





(21CC505PC) SOFTWARE ENGINEERING LAB

LAB EXERCISE - 5

BUILD TOOLS

TOPIC-2

CREATING MAVEN JAVA PROJECT USING ECLIPSE AND PUSH INTO TO GITHUB



List of Experiments:

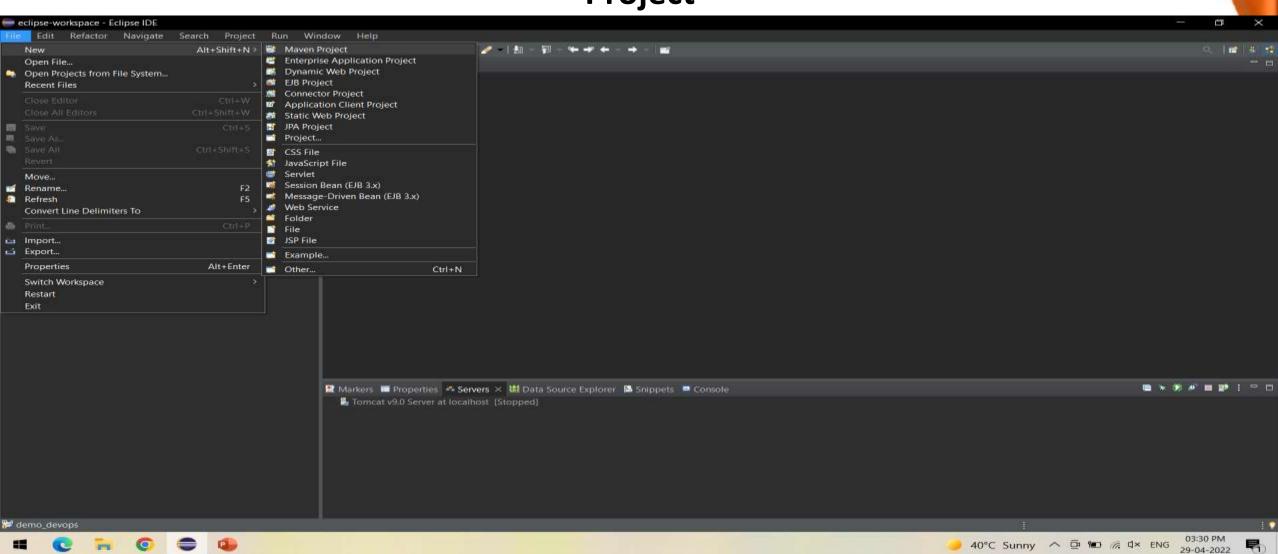
Do the following exercises for any one project given in the list of sample projects or any other projects?

- 1. Development of problem statement.
- 2. Preparation of Software Requirement Specification Document, Design Documents and Testing Phase related documents.
- 3. Study and usage of any Design phase CASE tool
- 4. Creating the project and committing using Git and GitHub
- 5. Creating Maven Java and Maven Web project using Eclipse and Push them to GitHub.
- 6. Building the CI/CD pipeline using Jenkins for the project in the previous experiment.
- 7. Local Deployment of project using Docker, Kubernetes and Monitoring using Nagios tool.
- 8. Cloud Deployment of a project in the AWS Cloud using EC2 instance.

Activate Windows

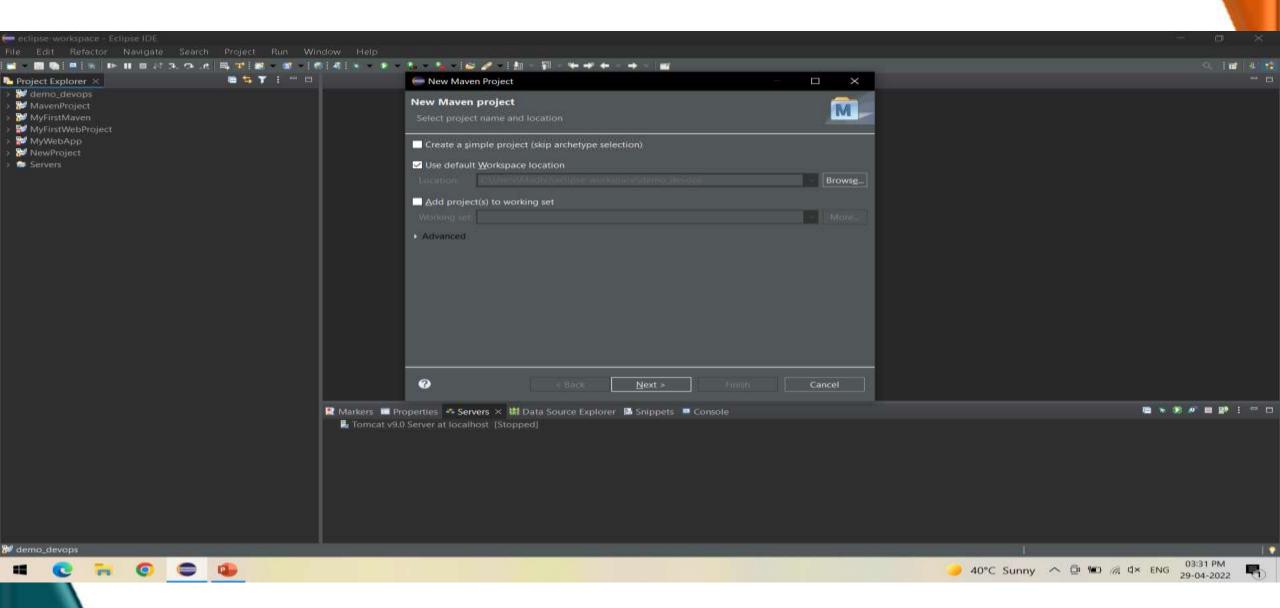


Create a Maven Project - > File - > New -> Maven Project

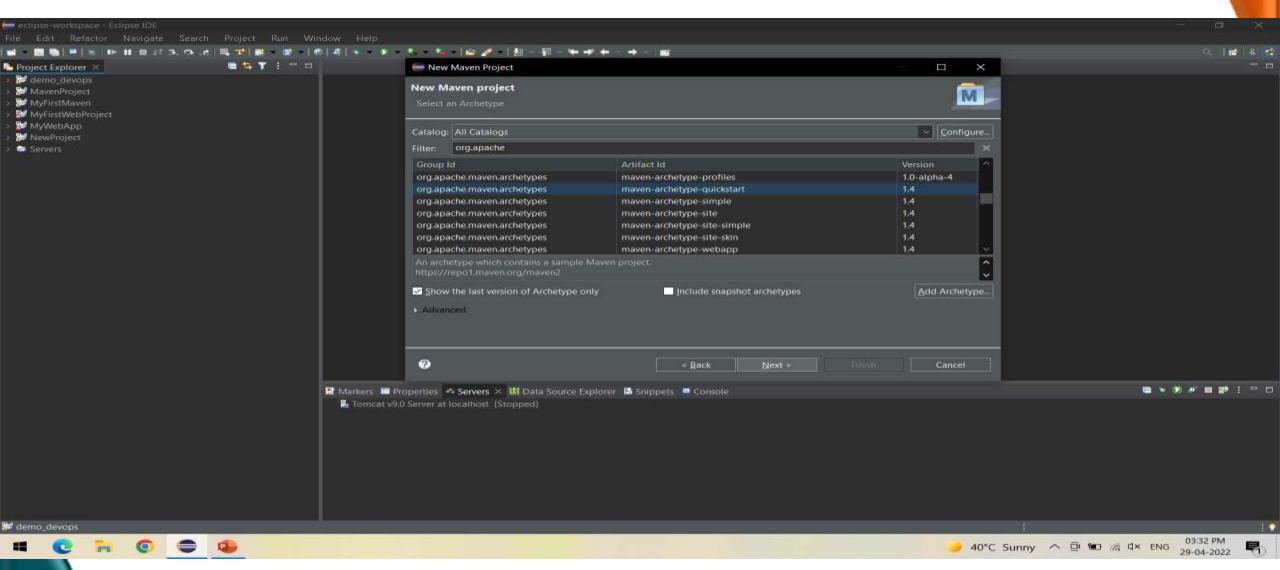




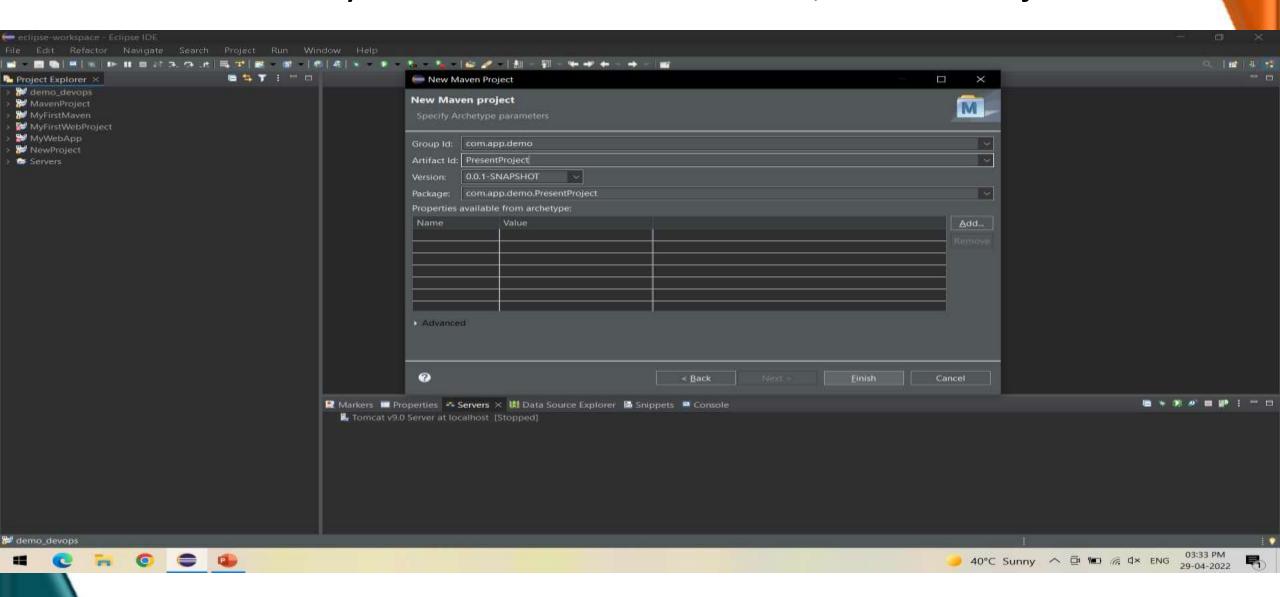
Click on Next



Select the quickstart archetype under org.apache.maven.archetypes and click on Next

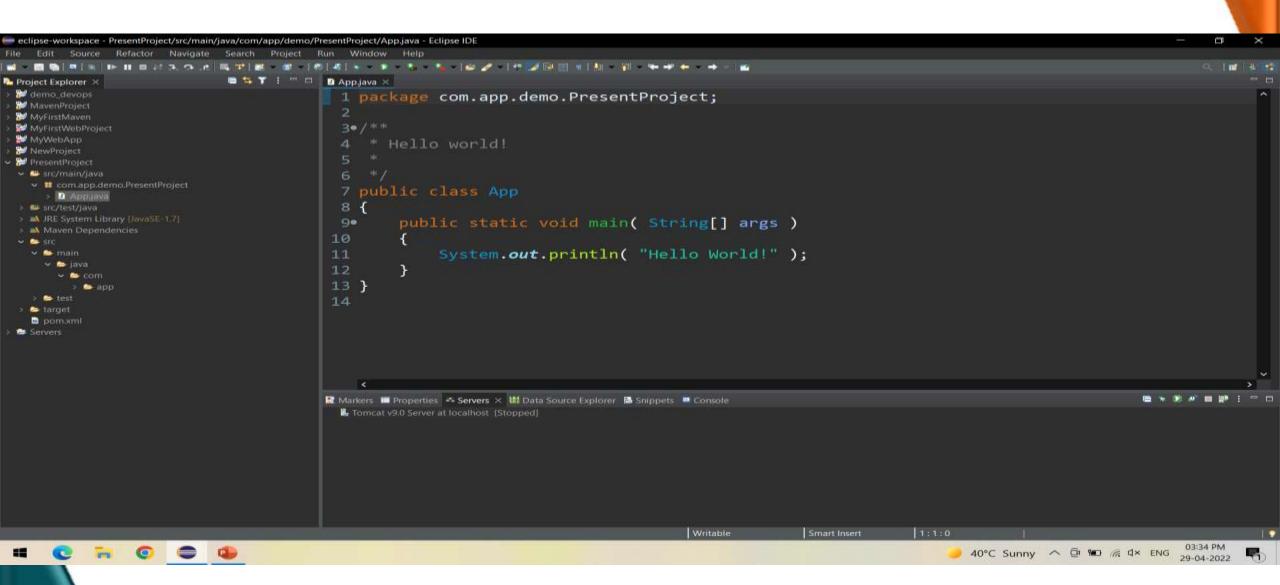


Give Artifact ID of your choice and click Finish, Maven Project is created

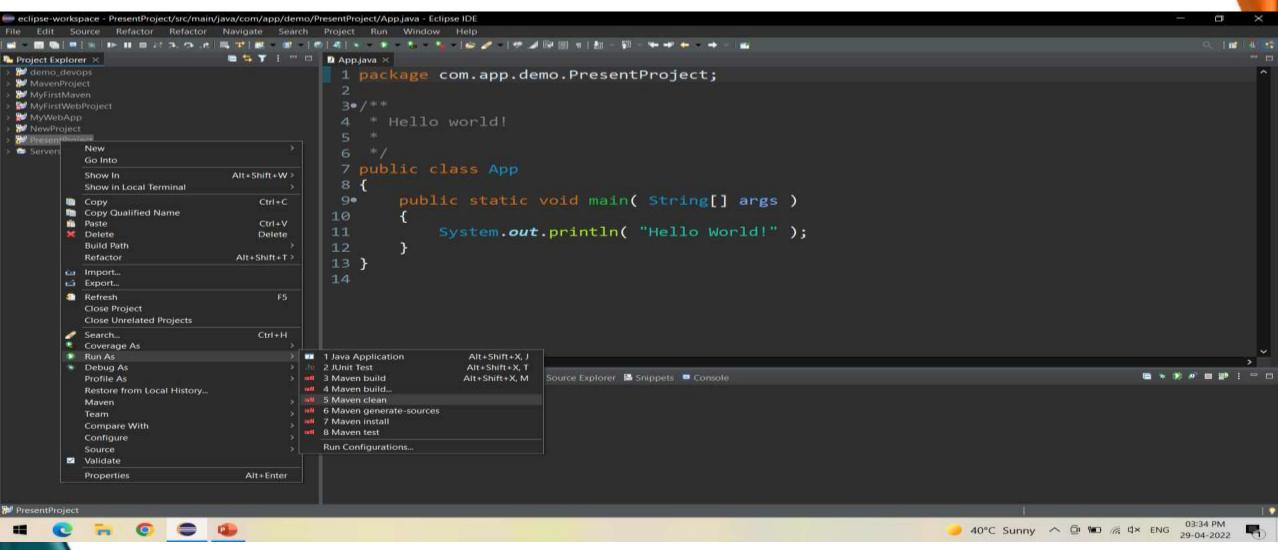


In the created project, Check for App.java file containing Hello World program

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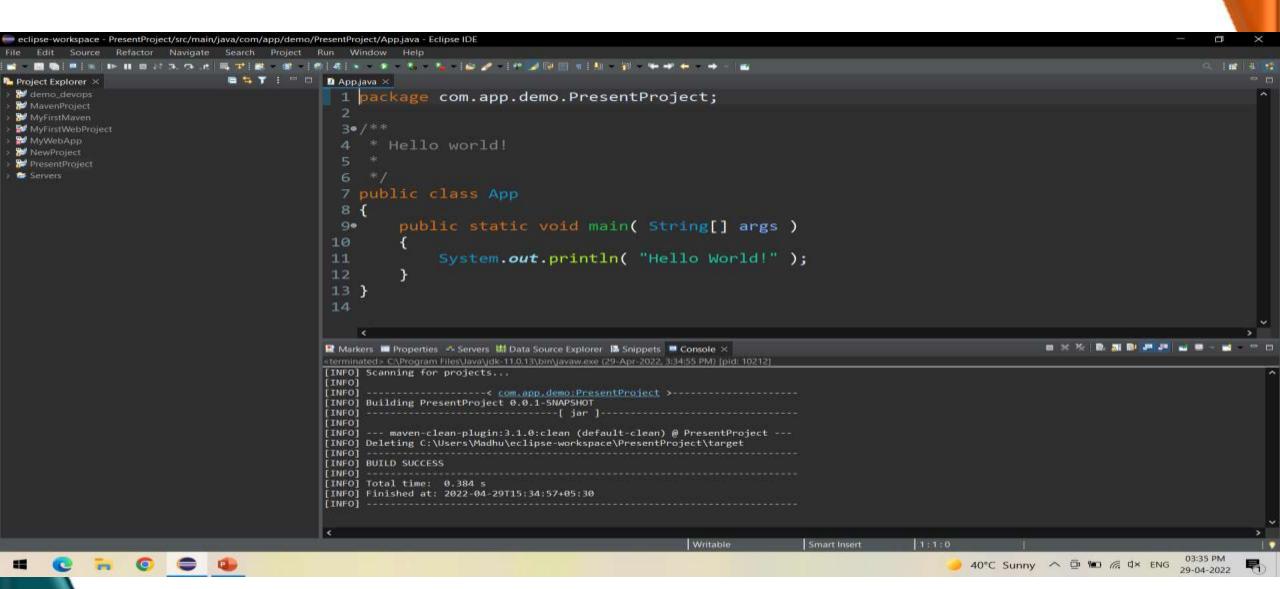


Right click on your project and Run As Maven Clean - It clears out the existing classes that you compiled from last compile

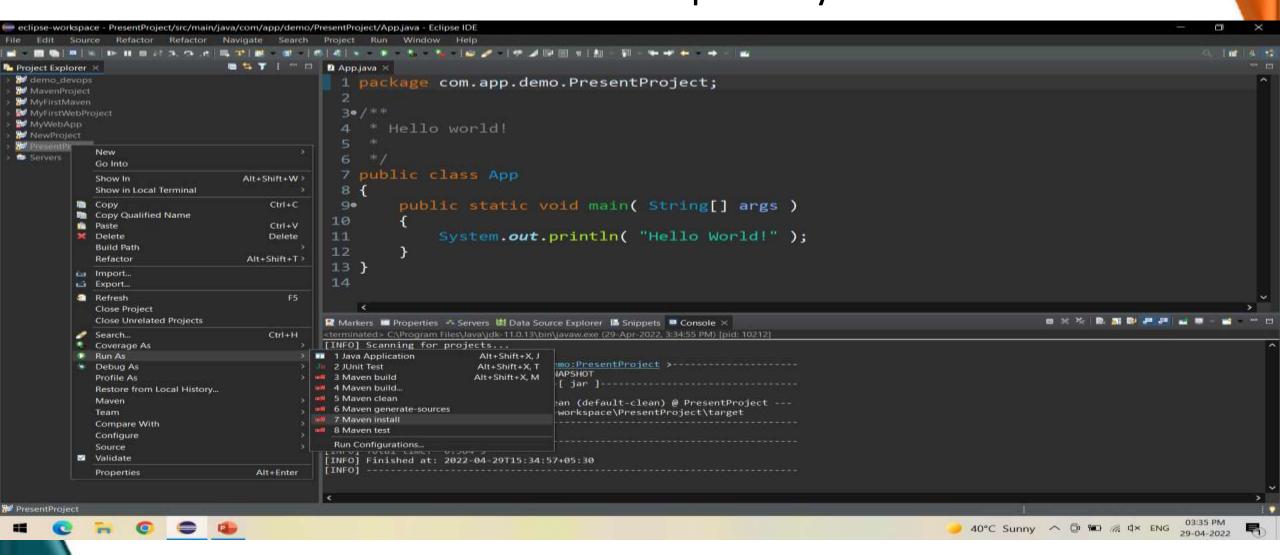




Check the console for Build Success

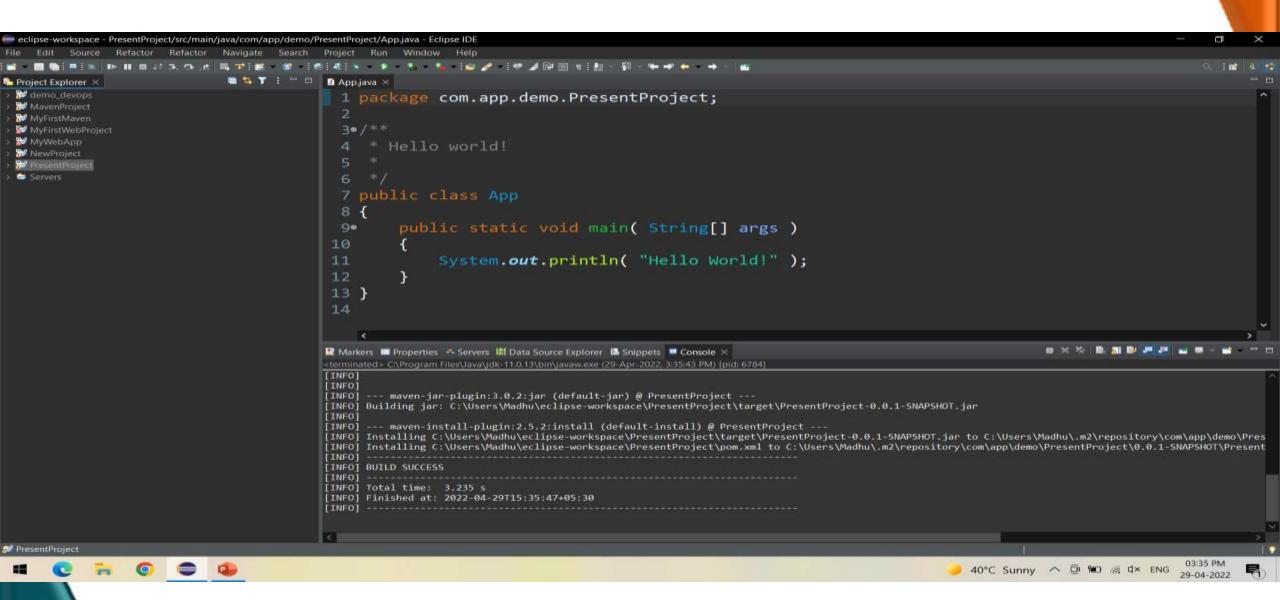


Right click on your project and Run As Maven Install - to add artifact(s) to the local repository

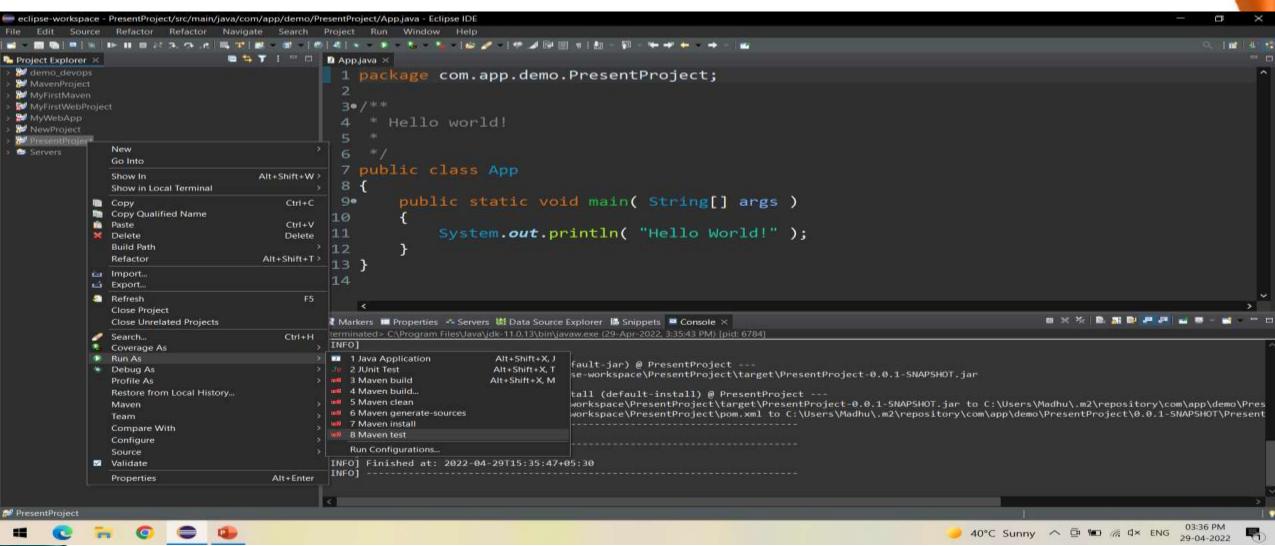




Check the console for Build Success

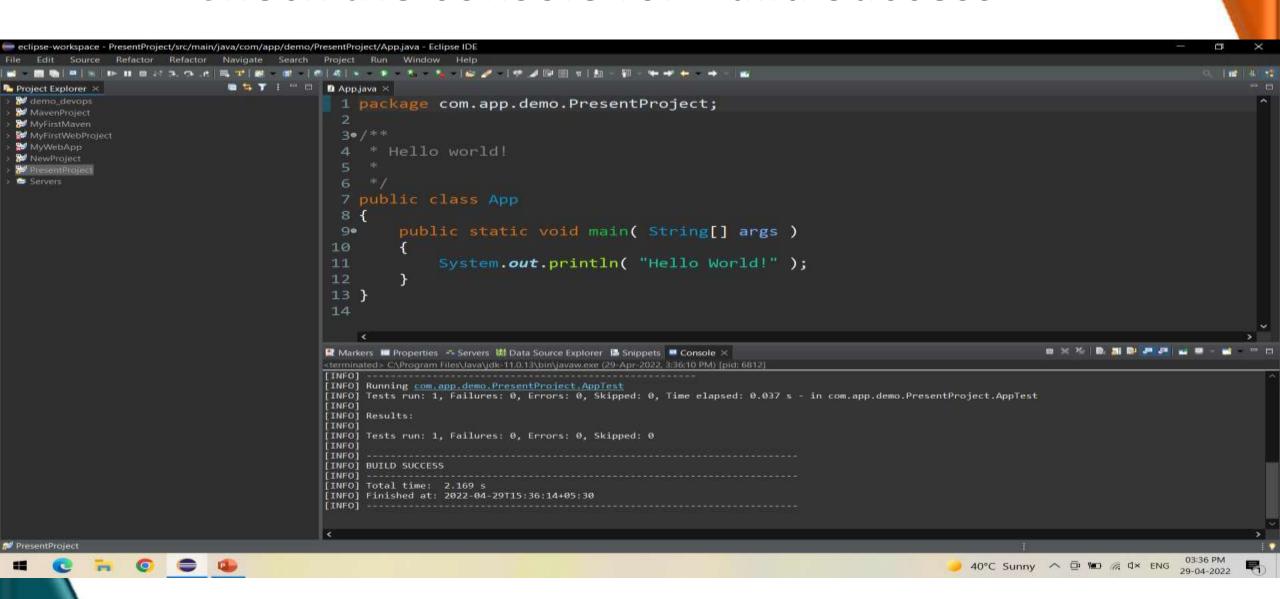


Bight click on your project and Run As Maven Install - use to specify test classes or methods we want to execute

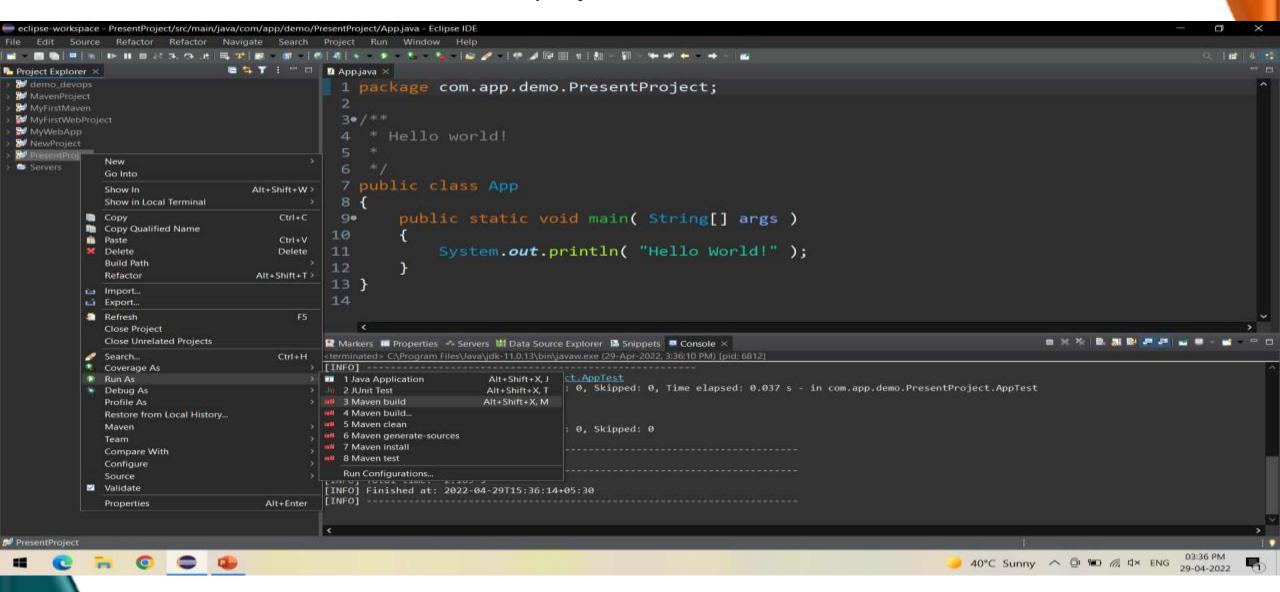




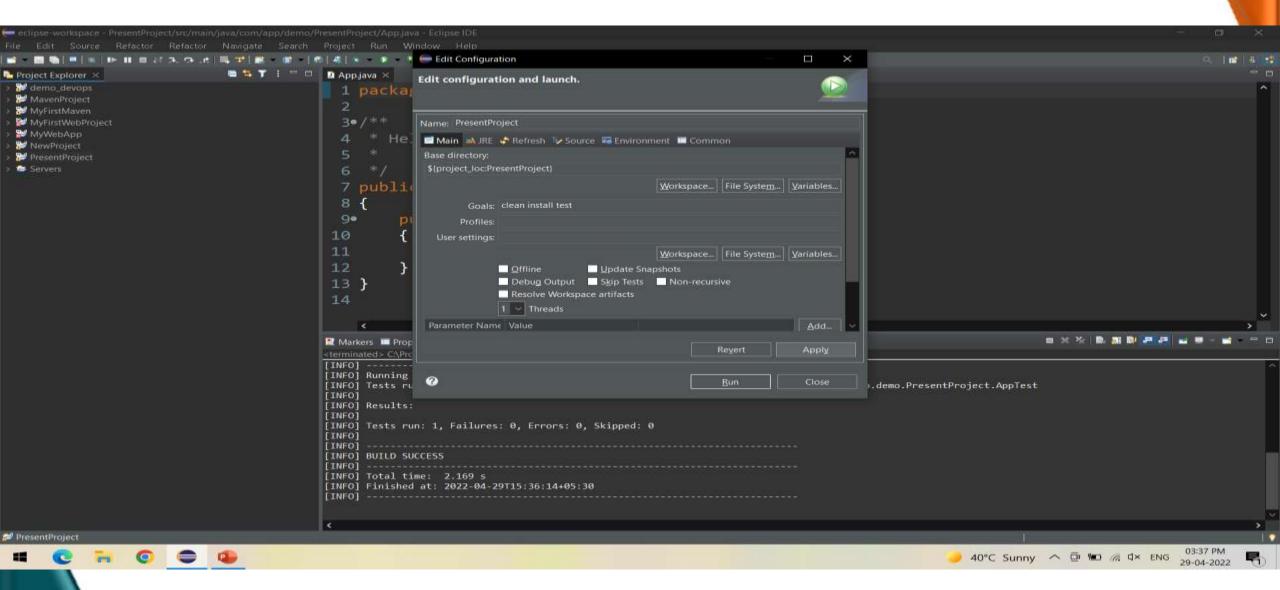
Check the console for Build Success



Right click on your project and Run As Maven Install - Compiles source code of the project, Creates JAR or WAR file for the project to convert it into a distributable format.

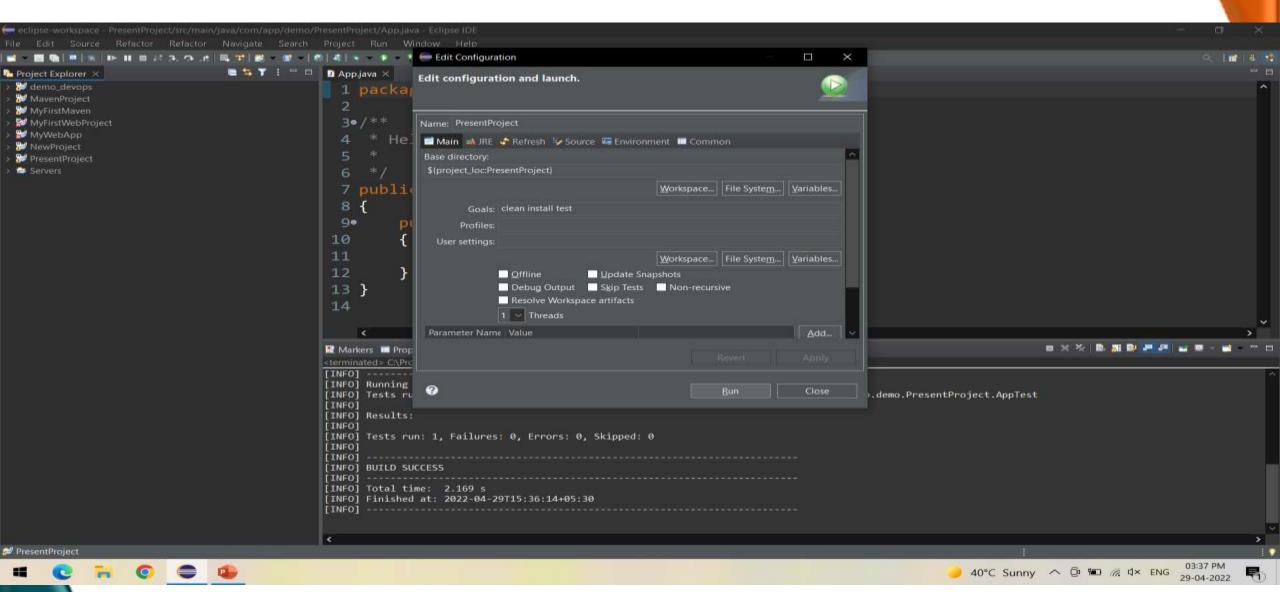


Specify the goals as - Clean Install Test -> Click on Apply



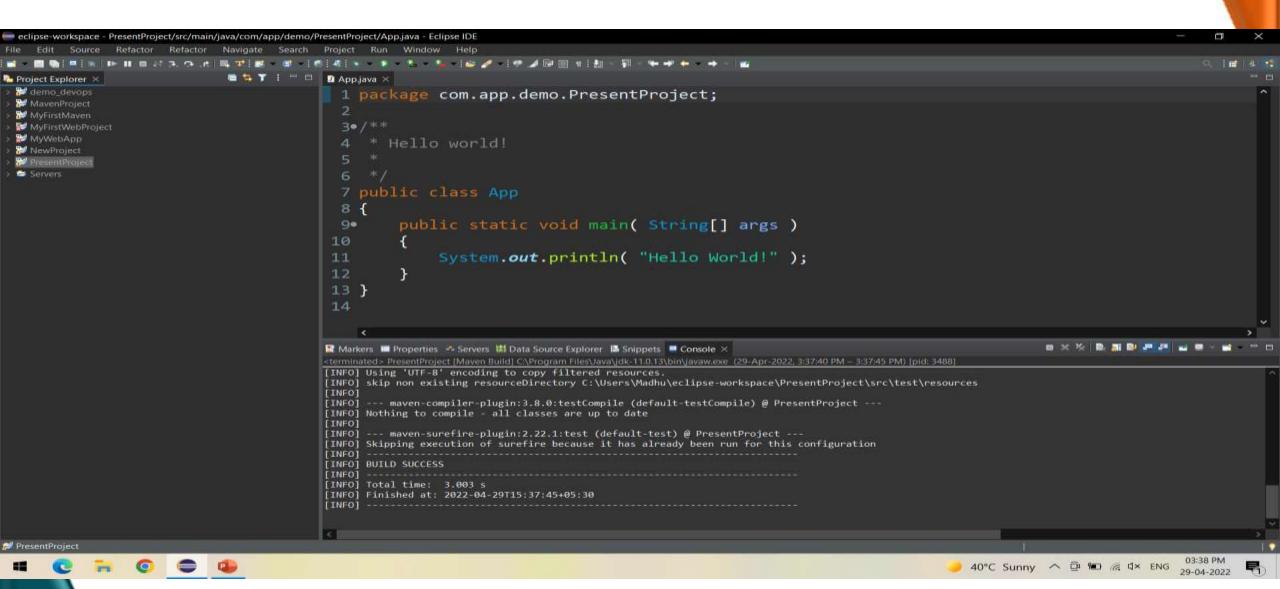


Click on Run



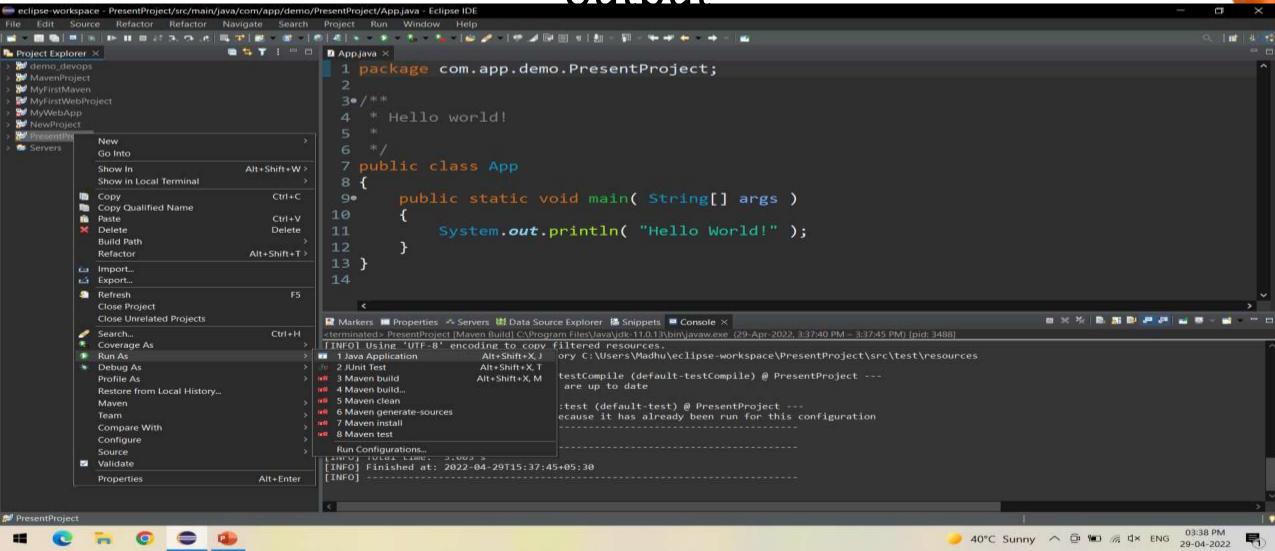


Check for Build Success in Console

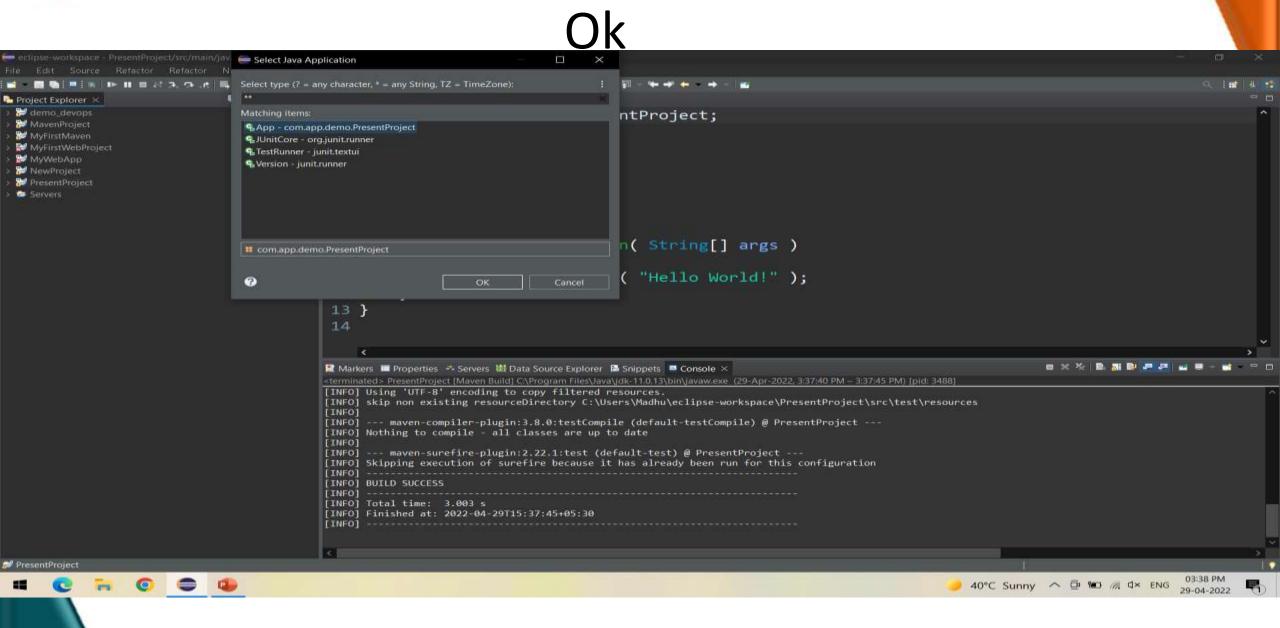


Now Run the Project as Java Application to test the

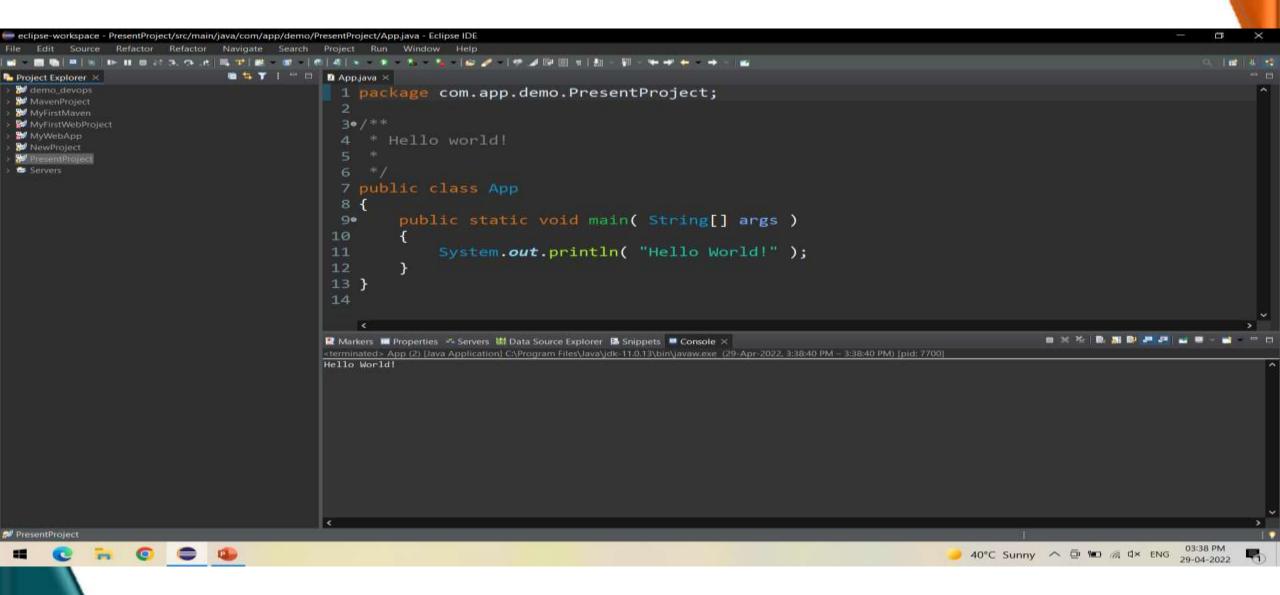
output



Select the Created project from the list - > Click

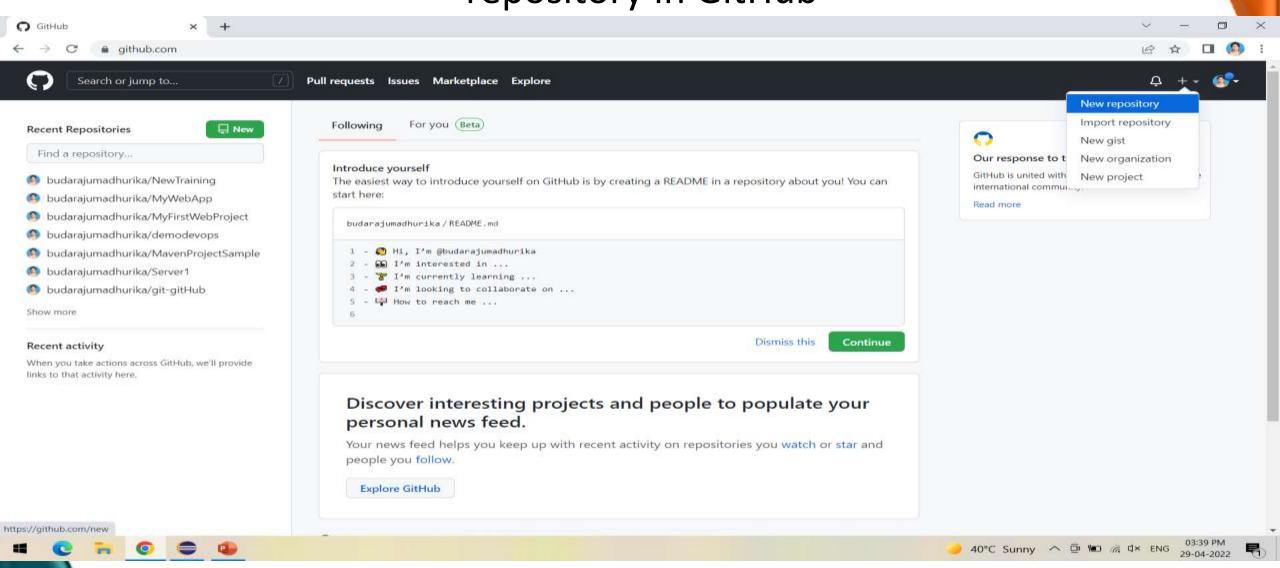


In the console we can view the output of the project

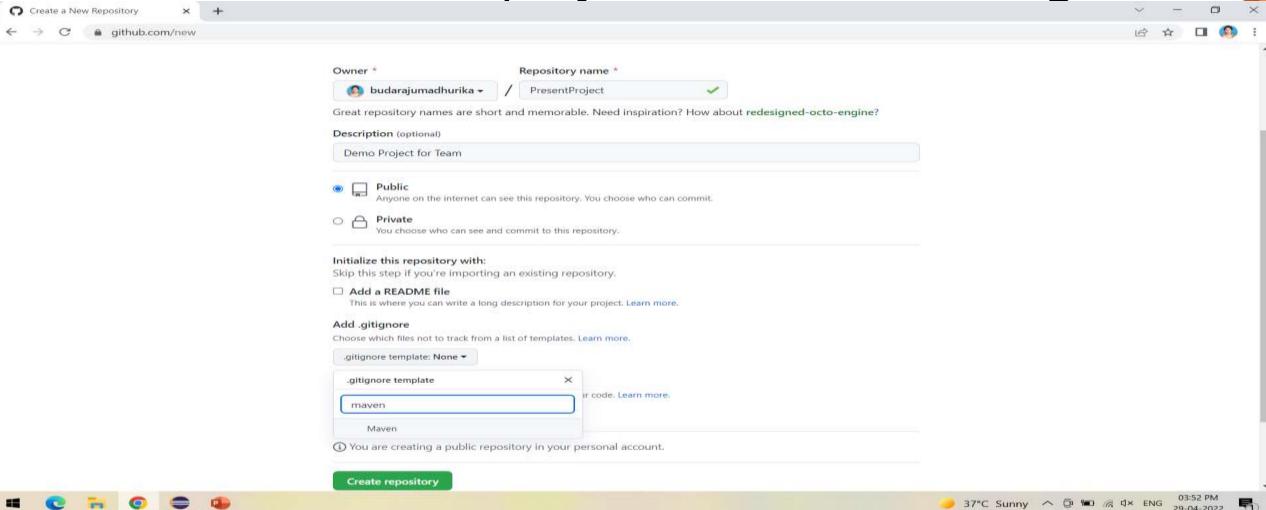




Next is to push the project into GitHub, for this, create a new repository in GitHub

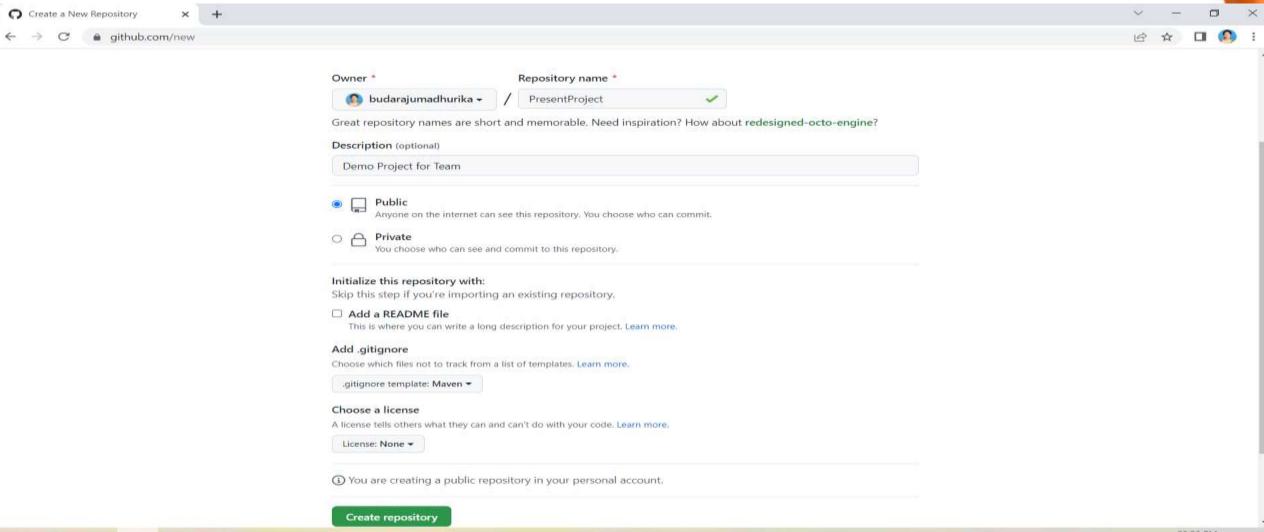


Select Maven in gitignore- to ignore unwanted target files in maven project while committing



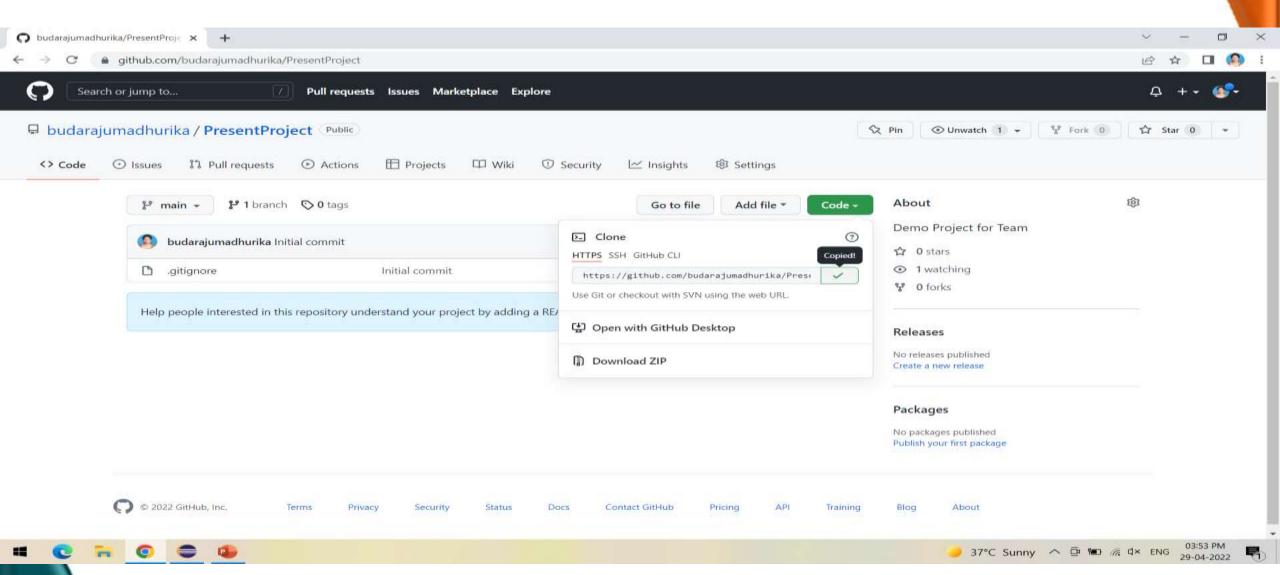


Click on create repository

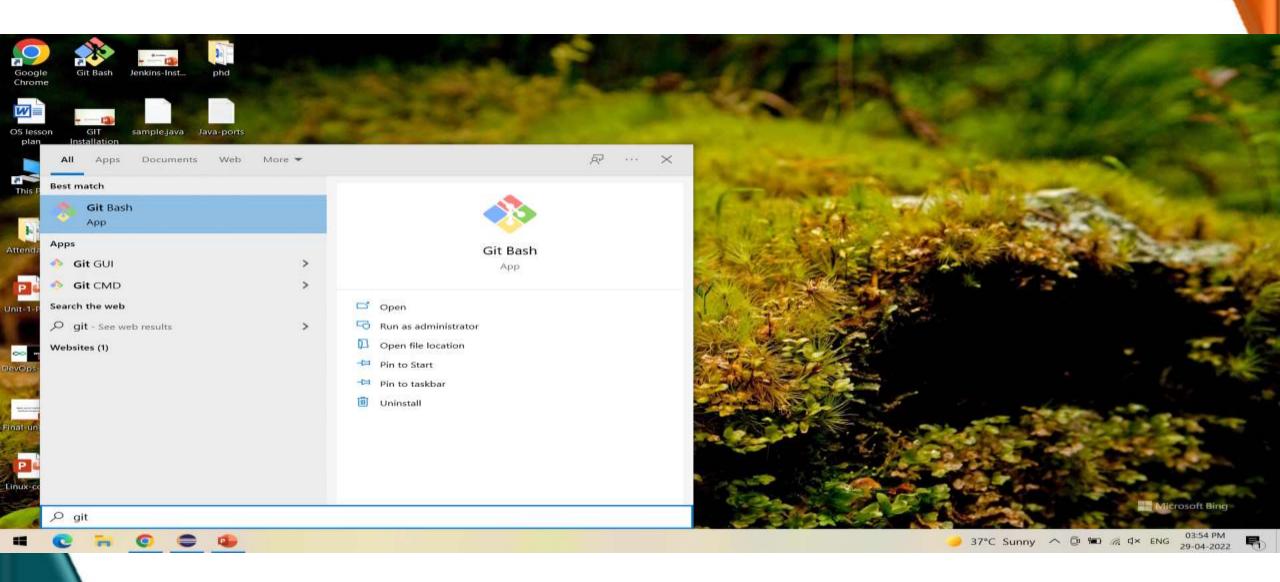




copy the HTTPs URL as shown to be copied into Jenkins

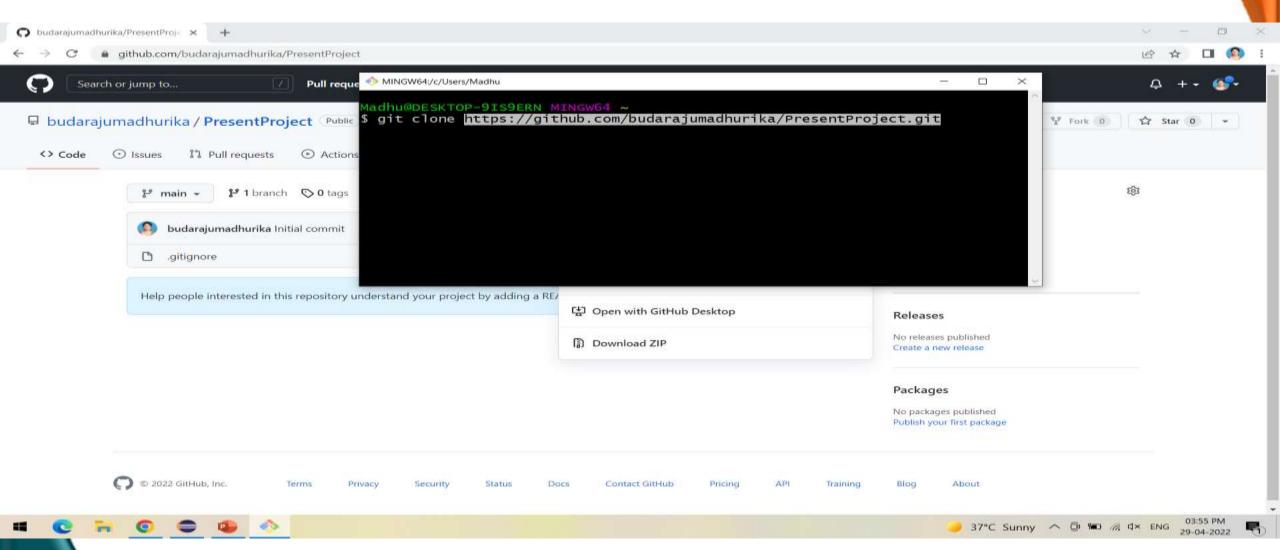


Open Git Bash to push the project into GitHub



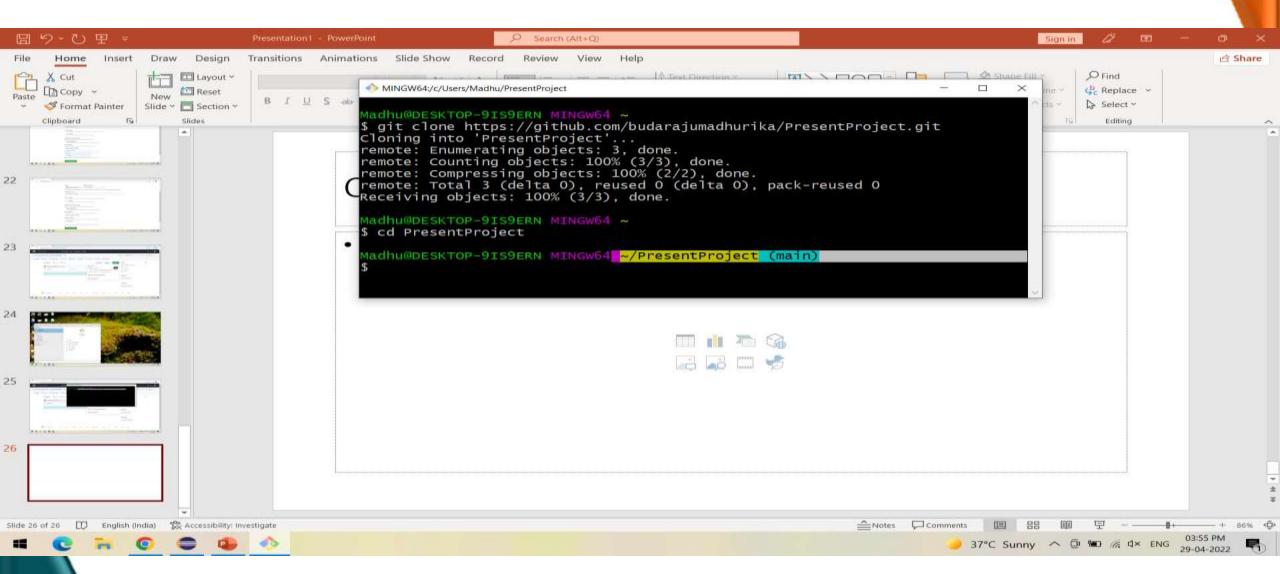
Clone the GitHub repository into the local system

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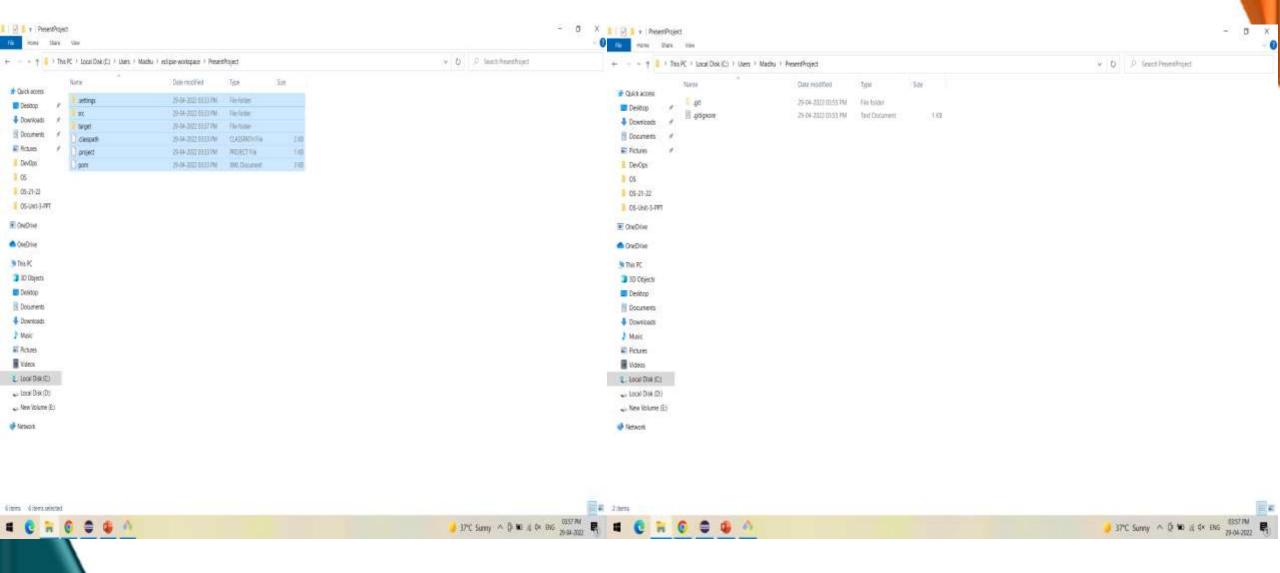




After cloning follow the steps as shown

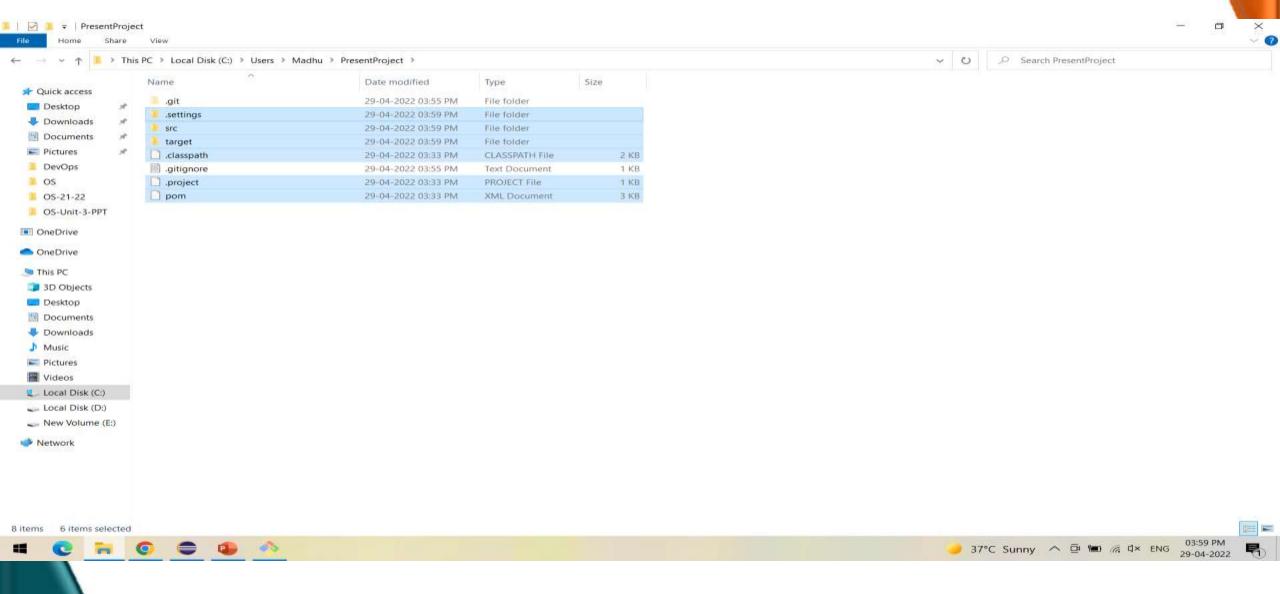


One way of cloning the local and global projects is to copy the contents from eclipse workspace to the local cloned repository as shown



The project files are successfully copied into the PresentProject repository

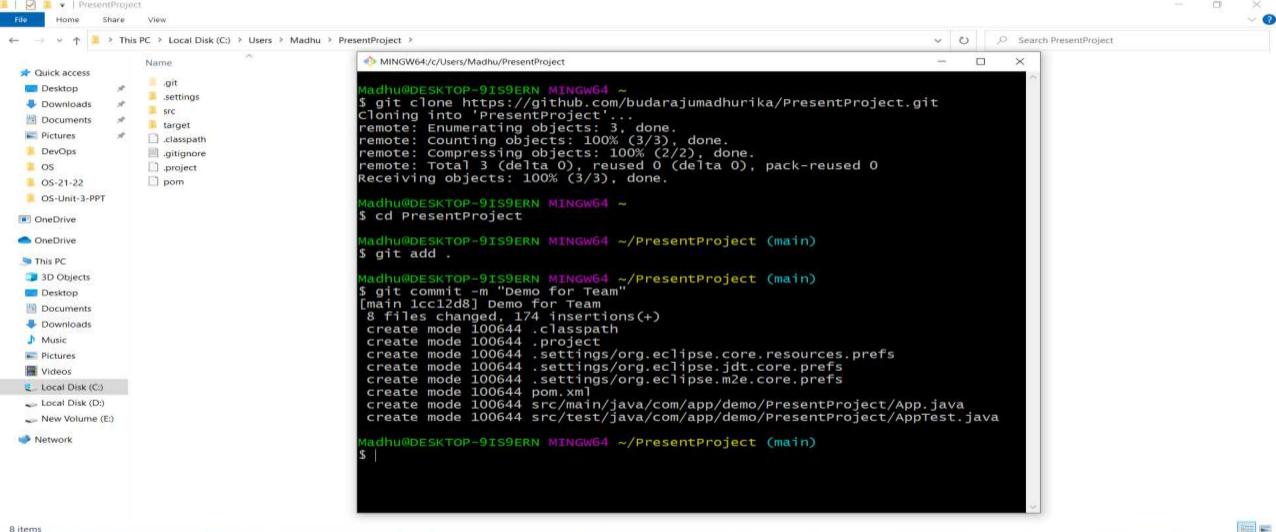
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Using Git bash, add and commit the changes made as

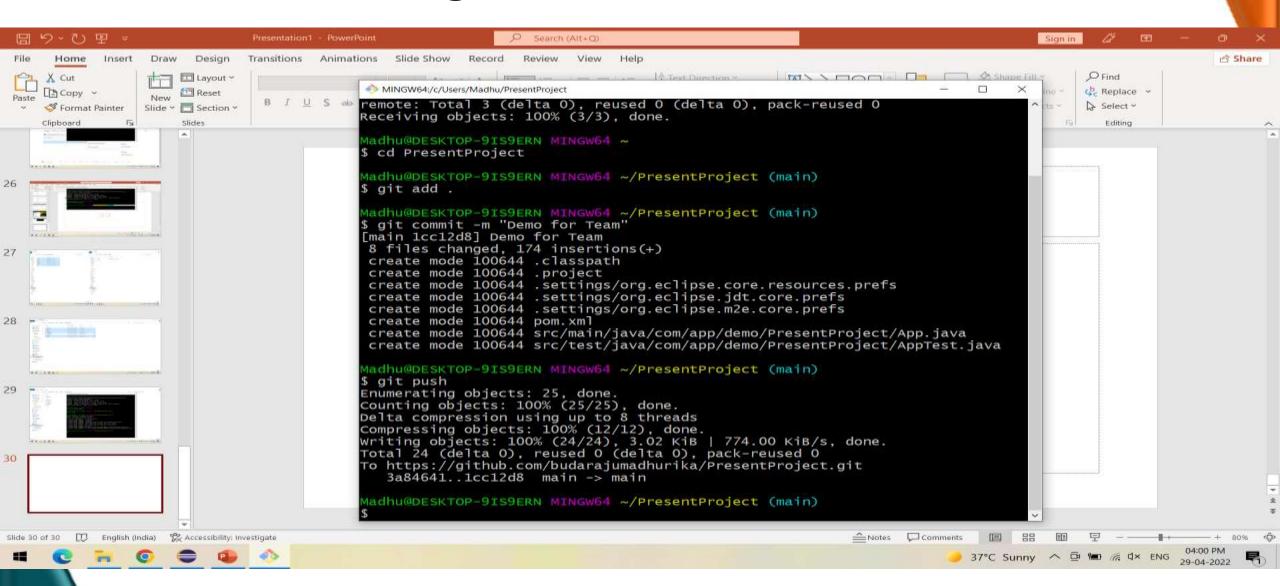
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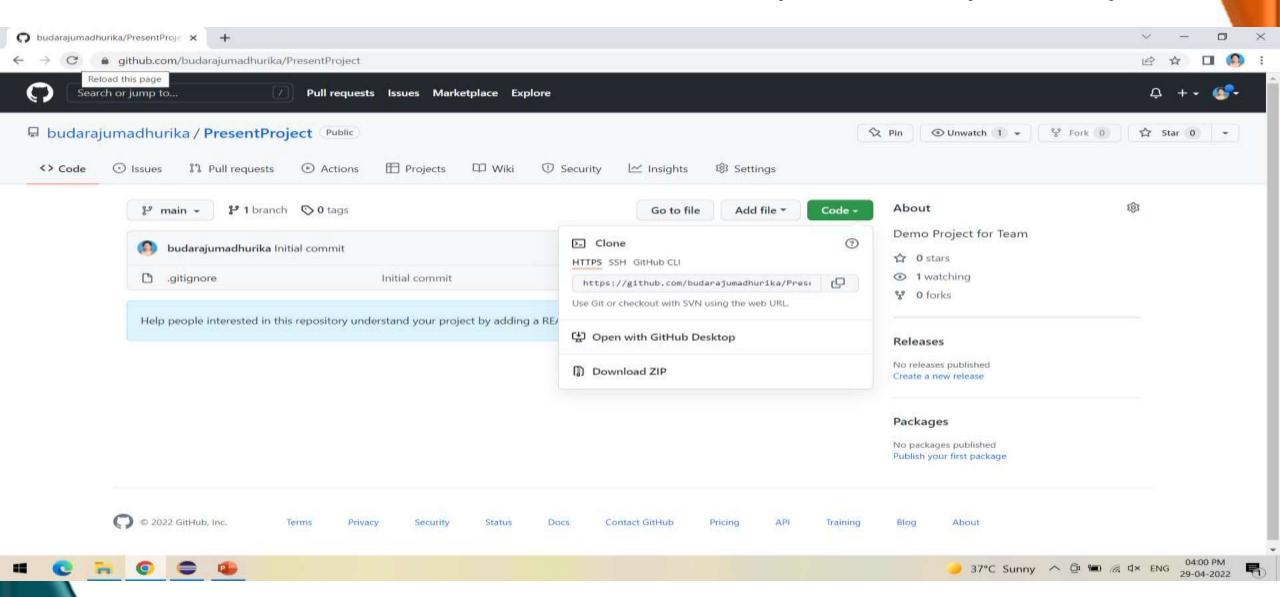


Push the changes to the GitHub as shown





Refresh the GitHub to see the updated repository





Repository is successfully updated

