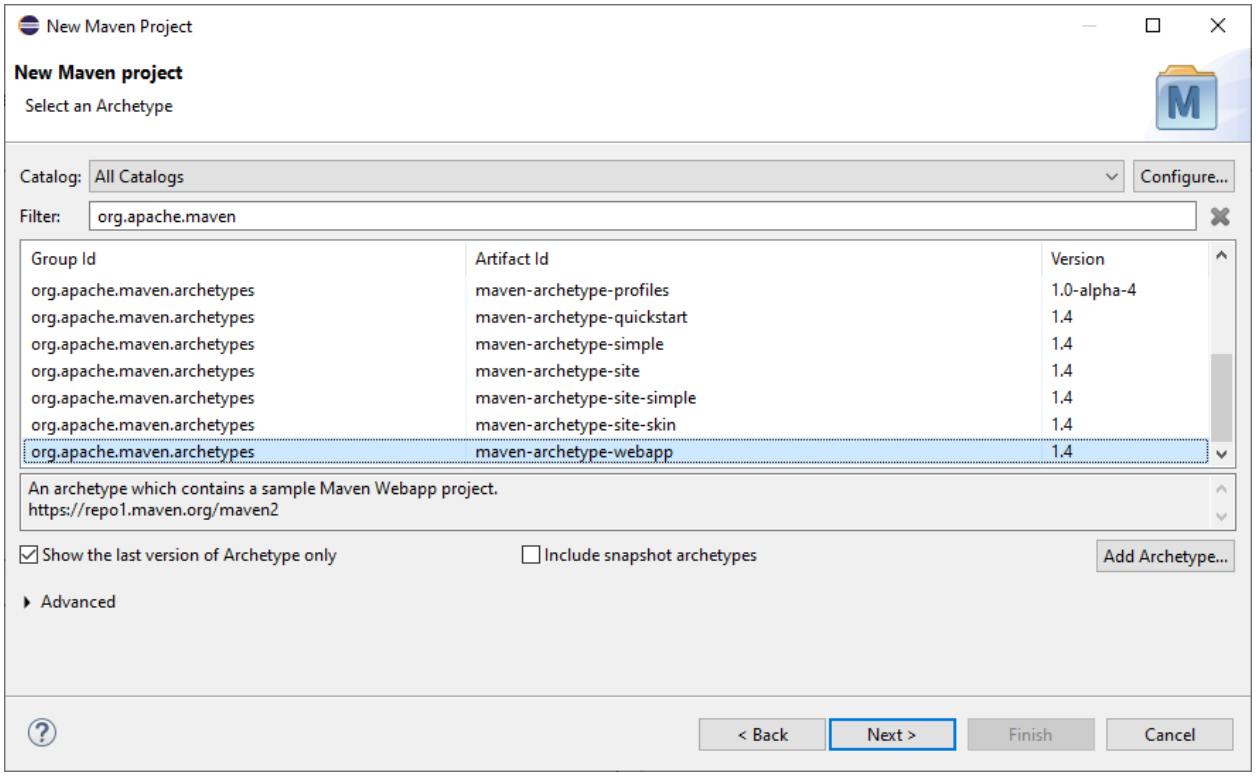
To create a web application,
1.Open eclipse ide for java developers
2.Go to files,click on project
3.Click on Maven Project as shown below



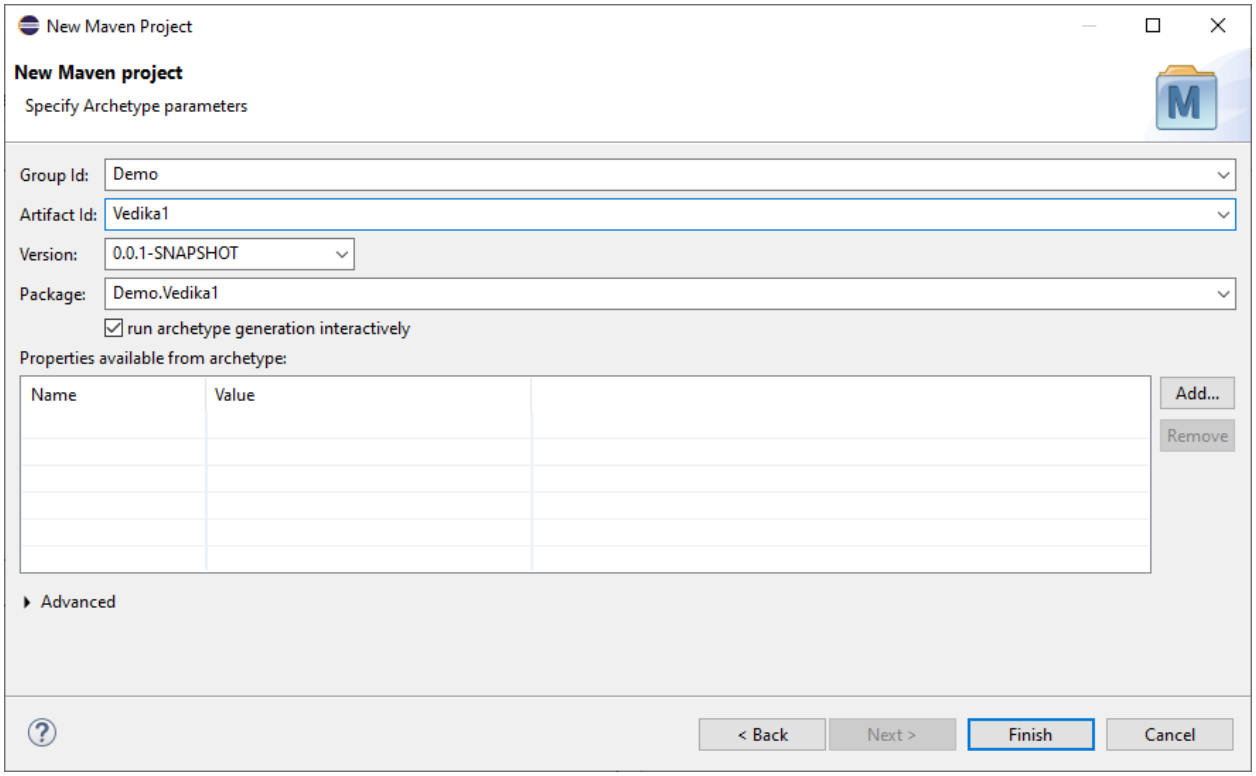

New Project
Select a wizard
Create a Maven project
Wizards:
type filter text
General
Gradle
Java
Maven
Check out Maven Projects from SCM
Maven Module
Maven Project
< Back
Next >
Finish
Cancel



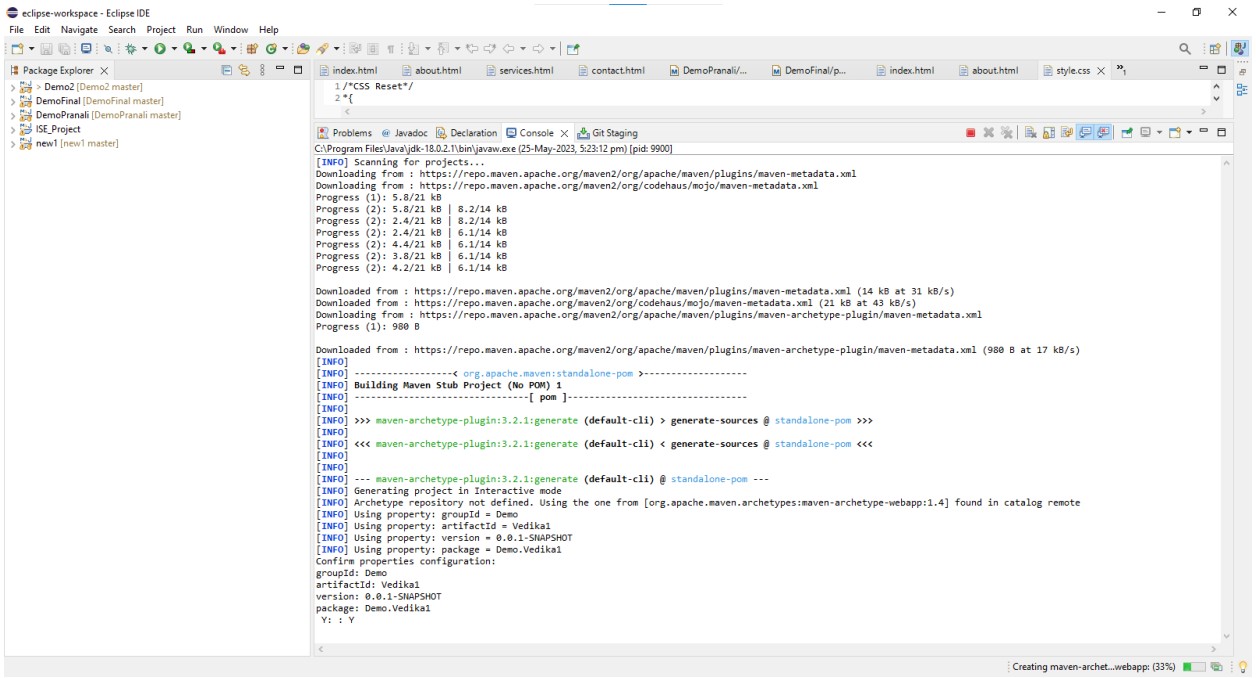
Use default workspace location and click on ‘Next’ You will find window as shown below In filter search filter as ‘org.apache.maven.archetypes’ select webapp option,version 1.4



Click on next
Given group id as Demo,artifact id as ‘PranotiSample’
Click on finish

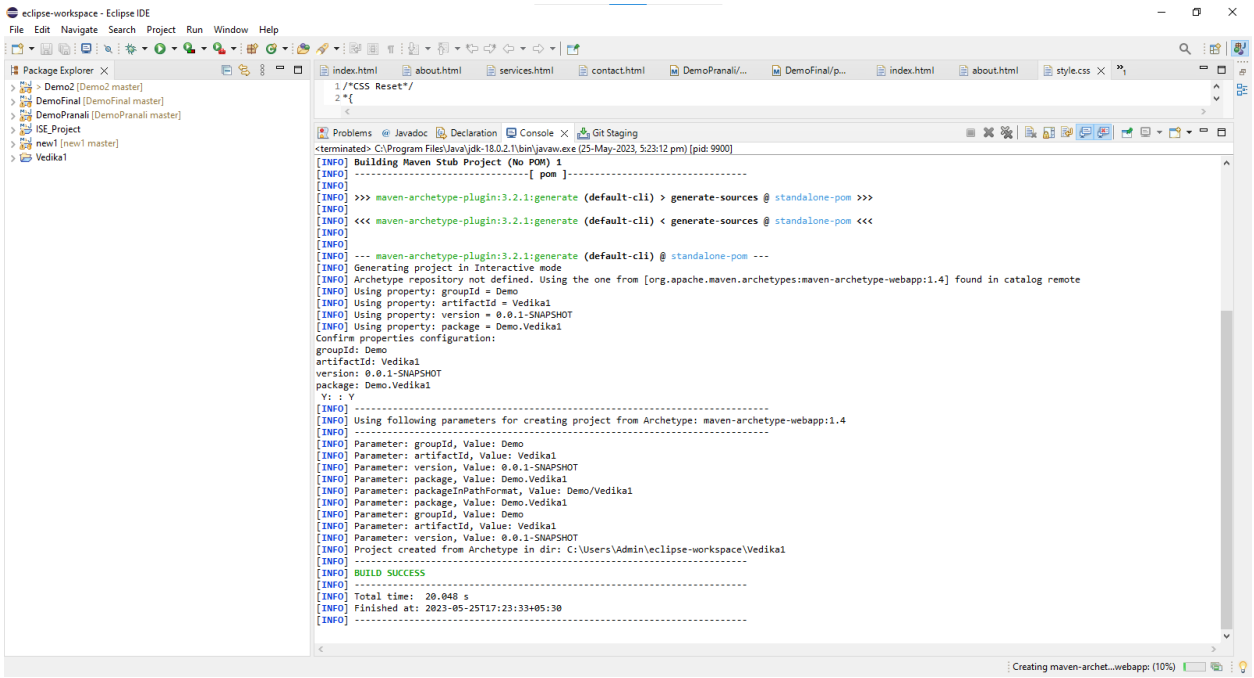


You will find project building in console,
When it terminates click ‘Y’ and press Enter

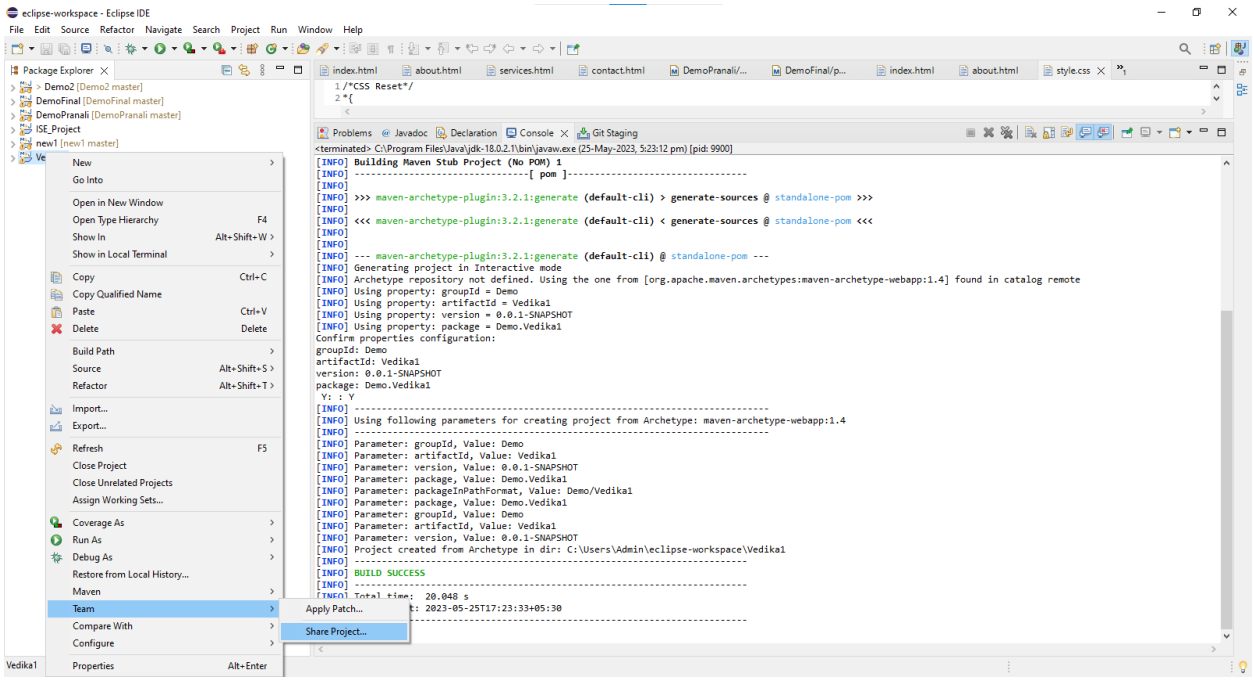


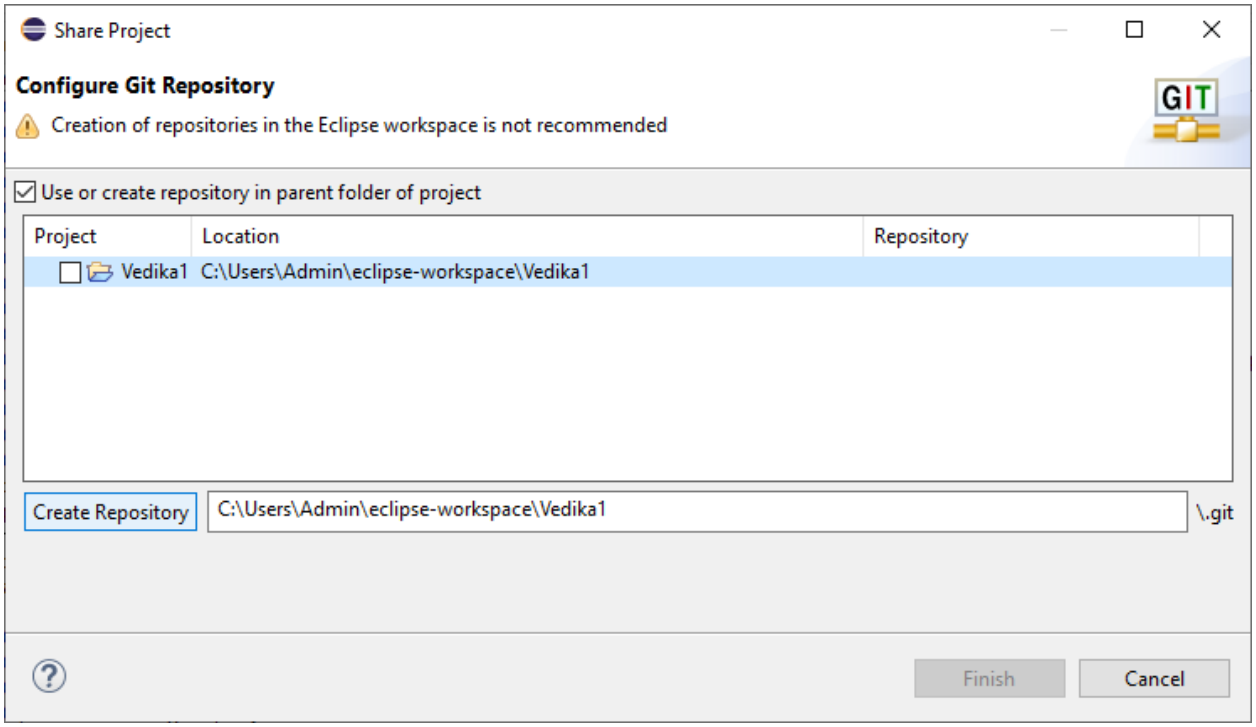
You will see below window with build success

This project contains ‘pom.xml’ which contains all the dependencies required for application

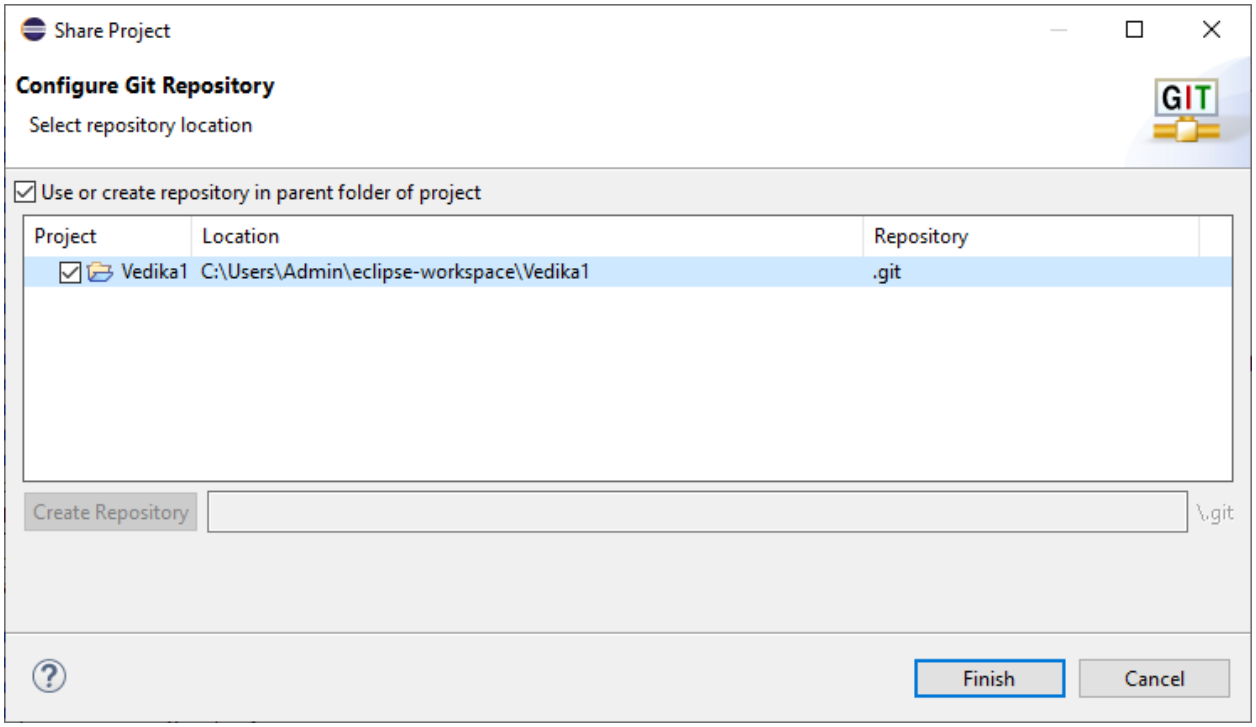


Right click on your created maven project and click on Team-share project In a below window click the check box as ‘use or create repository in parent folder of project’



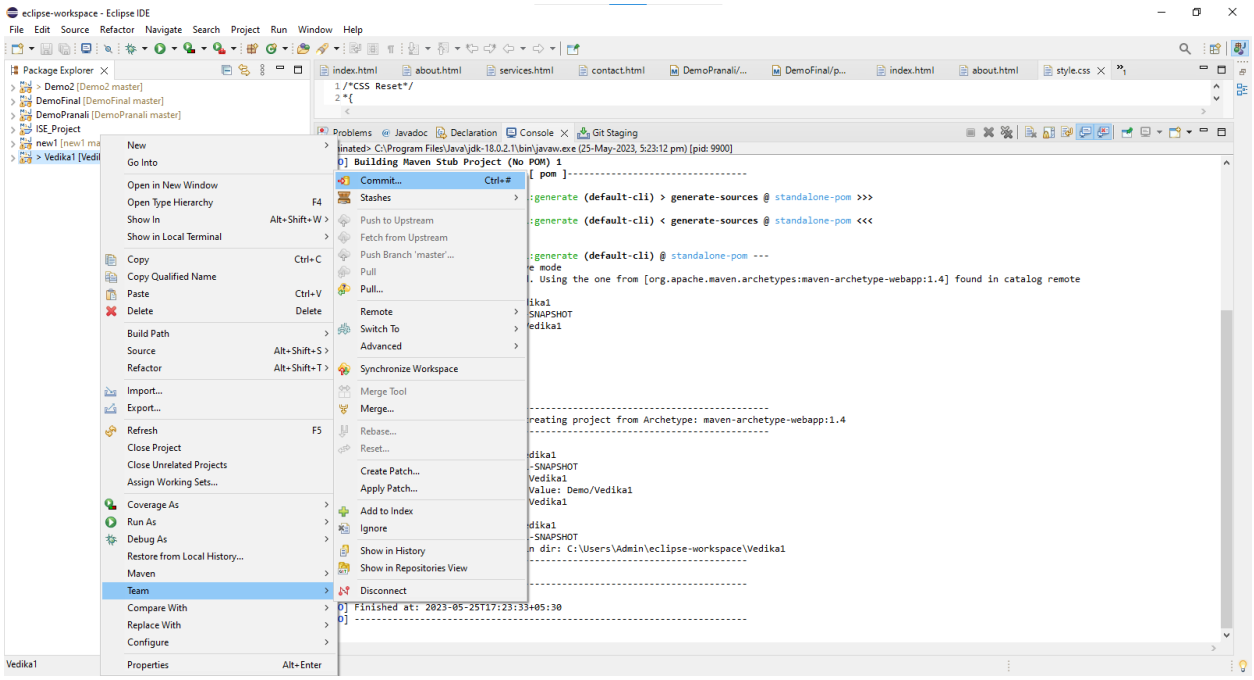


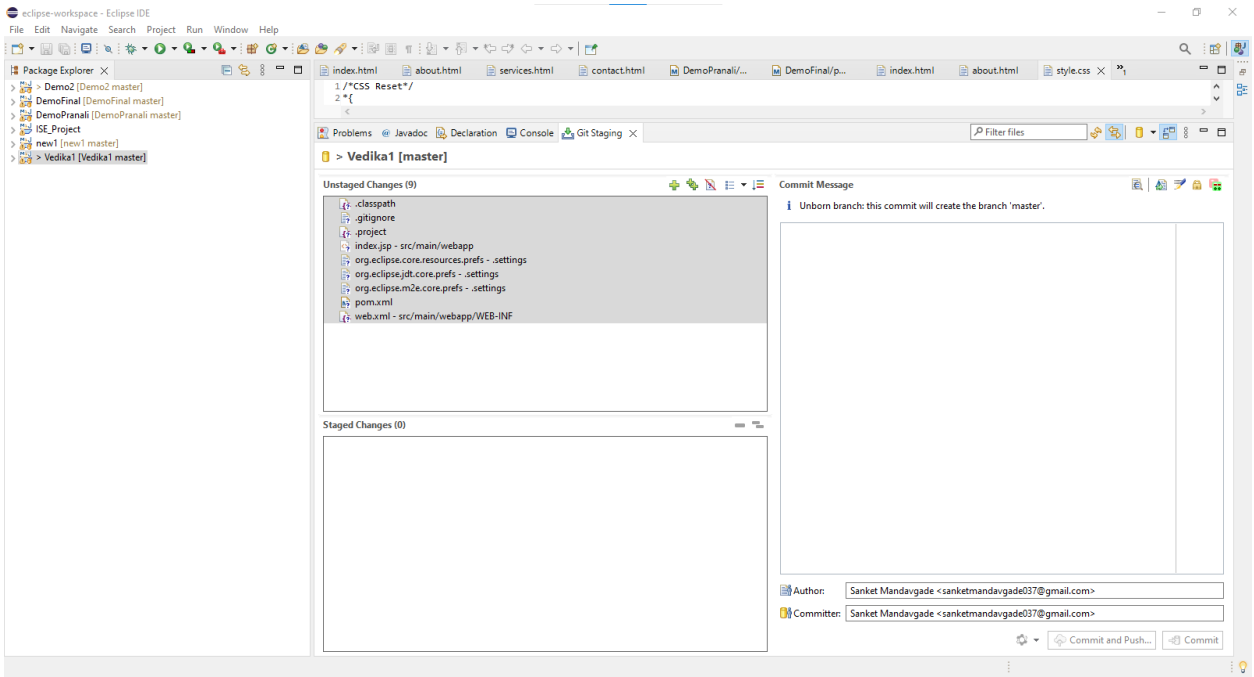
Click on create repository



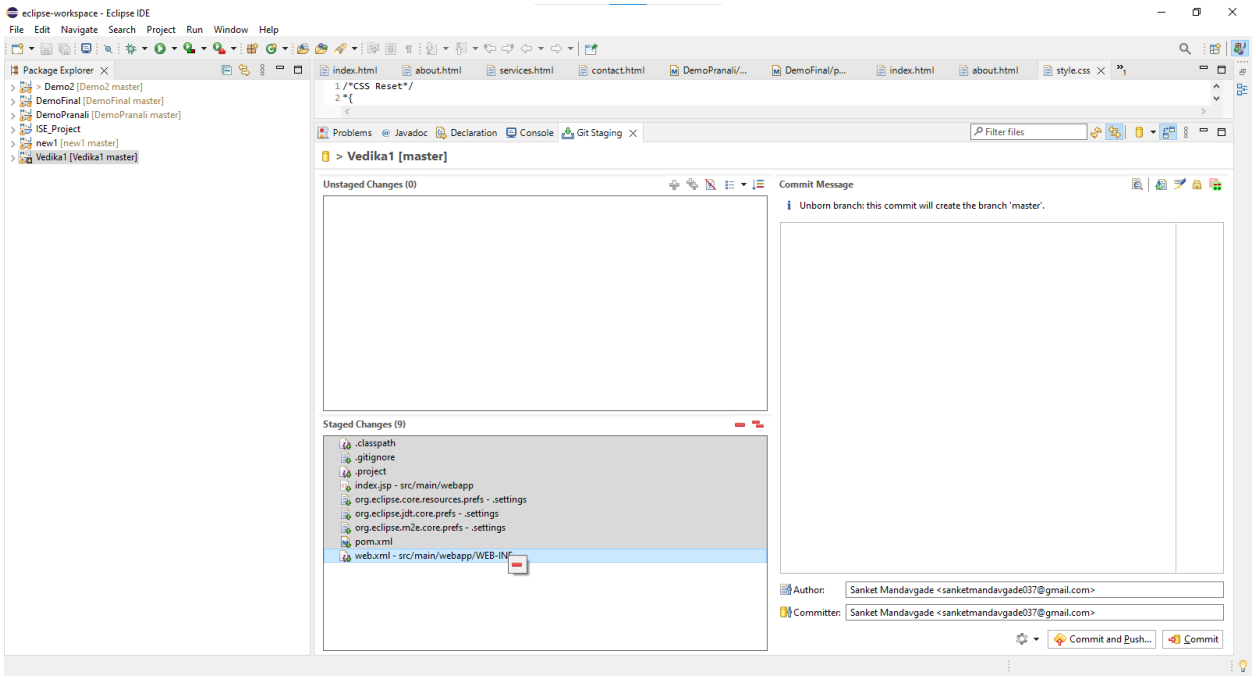
Click on finish

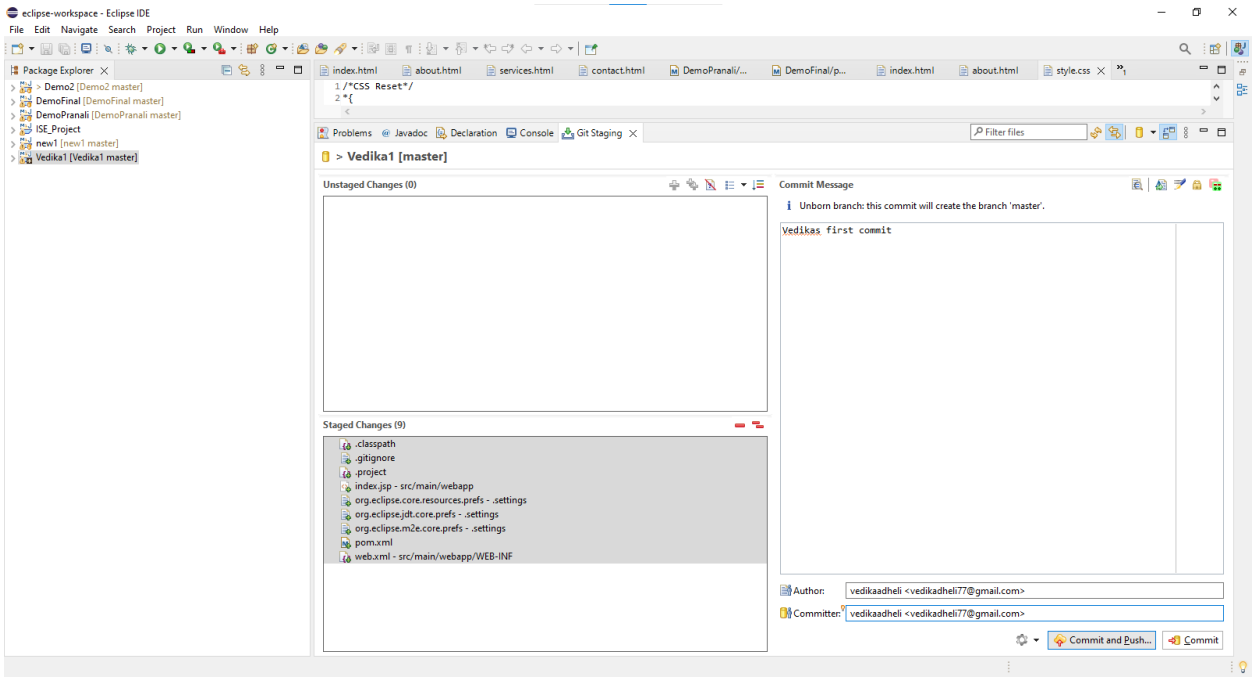
Right click on PranotiSampleProject and click on Team-commit



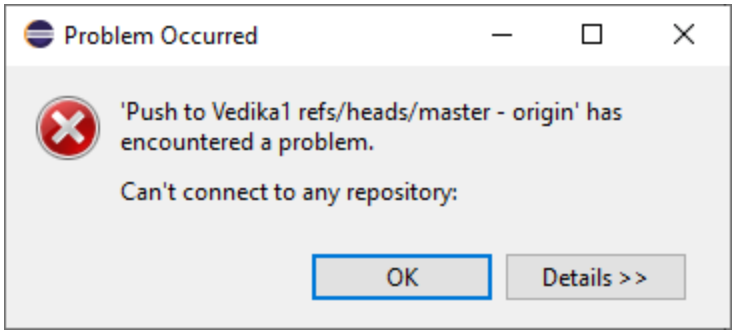


Select all files in Unstaged changes and drag and drop them into staged changes
Enter commit message
Edit author and creator name as username <email>
i.e vedikaadheli <vedikaadheli77@gmail.com>

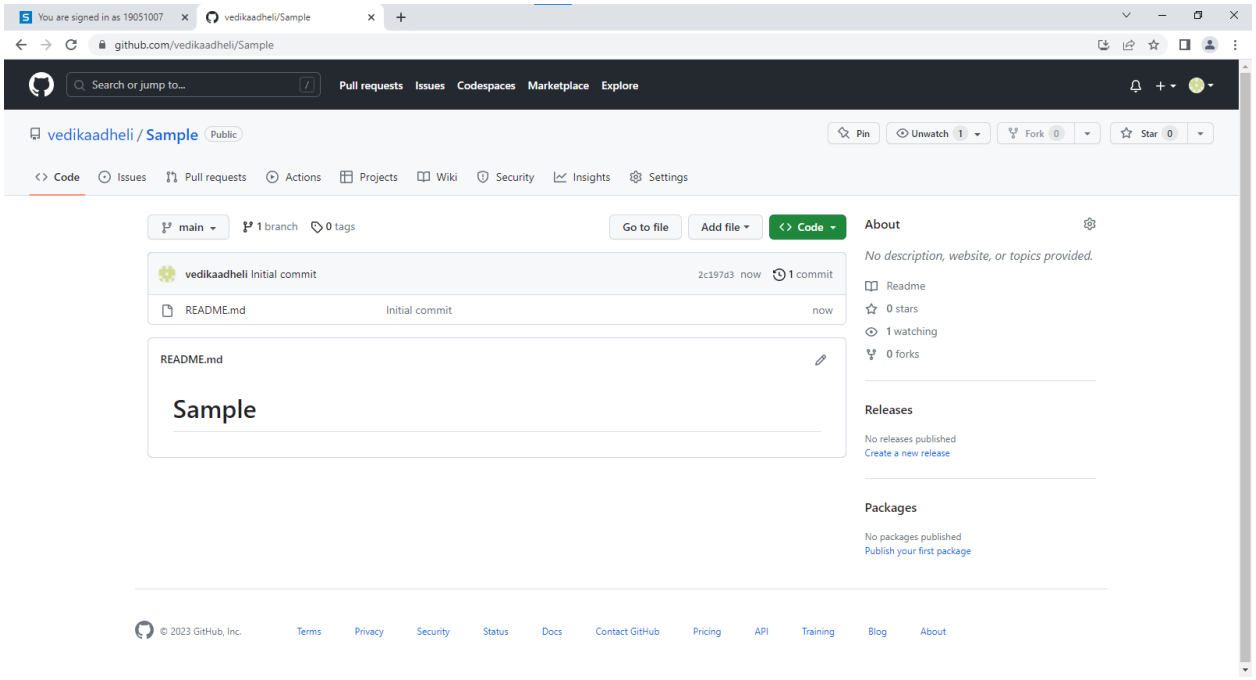




You will see below window with message ‘can't connect to any repository’ Click on ‘OK



Login to your Github account and create repository as ‘Sample’



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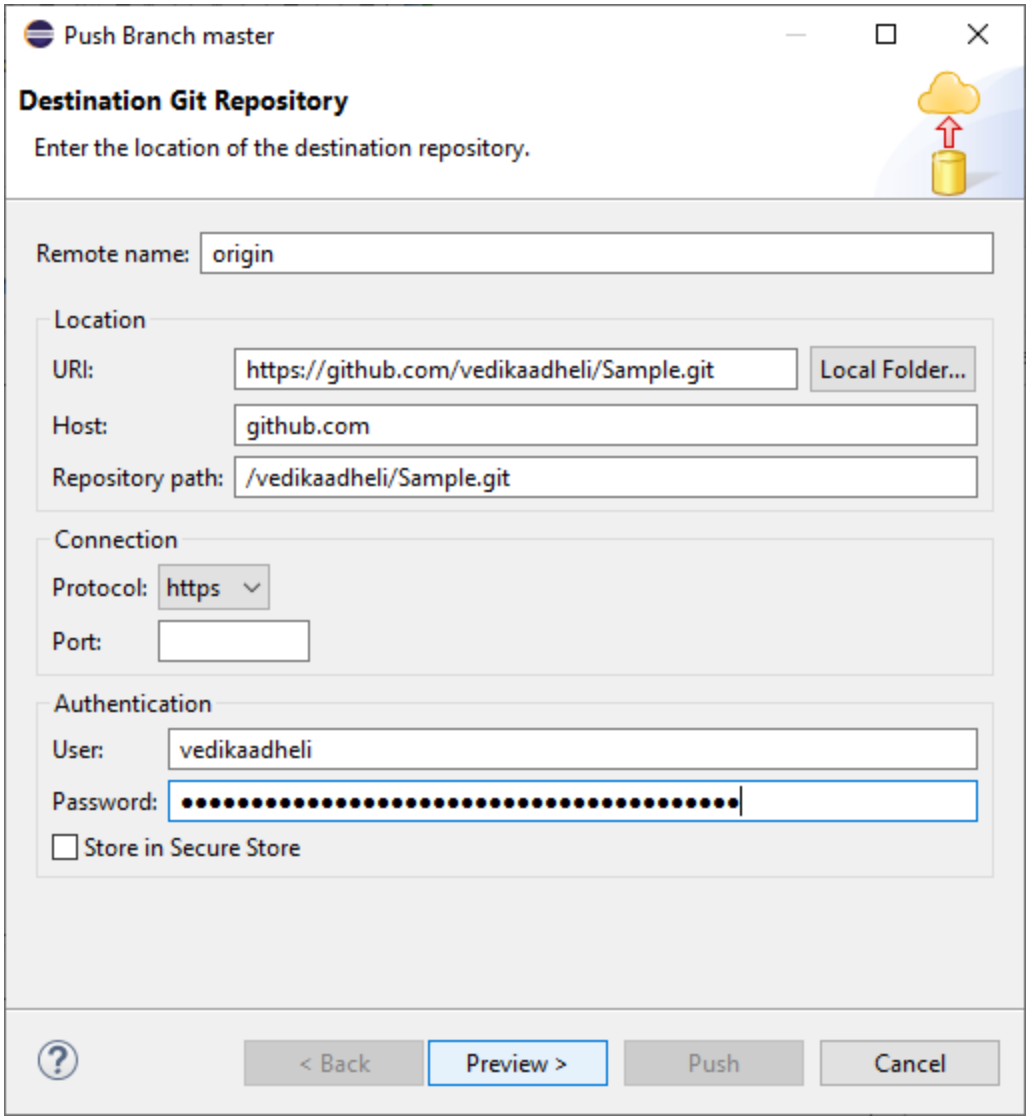
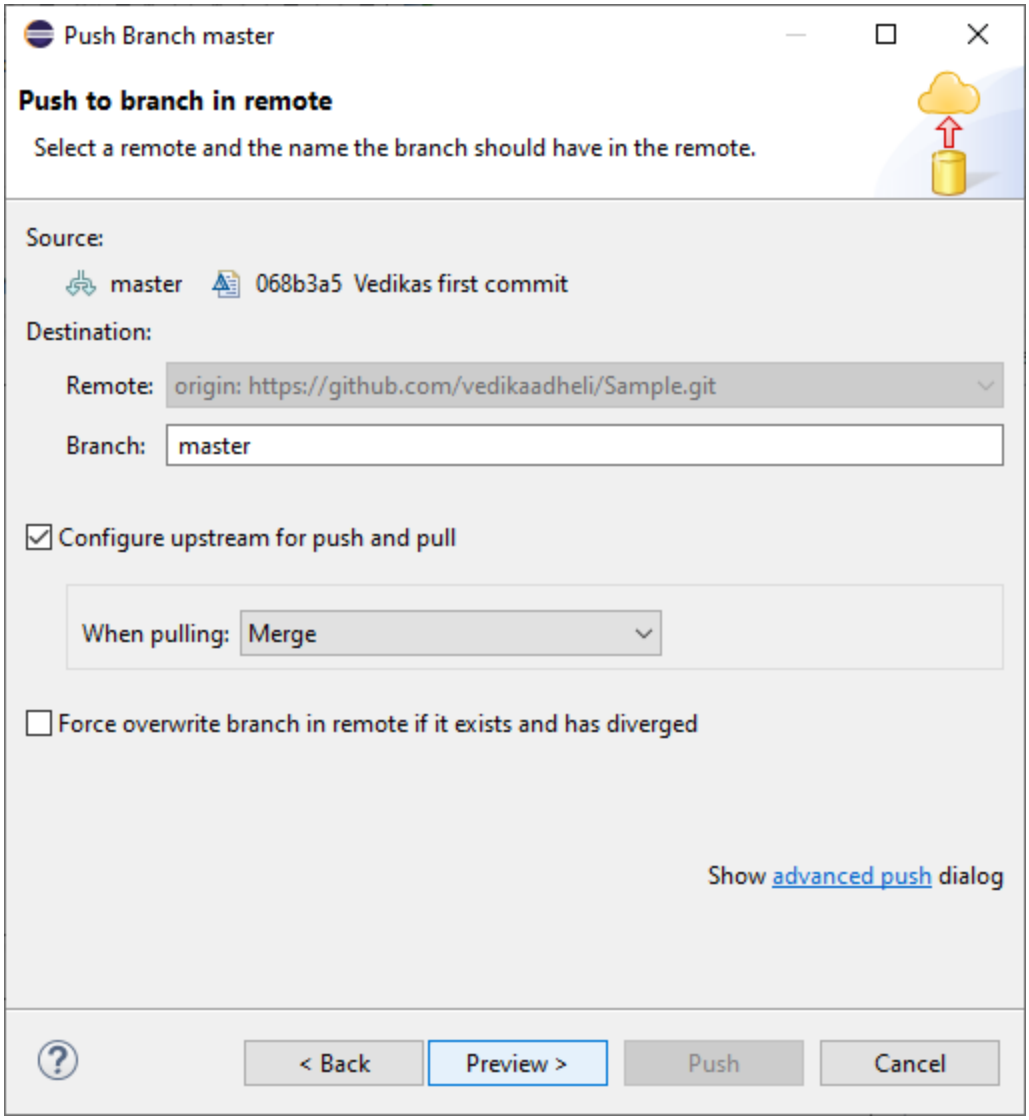
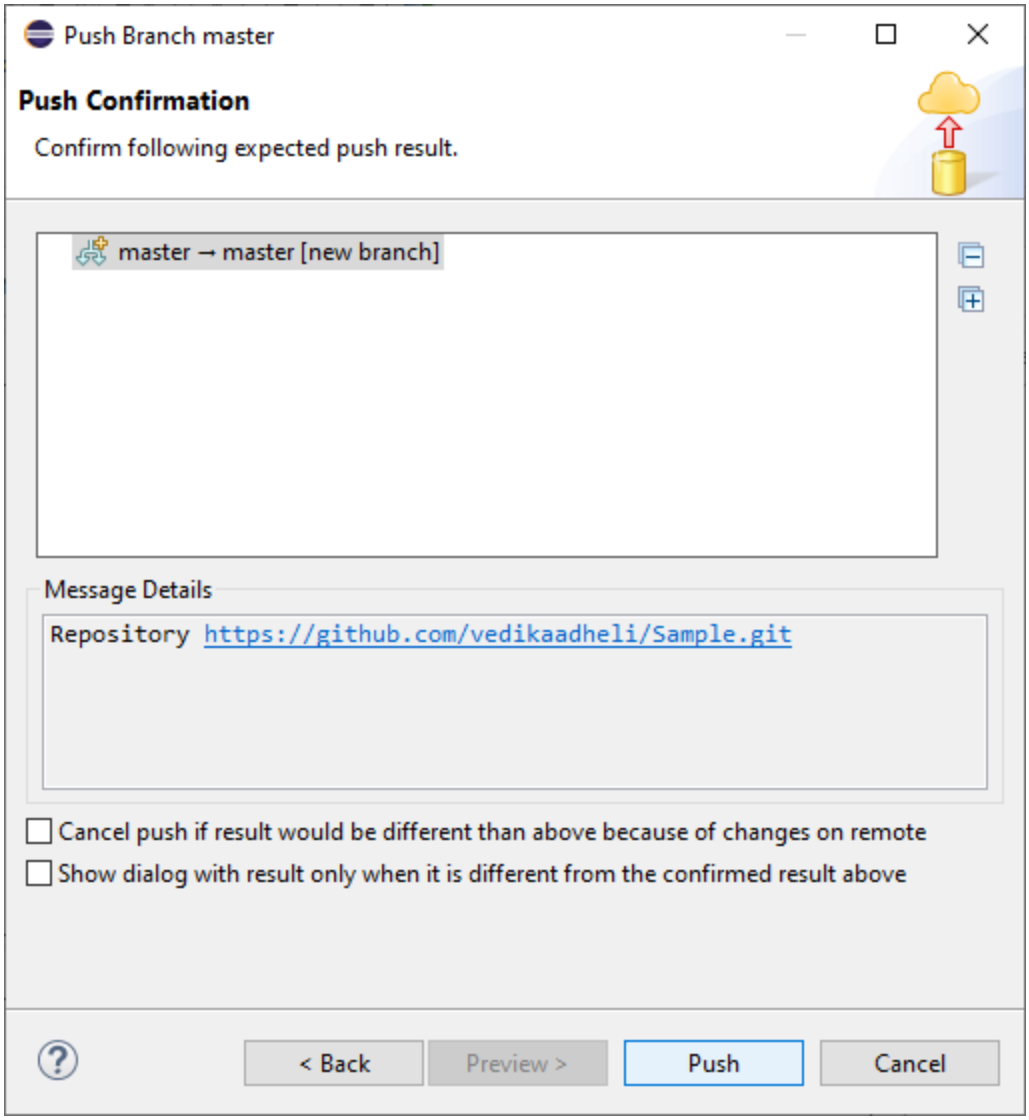
After commit click on ‘Push Head’ button and paste your GitHub repository url Enter username and password Click on Preview



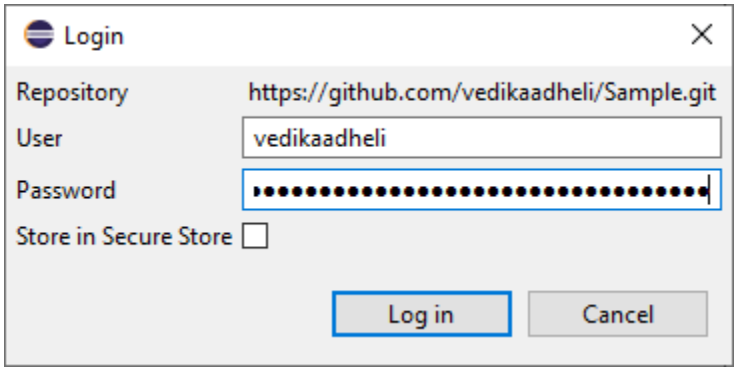
Click on preview in below window



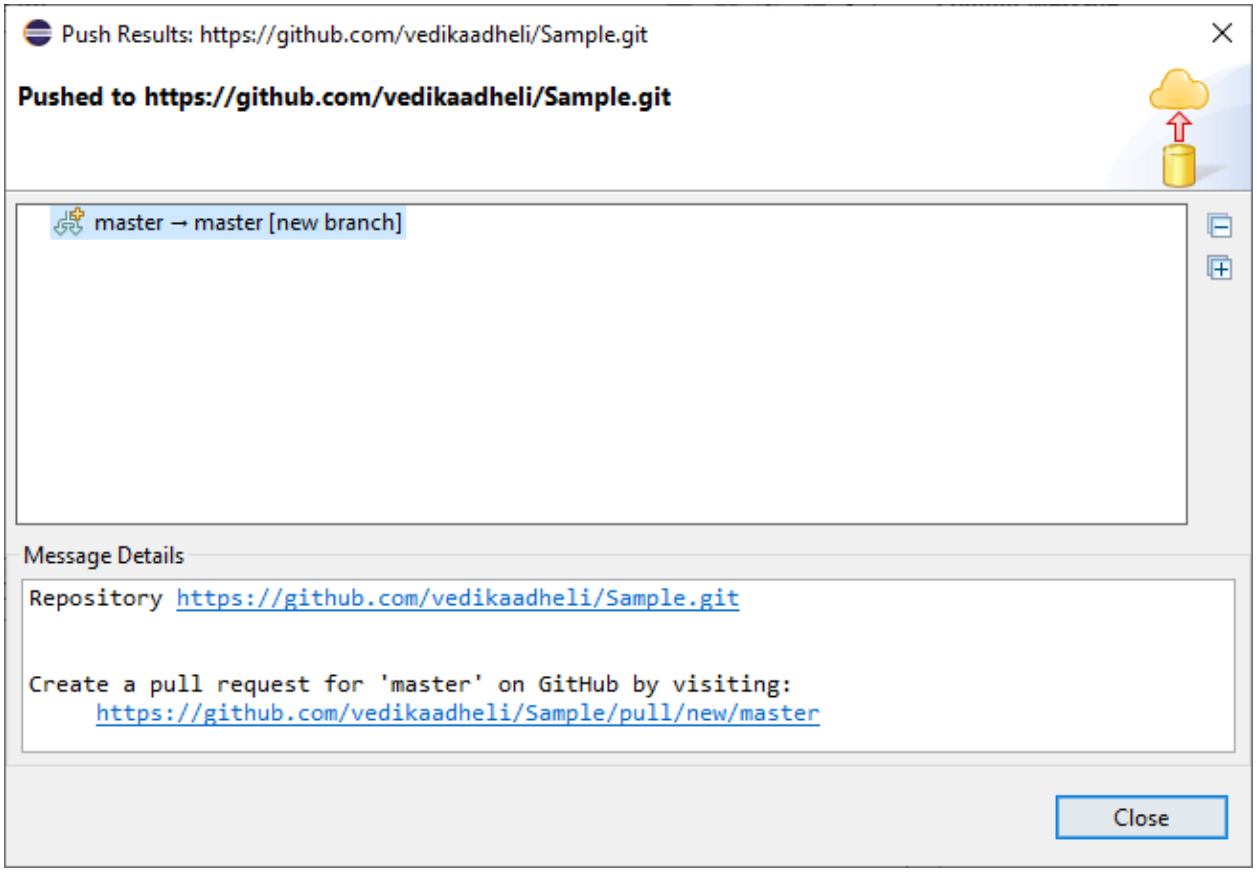
Click on push button



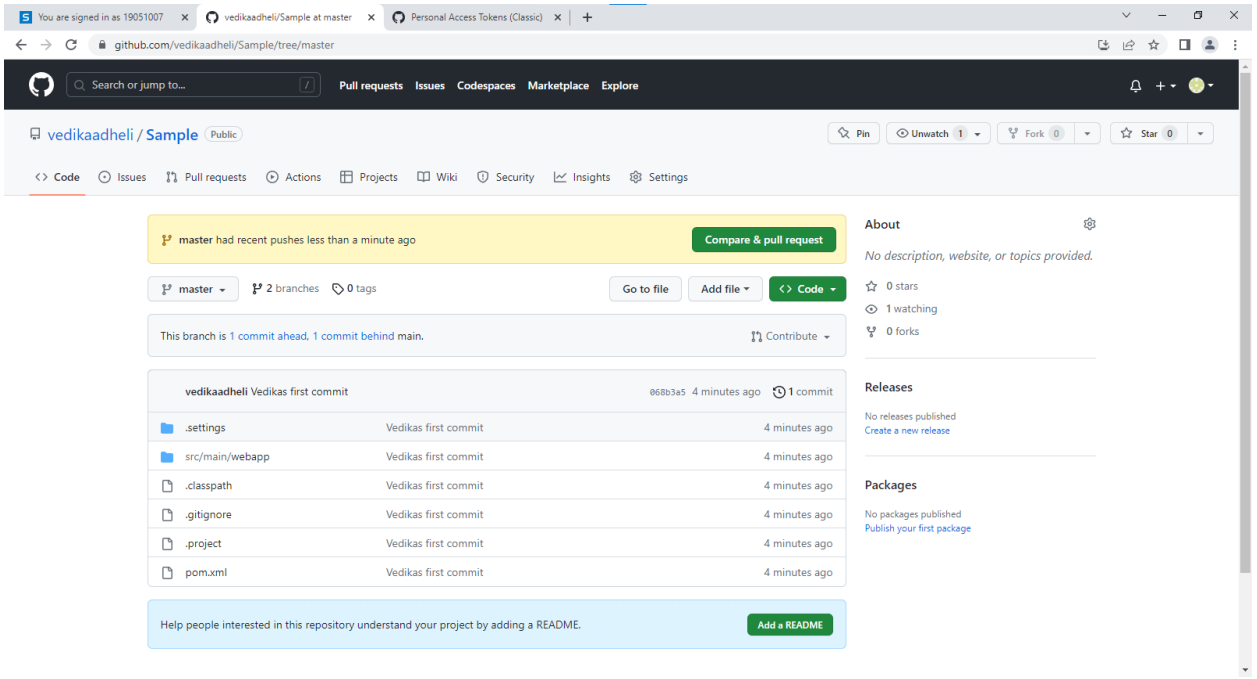
You will see below login window Enter appropriate credentials and Click in ‘Log in’



After Log in you will see below window Click on ‘Close’



You can see that the maven project is pushed into GitHub in master branch



Now Go to Environment variables,in system variables

- Add JAVA_HOME variable with path ‘C:\Program Files\Java\jdk-18.0.1.1\bin’
- Add JRE_HOME variable with path ‘C:\Program Files\Java\jdk-18.0.1.1‘
- Add M2_HOME variable with path ‘C:\apache-maven-3.8.5-bin’
- Add MAVEN_HOME variable with path ‘C:\apache-maven-3.8.5-bin\bin’

In User variables add ‘C:\apache-maven-3.8.5-bin\bin’ path

Now Go to Jenkins and Log in Go to Manage Jenkins and download plugins as

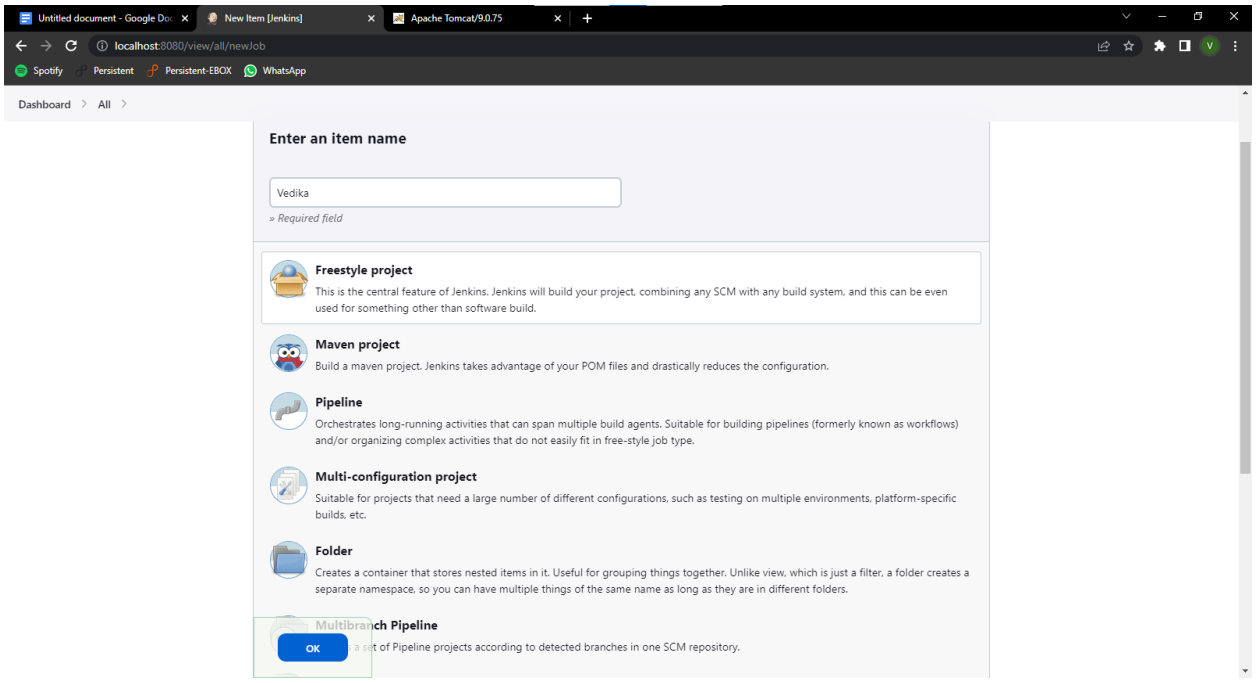
- Deploy to container
- Maven project

In Manage Jenkins go to ‘Global tool configuration’

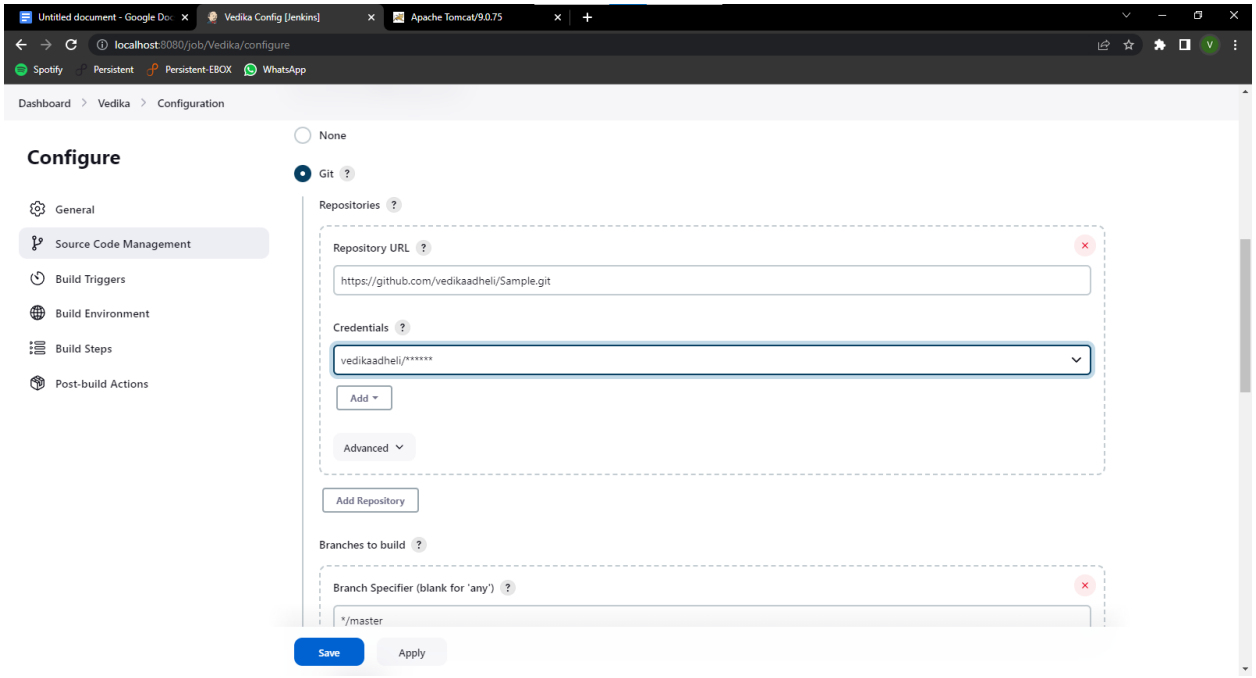
- Go to Maven
- Enter name as ‘MAVEN_HOME’
- Enter path as ‘C:\apache-maven-3.8.5-bin’

  Add maven and apply and save

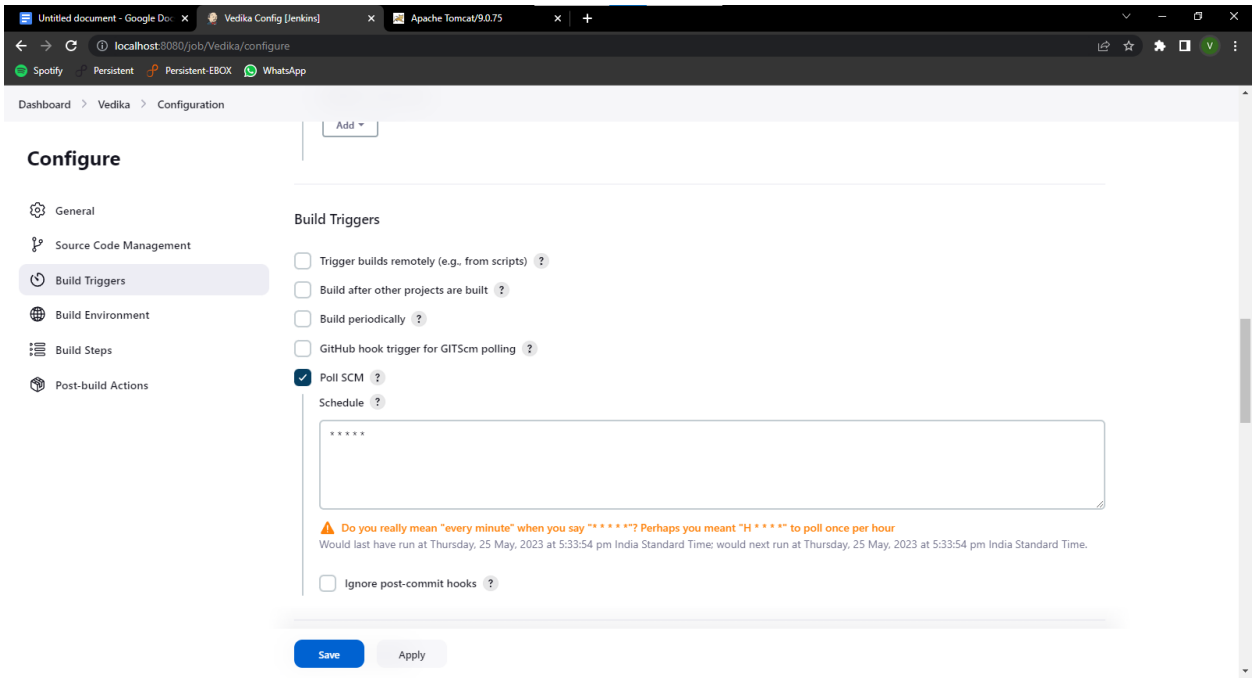
Go to Dashboard Click on New item Enter Item name i.e.’Pranoti1’ Select Freestyle project Click on ‘OK’



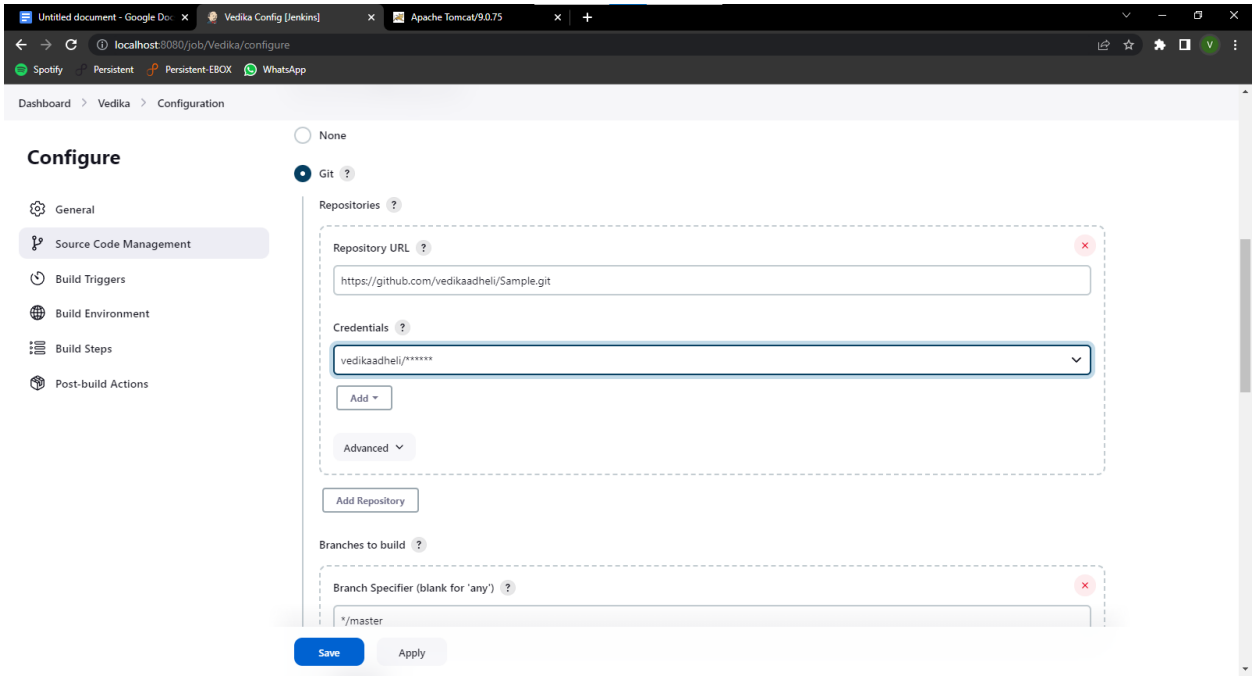
Select Git Option and paste your GitHub repository url



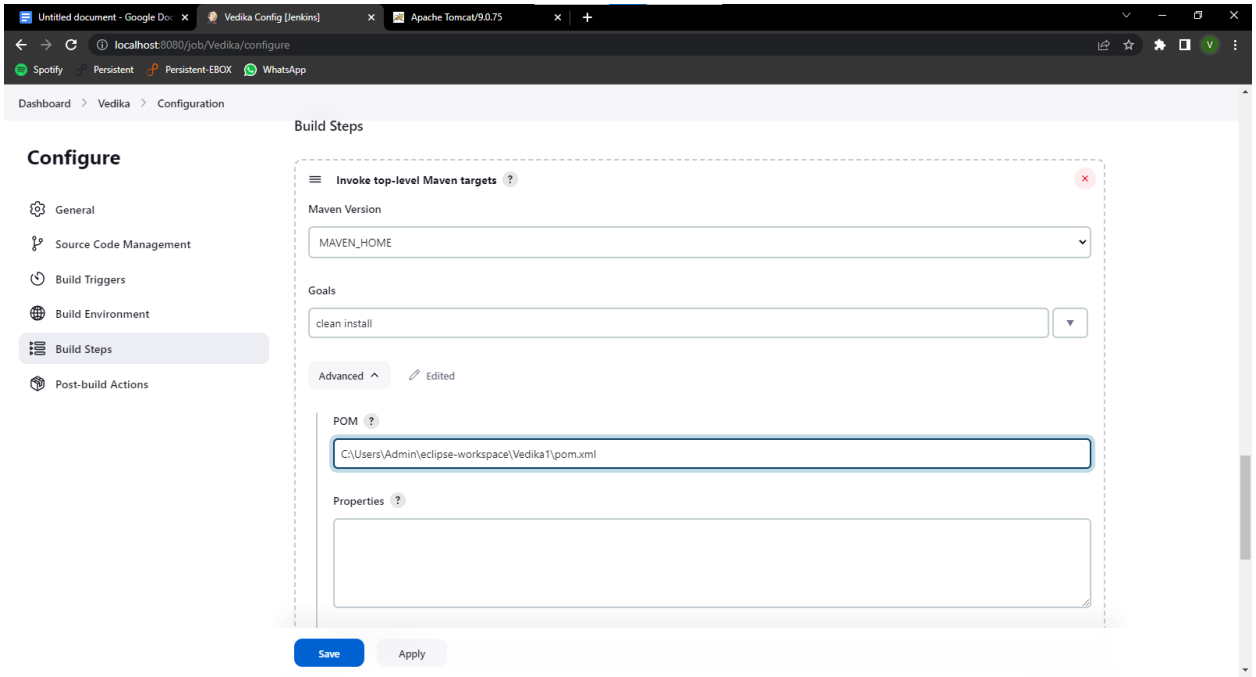
Enter credentials Let the branch be master



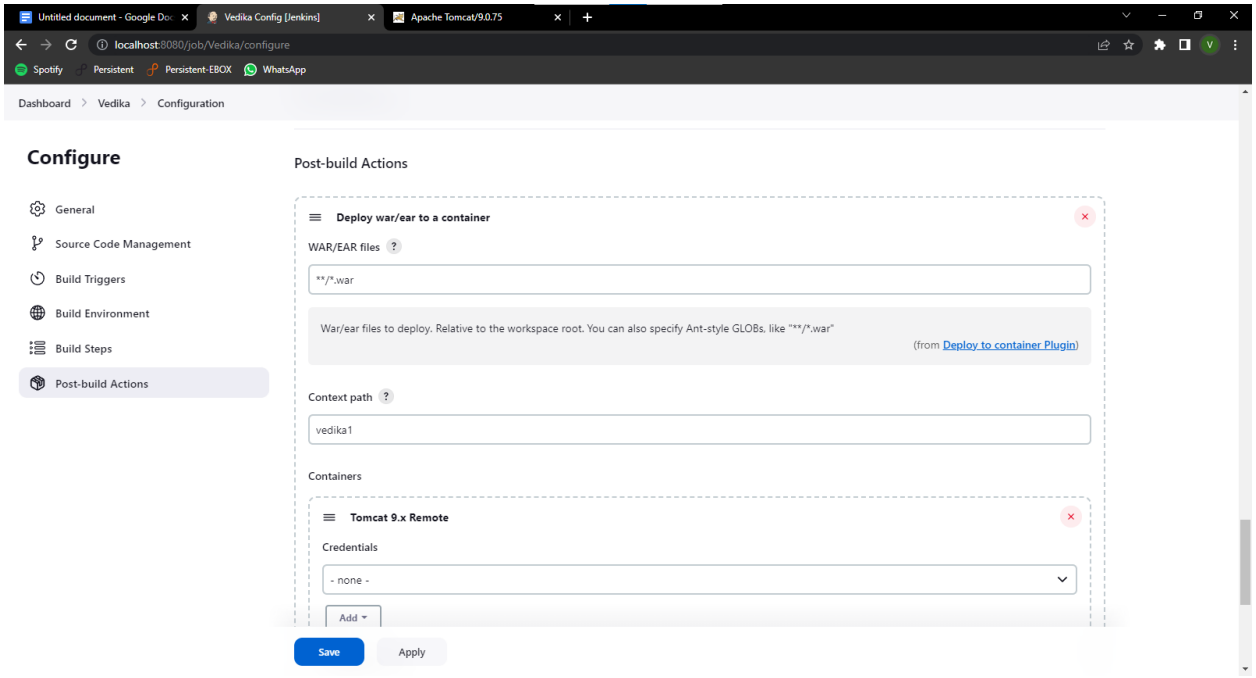
Click on Poll SCM checkbox Enter ‘* * * * *’



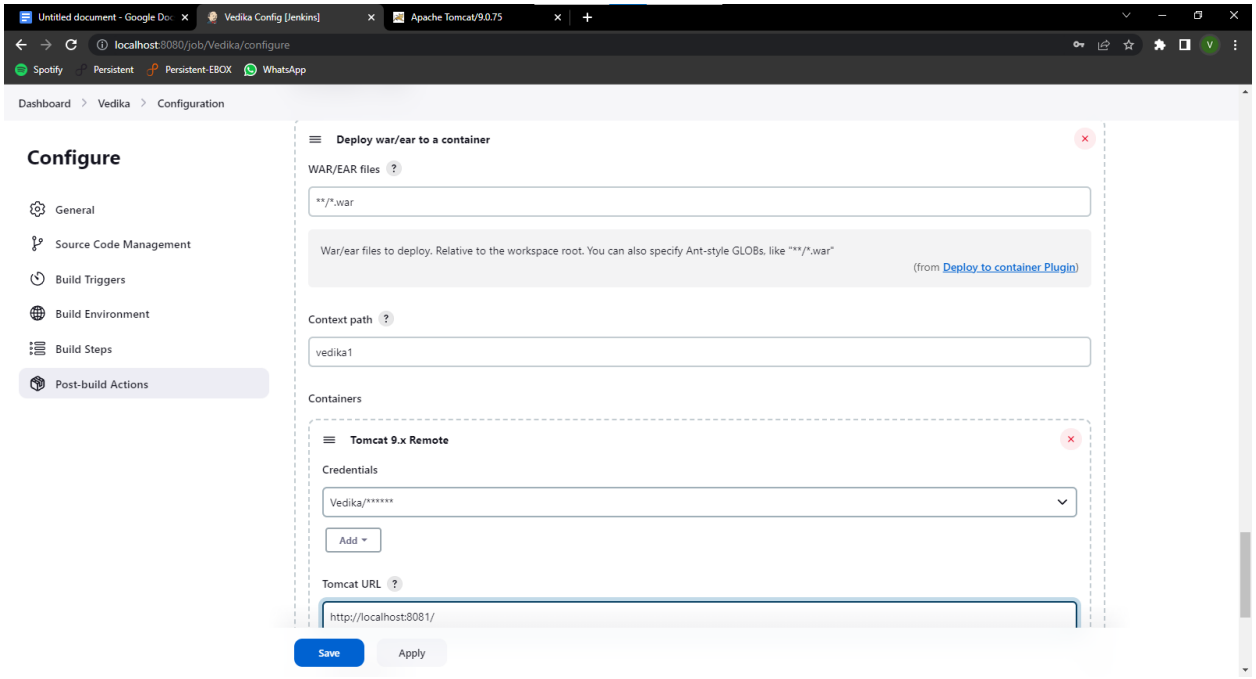
In build steps select ‘top level maven targets’
In Maven version,select MAVEN_HOME in dropdown Enter ‘clean install’ in Goals



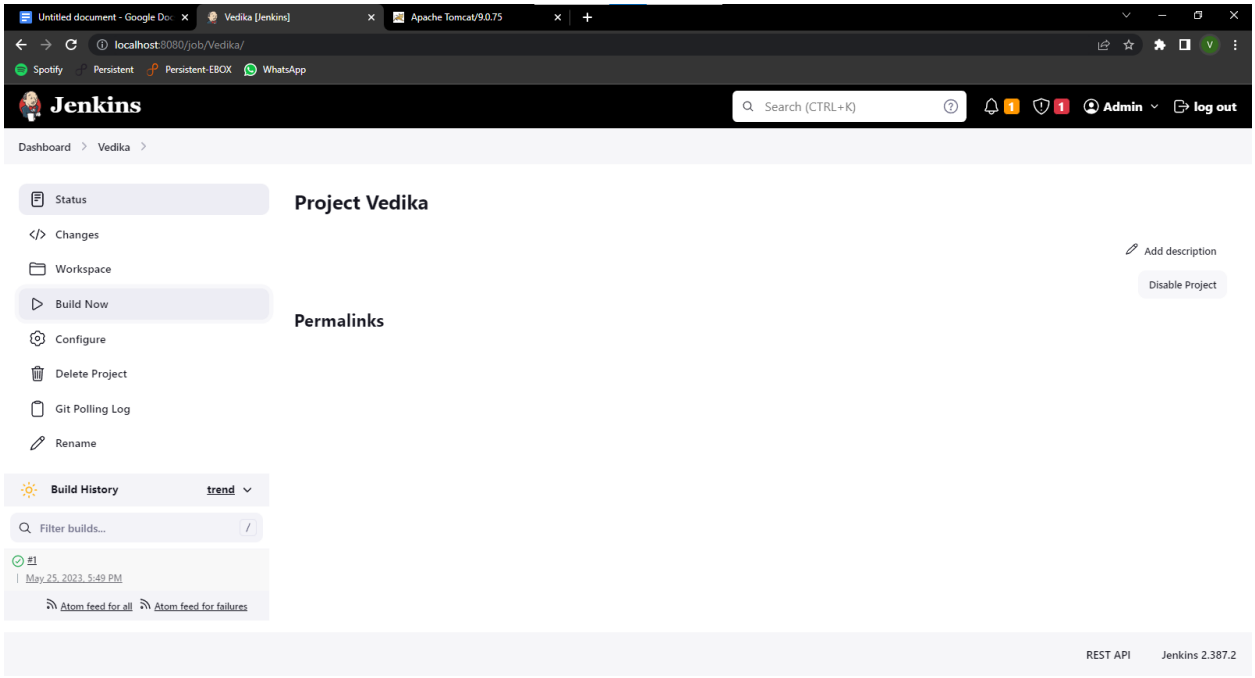
In Post build steps,click on ‘deploy war/ear to a container’
Enter ‘**/*.war’ in war/ear files field Enter context path as ‘vedika1’



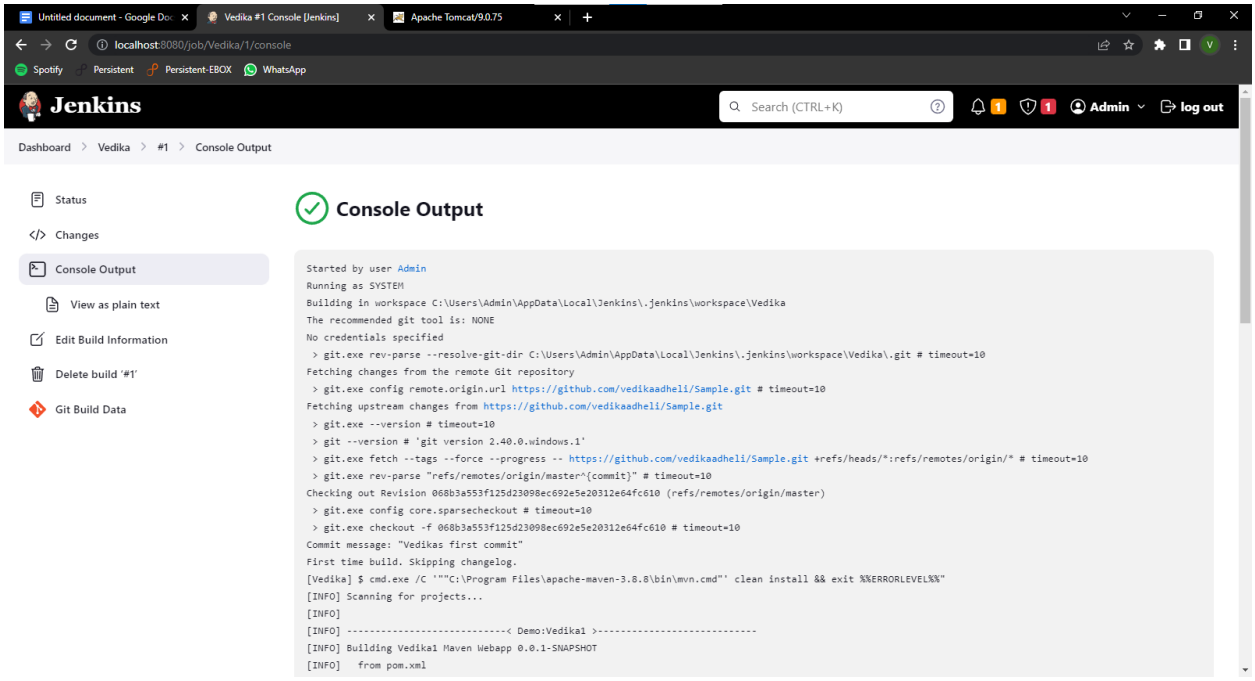
In containers select ‘Tomcat 9x Remote’
Edit username and password in war file of Tomcat and Enter the credentials
Enter Tomcat URL Then Apply and save

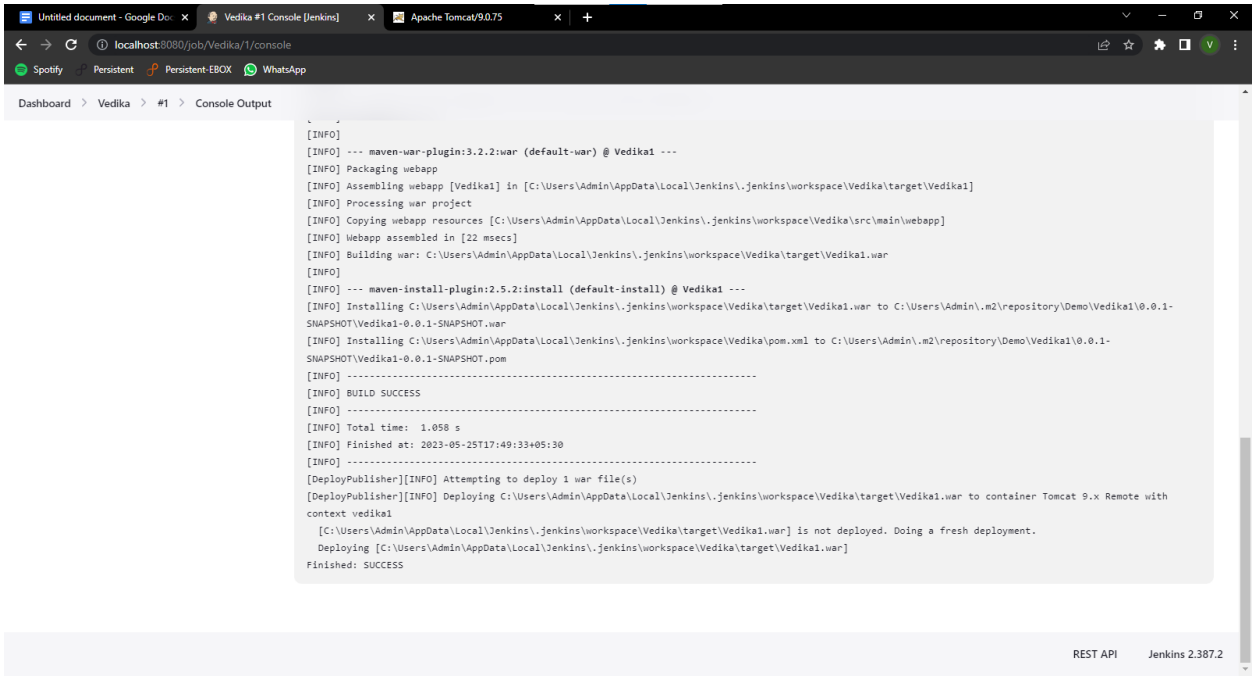


Click on Build now



After build success you can see Console Output as shown below





Open Tomcat by entering url i.e. ‘localhost:8081/contextpath/’ Entered ‘localhost:8081/Sample/’ Finally we can see web app will be deployed into Tomcat