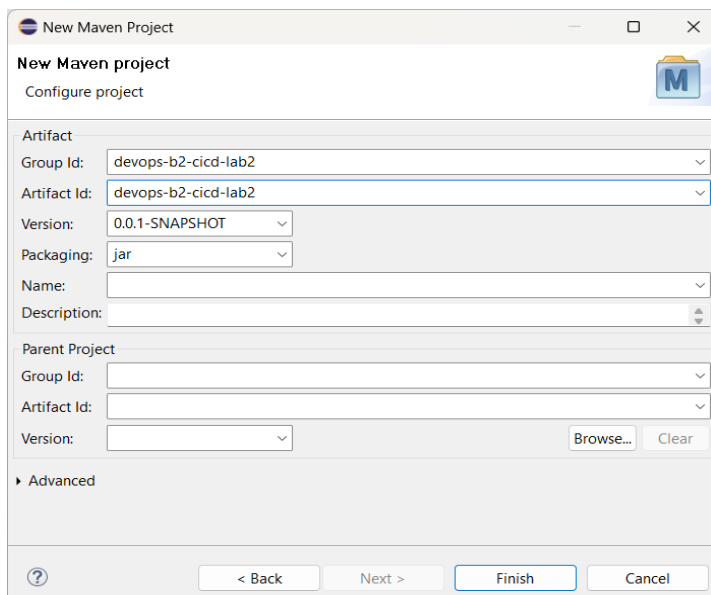
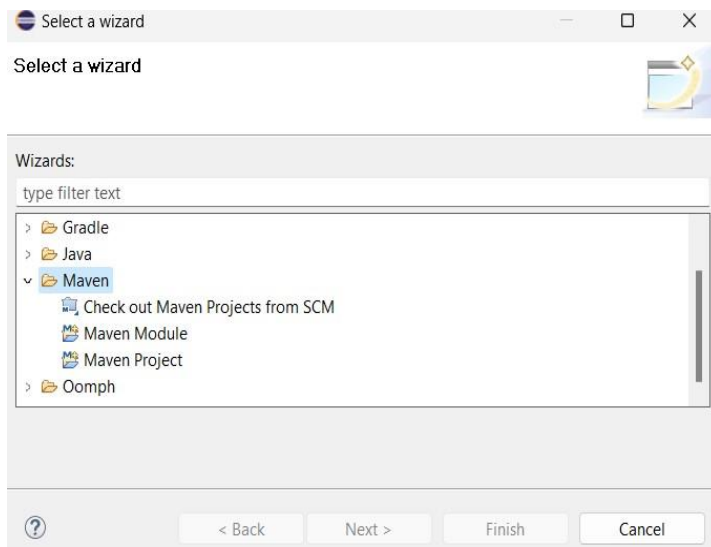


EXPERIMENT – 2

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.



New Java Class

Java Class

Create a new Java class.

Source folder: Browse...

Package: Browse...

☐ Enclosing type: Browse...

Name:

Modifiers: ☒ public ☐ package ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass: Browse...

Interfaces: Add... Remove

Which method stubs would you like to create?
☒ public static void main(String[] args)
☐ Constructors from superclass
☒ Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))
☐ Generate comments

? Finish Cancel

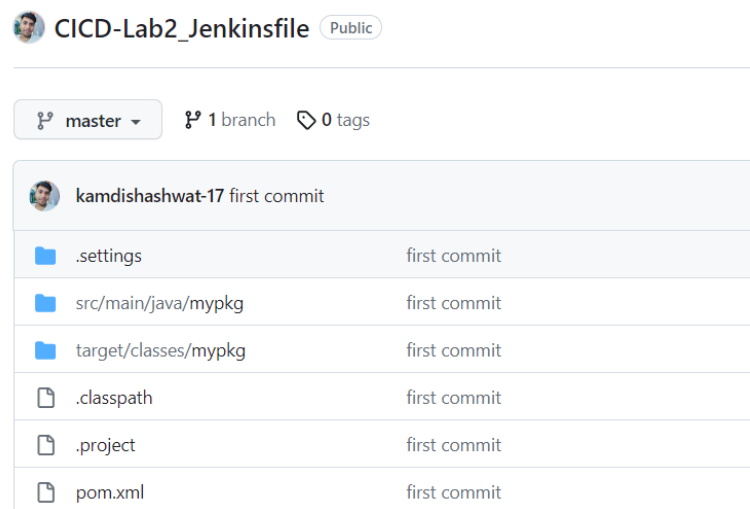
```
devops-b2-cicd-lab2/pom.xml  MyCalc.java x
1 package mypkg;
2
3 import java.util.Scanner;
4
5 public class MyCalc {
6     public int sum(int a, int b)
7     {
8         return (a+b);
9     }
10    public int diff(int a, int b)
11    {
12        return (a-b);
13    }
14    public static void main(String[] args) {
15        int num1, num2;
16        MyCalc calc = new MyCalc();
17        Scanner sc = new Scanner(System.in);
18        System.out.println("Enter num1 : ");
19        num1 = sc.nextInt();
20        System.out.println("Enter num2 : ");
21        num2 = sc.nextInt();
22        System.out.println("Sum is : "+calc.sum(num1, num2) );
23        System.out.println("Diff is : "+calc.diff(num1, num2) );
24    }
25 }
```

Console x

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

```
devops-b2-cicd-lab2/pom.xml x  MyCalc.java
1 <?xml version="1.0" encoding="UTF-8" ?>
2 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3     xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
4     <modelVersion>4.0.0</modelVersion>
5     <groupId>devops-b2-cicd-lab2</groupId>
6     <artifactId>devops-b2-cicd-lab2</artifactId>
7     <version>0.0.1-SNAPSHOT</version>
8     <properties>
9         <maven.compiler.source>17</maven.compiler.source>
10        <maven.compiler.target>17</maven.compiler.target>
11    </properties>
12
13 </project>
```

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



The screenshot shows a GitHub repository named "CICD-Lab2_Jenkinsfile" which is public. It has 1 branch (master) and 0 tags. The repository contains 7 files, all marked as "first commit":

File Name	Status
.settings	first commit
src/main/java/mypkg	first commit
target/classes/mypkg	first commit
.classpath	first commit
.project	first commit
pom.xml	first commit

```
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

Maven Integration 3.20

This plugin provides a deep integration between Jenkins and Maven. It adds support for automatic triggers between projects depending on SNAPSHOTS as well as the automated configuration of various Jenkins publishers such as Junit.

[Report an issue with this plugin](#)

Git 5.0.0

This plugin integrates [Git](#) with Jenkins.

[Report an issue with this plugin](#)

Maven
Name

MAVEN_HOME

☒ Install automatically

Install from Apache

Version

3.9.2

Add Installer

```
[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.

☒ Poll SCM

Schedule

Do you really mean "every minute" when you say "*****"? Perhaps you meant "H*****" to poll once per hour

Would last have run at Friday, 6 October, 2023 at 7:15:16 am India Standard Time; would next run at Friday, 6 October, 2023 at 7:15:16 am India Standard Time.

(show details)

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

```

kamdi@DESKTOP-P4AHPQ 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-P4AHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git add .

kamdi@DESKTOP-P4AHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git commit -m "mul added"
[master 0f79c39] mul added
 2 files changed, 4 insertions(+)

kamdi@DESKTOP-P4AHPQ 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

```

- ✓ #2 [Oct 6, 2023, 7:18 AM](#)
- ✓ #1 [Oct 6, 2023, 7:10 AM](#)

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 ×
1 pipeline {
2   agent any
3   tools {
4     maven 'MAVEN_HOME'
5   }
6   stages {
7     stage('Stage1: Hello Clean Stage 1') {
8       steps {
9         bat 'mvn clean'
10      }
11    }
12    stage ('Stage 2: Test Stage') {
13      steps {
14        bat 'mvn test'
15      }
16    }
17    stage ('Stage 3: My Package'){
18      steps {
19        bat 'mvn package'
20      }
21    }
22    stage ('Stage 4: My Final Build Stage'){
23      steps {
24        bat 'mvn install'
25      }
26    }
27    stage ('Stage Final: Build Success'){
28      steps {
29        echo 'Build Success!'
30      }
31    }
32  }
33 }

```

```
kamdi@DESKTOP-P4AHPQ 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-P4AHPQ MINGW64 ~/eclipse Workspce/devops-b2-cicd-lab2 (master)
$ git add .

kamdi@DESKTOP-P4AHPQ 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-P4AHPQ 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
```

Enter an item name

» Required field



Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.



Maven project

Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.



Pipeline

Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Pipeline

Definition

SCM ?

Repositories ?

Repository URL ?

Stage View

