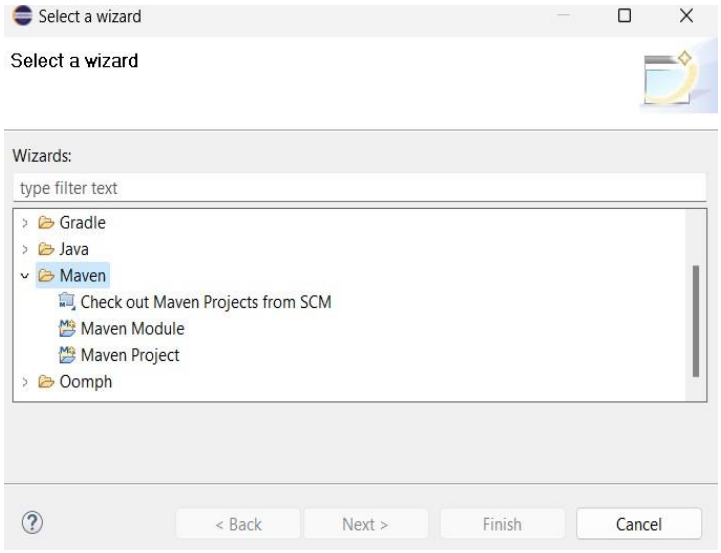
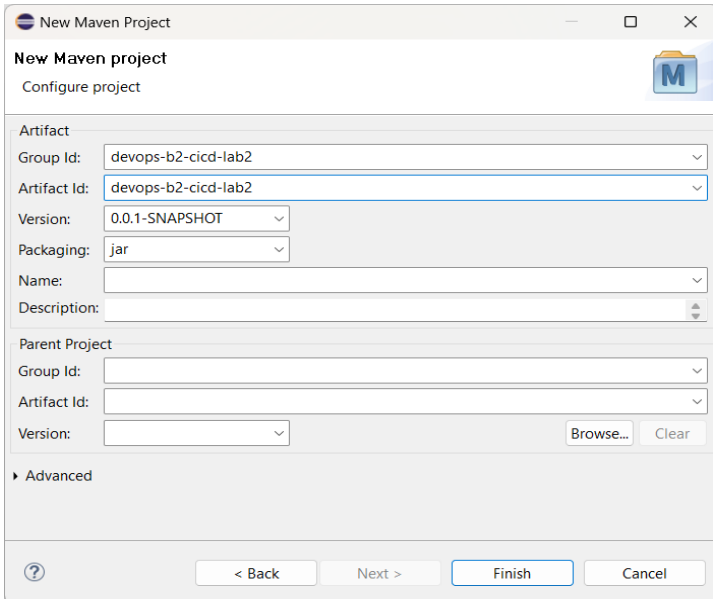
EXPERIMENT – 2

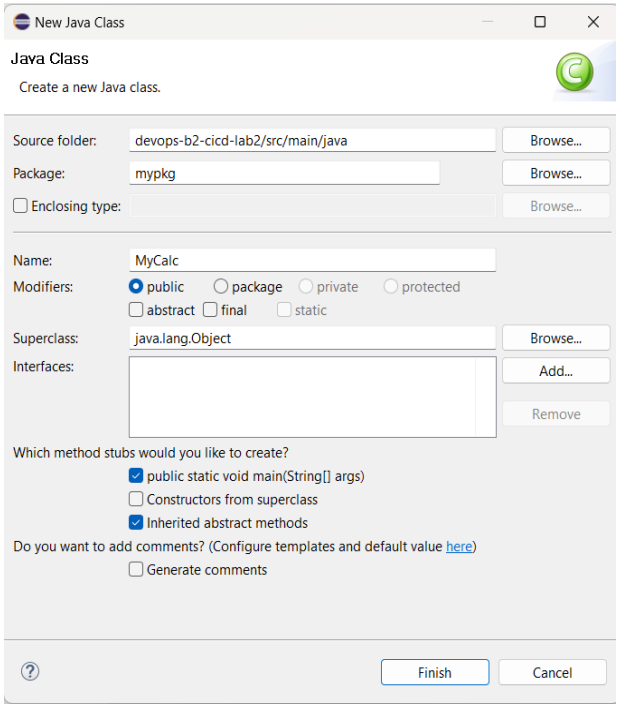
Name: - Shashwat. Dnyaneshwar Kamdi
Batch – 2 [DevOps Non-Hons]
SAP ID- 500092140
Subject – Continuous Integration and Continuous Delivery Lab

Aim: Creating a Jenkins Pipeline with a Jenkins file.

1] Create a Maven Project in eclipse.







devops-b2-cicd-lab2/pom.xml | MyCalc.java

```java
package mypkg;

import java.util.Scanner;

public class MyCalc {
    public int sum(int a, int b)
    {
        return(a+b);
    }
    public int diff(int a, int b)
    {
        return(a-b);
    }
    public static void main(String[] args) {
        int num1, num2;
        MyCalc calc = new MyCalc();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter num1 : ");
        num1 = sc.nextInt();
        System.out.println("Enter num2 : ");
        num2 = sc.nextInt();
        System.out.println("Sum is : "+calc.sum(num1, num2) );
        System.out.println("Diff is : "+calc.diff(num1, num2) );
    }
}
```

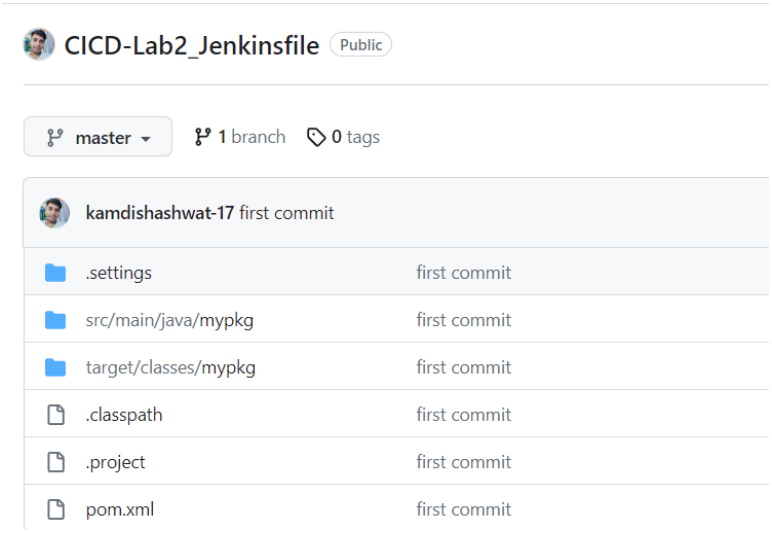
Console

```
<terminated> MyCalc [Java Application] C:\Users\kamdi\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jr
Enter num1 :
20
Enter num2 :
30
Sum is : 50
Diff is : -10
```

devops-b2-cicd-lab2/pom.xml | MyCalc.java

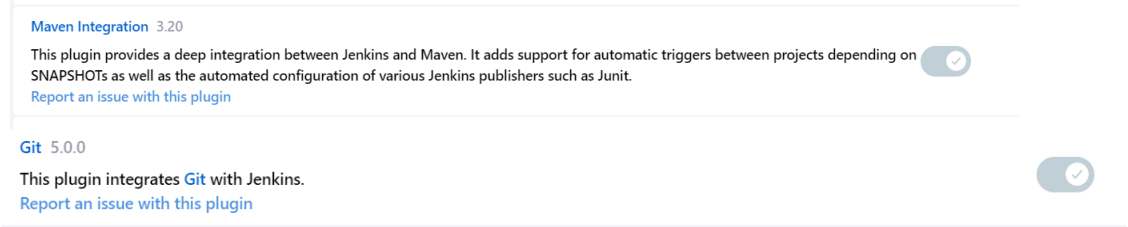
```xml
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w
    <modelVersion>4.0.0</modelVersion>
    <groupId>devops-b2-cicd-lab2</groupId>
    <artifactId>devops-b2-cicd-lab2</artifactId>
    <version>0.0.1-SNAPSHOT</version>

    <properties>
        <maven.compiler.source>17</maven.compiler.source>
        <maven.compiler.target>17</maven.compiler.target>
    </properties>


</project>
```

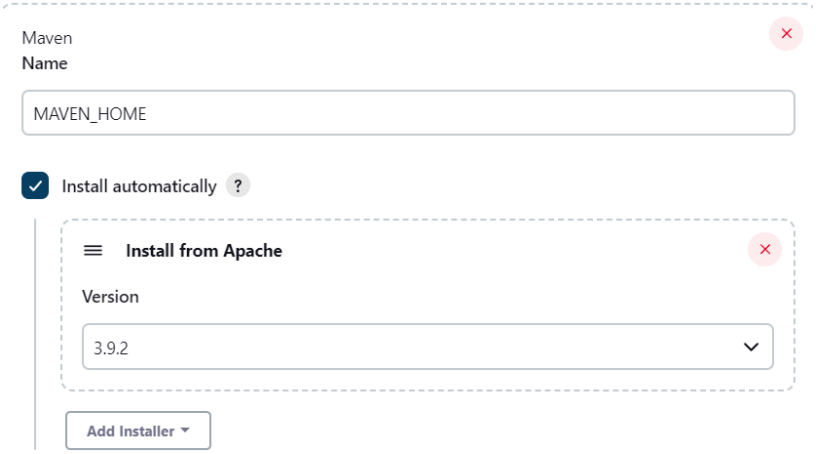
2] Make a repo name as “CICD-Lab2_Jenkinsfile” and Push project on github.




```
kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2
$ ls
pom.xml  src/  target/

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2
$ git init
Initialized empty Git repository in C:/Users/kamdi/eclipse Workspce/devops-b2-ci
cd-lab2/.git/

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        .classpath
        .project
        .settings/
        pom.xml
        src/
        target/

nothing added to commit but untracked files present (use "git add" to track)

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git add .

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git commit -m "first commit"
[master (root-commit) 5e73fb2] first commit
 7 files changed, 111 insertions(+)
 create mode 100644 .classpath
 create mode 100644 .project
 create mode 100644 .settings/org.eclipse.jdt.core.prefs
 create mode 100644 .settings/org.eclipse.m2e.core.prefs
 create mode 100644 pom.xml
 create mode 100644 src/main/java/mypkg/MyCalc.java
 create mode 100644 target/classes/mypkg/MyCalc.class

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git remote add abc https://github.com/kamdishashwat-17/CICD-Lab2_Jenkinsfile.git

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git push -u abc master
Enumerating objects: 17, done.
Counting objects: 100% (17/17), done.
Delta compression using up to 12 threads
Compressing objects: 100% (10/10), done.
Writing objects: 100% (17/17), 2.76 KiB | 1.38 MiB/s, done.
Total 17 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/kamdishashwat-17/CICD-Lab2_Jenkinsfile.git
 * [new branch]      master -> master
branch 'master' set up to track 'abc/master'.
```

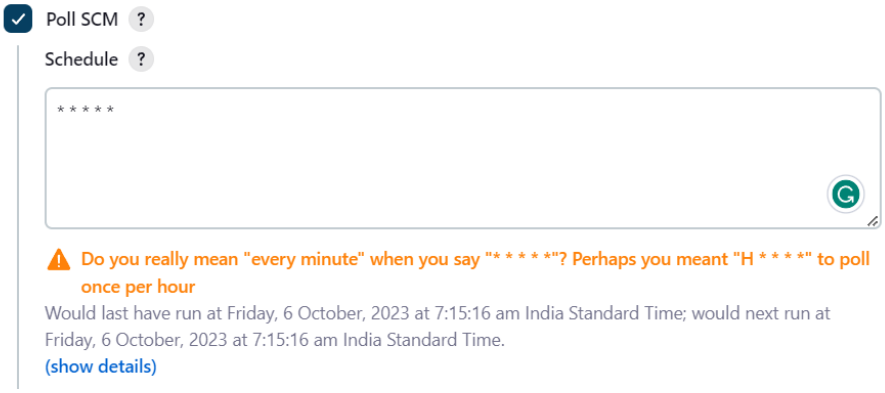
3] Add Maven integration and Git plugin in Jenkins , configure repo and make a build





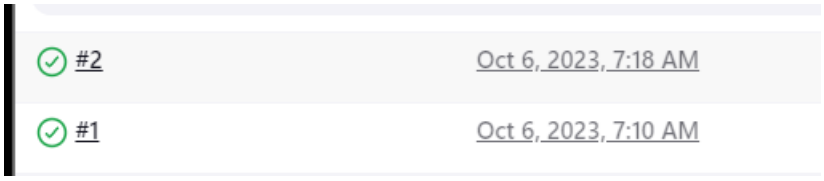

```
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-archi
520 kB/s)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/commons/commons-compr
1.2 MB/s)
[INFO] Building jar: C:\ProgramData\Jenkins\.jenkins\workspace\cicd-b2-lab2\target\devops-b2-cicd-lab
[INFO]
[INFO] --- install:3.1.0:install (default-install) @ devops-b2-cicd-lab2 ---
[INFO] Installing C:\ProgramData\Jenkins\.jenkins\workspace\cicd-b2-lab2\pom.xml to C:\WINDOWS\system
b2-cicd-lab2\devops-b2-cicd-lab2\0.0.1-SNAPSHOT\devops-b2-cicd-lab2-0.0.1-SNAPSHOT.pom
[INFO] Installing C:\ProgramData\Jenkins\.jenkins\workspace\cicd-b2-lab2\target\devops-b2-cicd-lab2-0
C:\WINDOWS\system32\config\systemprofile\.m2\repository\devops-b2-cicd-lab2\devops-b2-cicd-lab2\0.0.1
SNAPSHOT.jar
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  10.193 s
```

4] edit the code ,add mul funcion and add poll scm in jenkins configuration then again commit and push it.




```
public int mul(int a, int b)
{
    return(a*b);
}
```

```
kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git status
On branch master
Your branch is up to date with 'abc/master'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   src/main/java/mypkg/MyCalc.java
        modified:   target/classes/mypkg/MyCalc.class

no changes added to commit (use "git add" and/or "git commit -a")

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git add .

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git commit -m "mul added"
[master 0f79c39] mul added
 2 files changed, 4 insertions(+)

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git push
Enumerating objects: 21, done.
Counting objects: 100% (21/21), done.
Delta compression using up to 12 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (11/11), 1.12 KiB | 381.00 KiB/s, done.
Total 11 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To https://github.com/kamdishashwat-17/CICD-Lab2_Jenkinsfile.git
   5e73fb2..0f79c39  master -> master
```

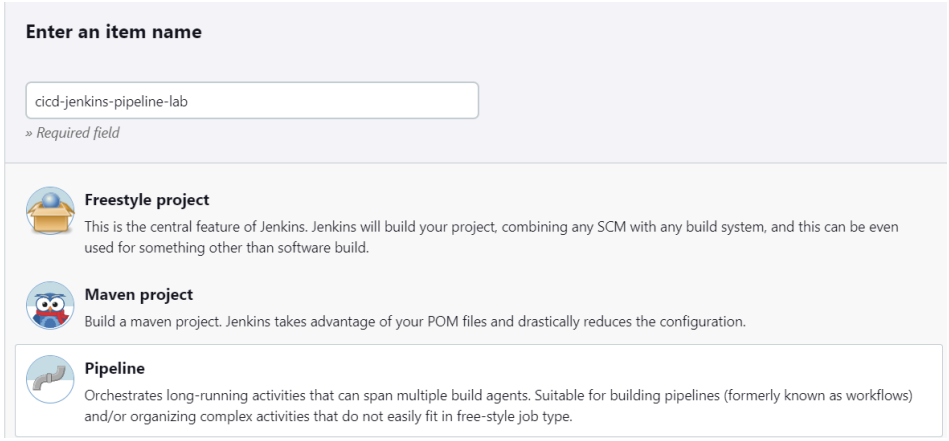


5] Add Jenkins file then commit and push it , In Jenkins make pipeline add configure it. When you create a pipeline. The pipeline will start.

devops-b2-cicd-lab2/pom.xml | MyCalc.java | *Jenkinsfile

```
pipeline {
    agent any
    tools {
    maven 'MAVEN_HOME'
    }
    stages {
        stage('Stage1: Hello Clean Stage 1') {
            steps {
                bat 'mvn clean'
                }
            }
        stage ('Stage 2: Test Stage') {
            steps {
                bat 'mvn test'
                }
            }
        stage ('Stage 3: My Package'){
            steps {
                bat 'mvn package'
                }
            }
        stage ('Stage 4: My Final Build Stage'){
            steps {
                bat 'mvn install'
                }
            }
        stage ('Stage Final: Build Success'){
            steps {
                echo  'Build Success!'
                }
            }
        }
    }
```

```
kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git status
On branch master
Your branch is up to date with 'abc/master'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        Jenkinsfile

nothing added to commit but untracked files present (use "git add" to track)

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git add .

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git commit -m "jenkinsfile"
[master b098ade] jenkinsfile
 1 file changed, 33 insertions(+)
 create mode 100644 Jenkinsfile

kamdi@DESKTOP-P4AQHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git push
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 473 bytes | 473.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/kamdishashwat-17/CICD-Lab2_Jenkinsfile.git
   0f79c39..b098ade  master -> master
```



Stage View