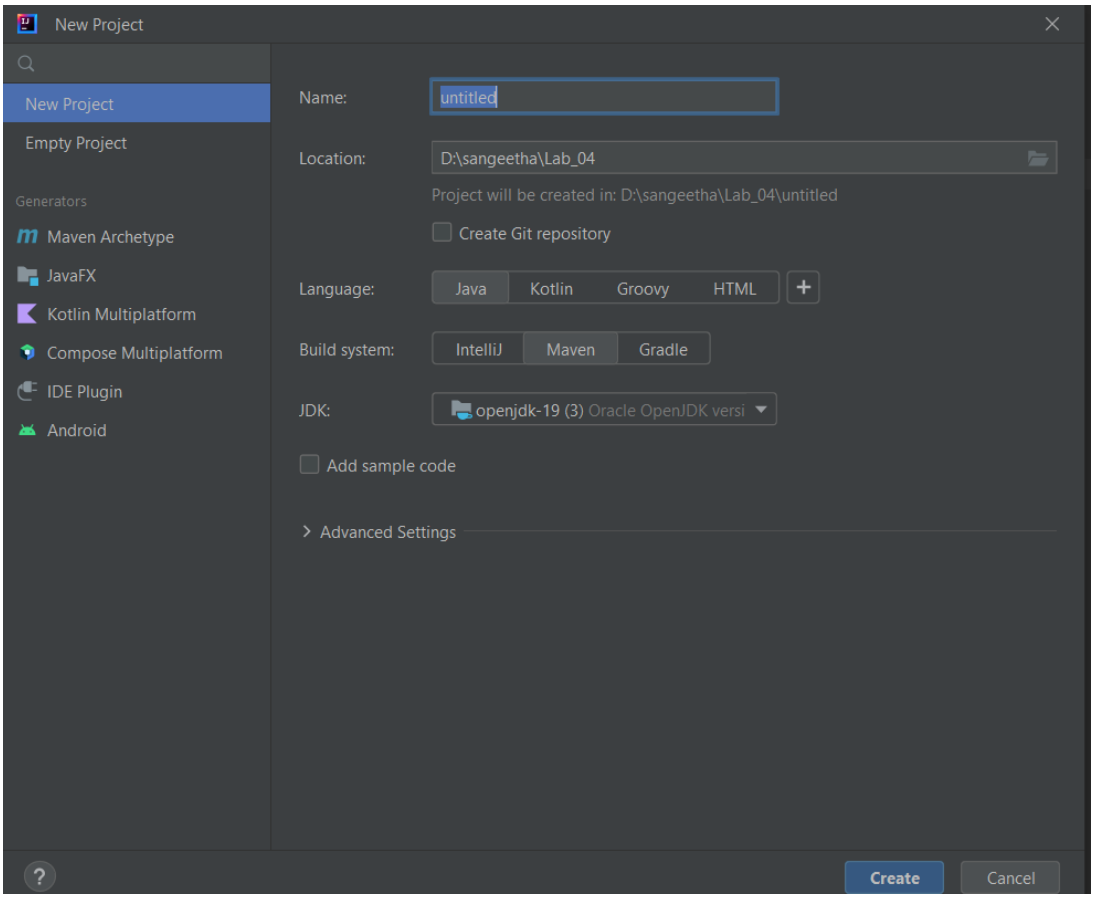
JUNIT 5 Testing.

EC5080-Software construction.

Tutorial

Step-01:

Create the maven project in IntelliJ idea.



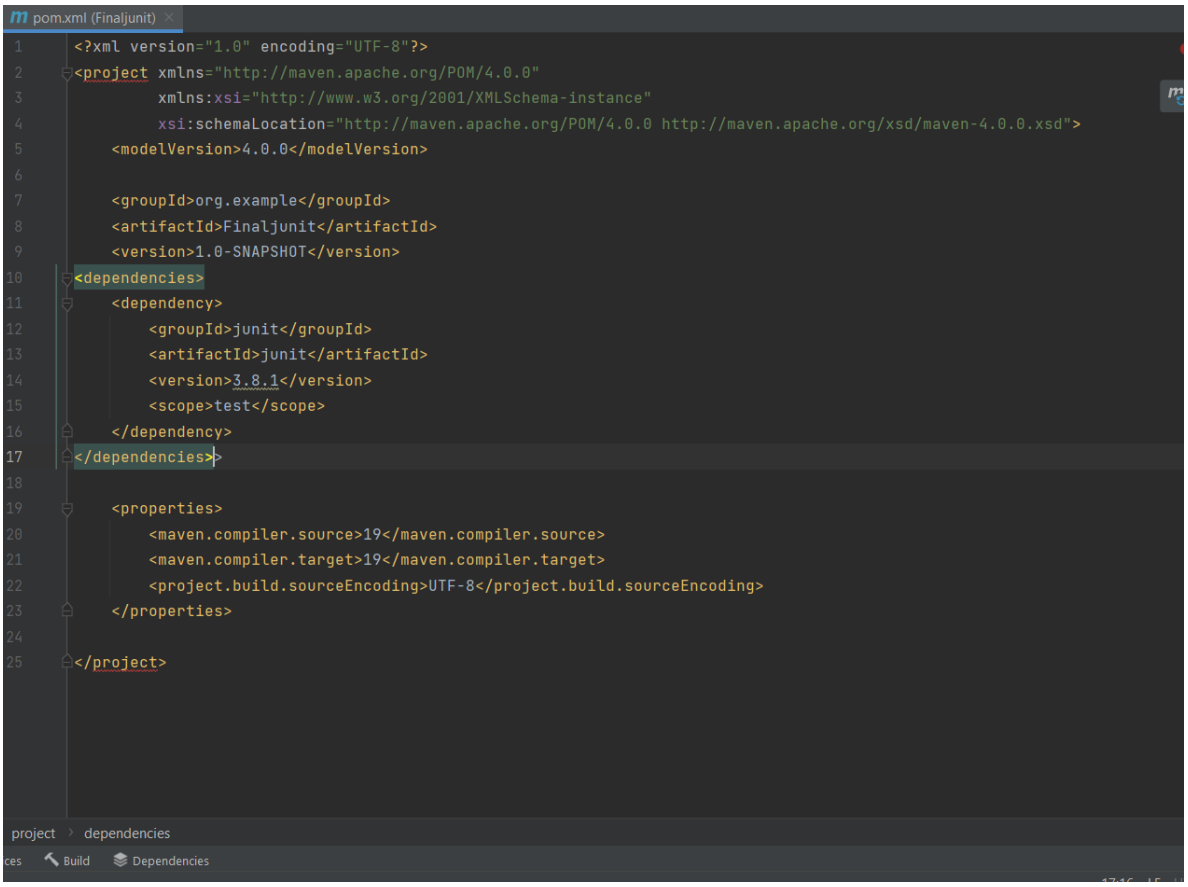
Write the proper project name ,select the language as java and Build System is maven After that click create.

Step-02

Go to the POM Xml and add the junit dependency.

How to get the junit dependency.

Chrome-→ maven Repository-→ Search bar option Type junit and search → select the version → Copy and paste the dependency in the pom xml.



Step-03

Create the Normal java class in the src folder.

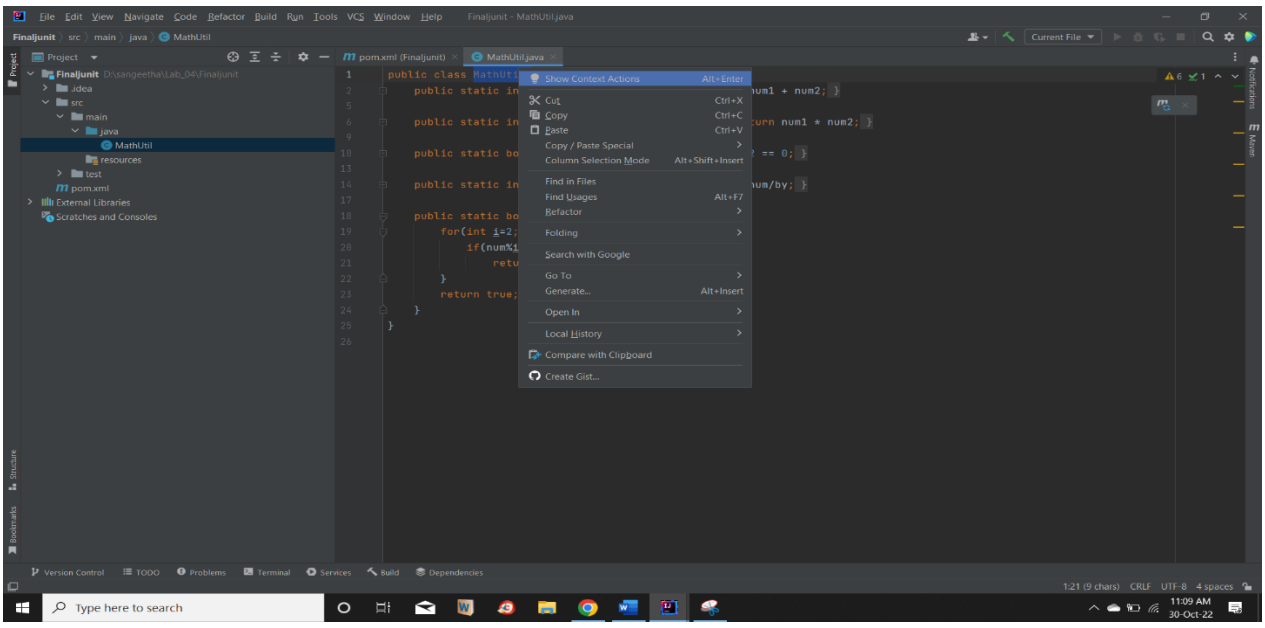
Eg:- create the math operations in the java class

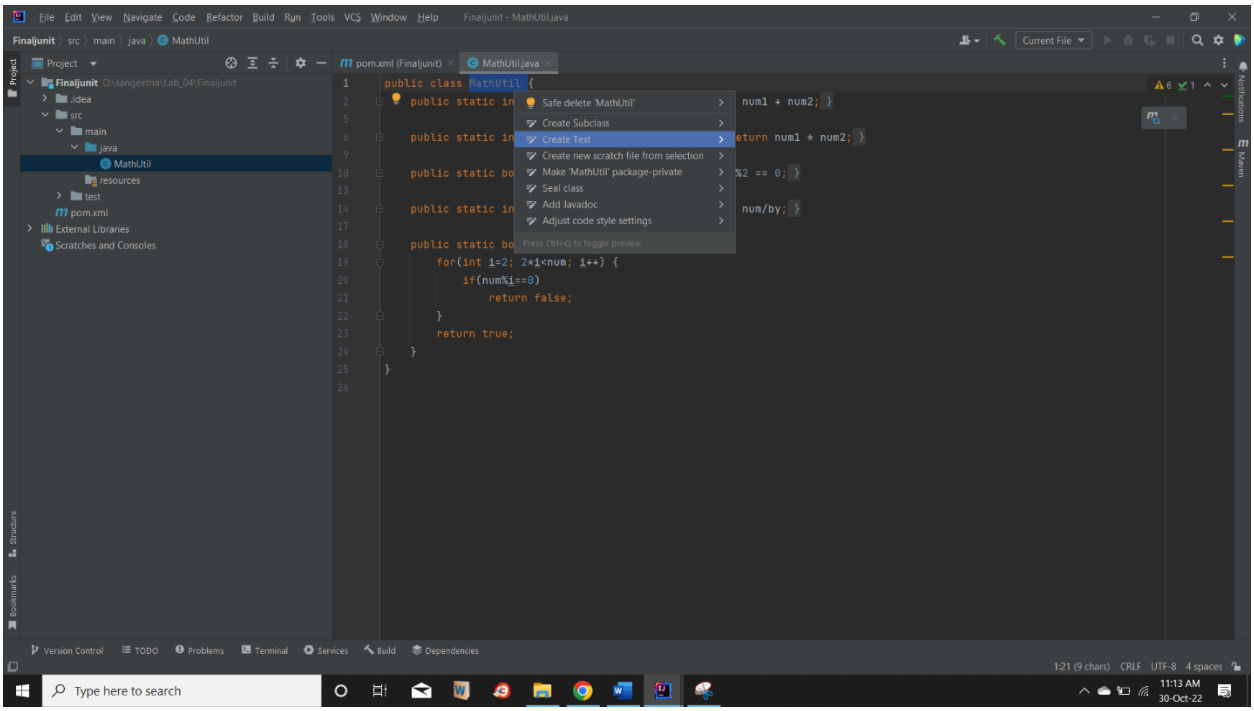
```java
public class MathUtil {
    public static int add(int num1, int num2) { return num1 + num2; }

    public static int multiple(int num1, int num2) { return num1 * num2; }

    public static boolean isEven(int num) { return num%2 == 0; }

    public static int devide(int num, int by) { return num/by; }

    public static boolean isPrime(int num) {
        for(int i=2; 2*i<num; i++) {
            if(num%i==0)
                return false;
        }
        return true;
    }
}
```

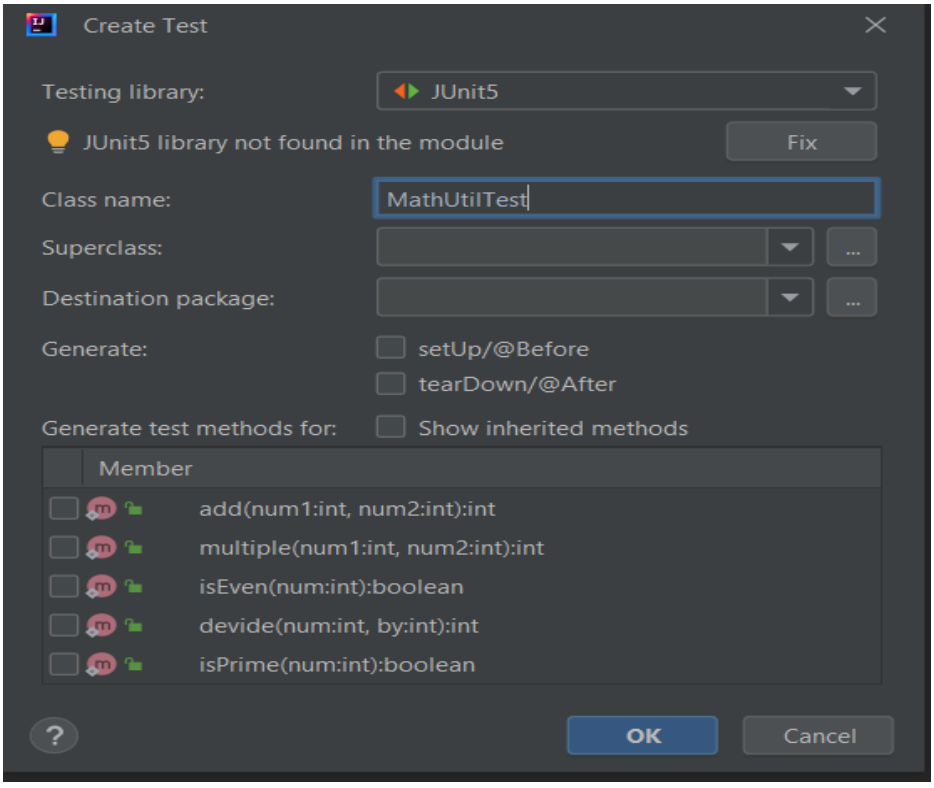
Step-04

Create the test class for MathUtil.

Select your java class name→ Right Click on the java class name → select show Context Action→ create Test




File Edit View Navigate Code Refactor Build Run Tools VCS Window Help
Finaljunit - MathUtil.java
Finaljunit src main java MathUtil
Current File
Project
Finaljunit D:\sangeetha\Lab_04\Finaljunit
.idea
src
main
java
MathUtil
resources
test
pom.xml
External Libraries
Scratches and Consoles
pom.xml (Finaljunit)
MathUtil.java
public class MathUtil {
public static in
public static in
public static bo
public static in
public static bo
for(int i=2; 2*i<num; i++) {
if(num%i==0)
return false;
return true;
Safe delete 'MathUtil'
Create Subclass
Create Test
Create new scratch file from selection
Make 'MathUtil' package-private
Seal class
Add Javadoc
Adjust code style settings
Press Ctrl+Q to toggle preview
num1 + num2; }
eturn num1 * num2; }
%2 == 0; }
num/by; }
Version Control
TODO
Problems
Terminal
Services
Build
Dependencies
1:21 (9 chars)
CRLF
UTF-8
4 spaces
Type here to search
11:13 AM
30-Oct-22

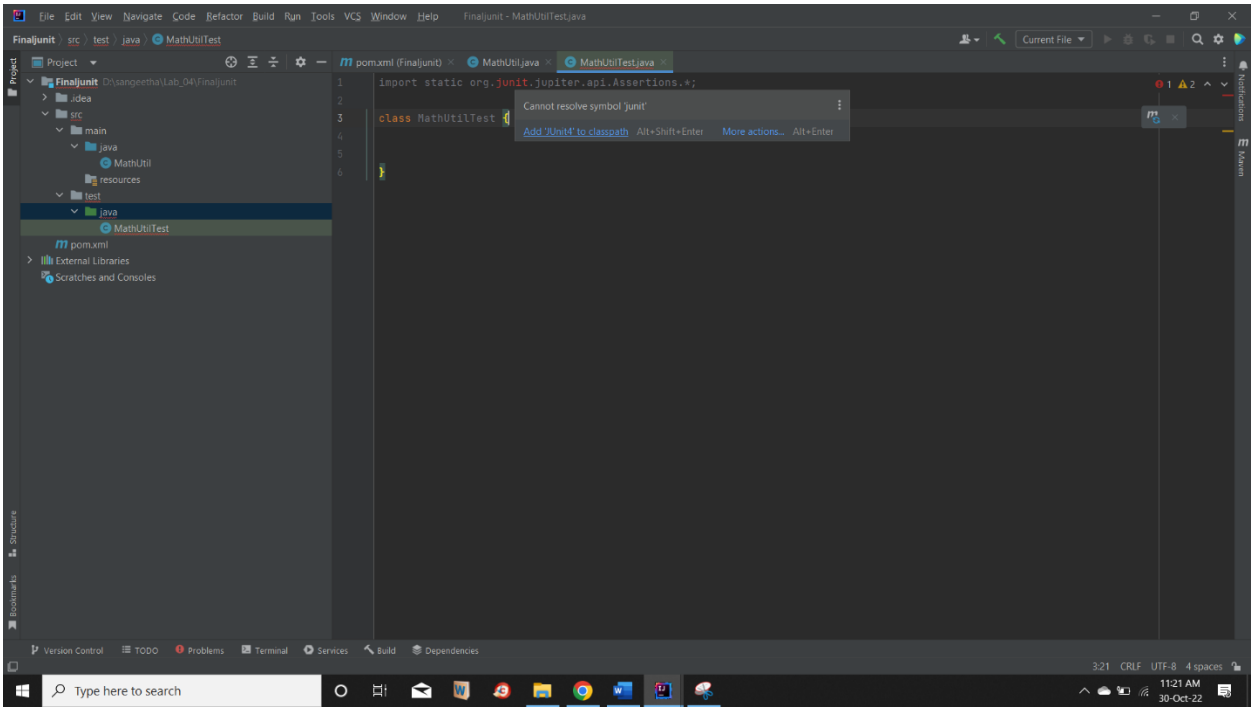

Create Test
Testing library:
JUnit5
JUnit5 library not found in the module
Fix
Class name:
MathUtilTest
Superclass:
Destination package:
Generate:
setUp/@Before
tearDown/@After
Generate test methods for:
Show inherited methods
Member
add(num1:int, num2:int):int
multiple(num1:int, num2:int):int
isEven(num:int):boolean
devide(num:int, by:int):int
isPrime(num:int):boolean
OK
Cancel

Step-05

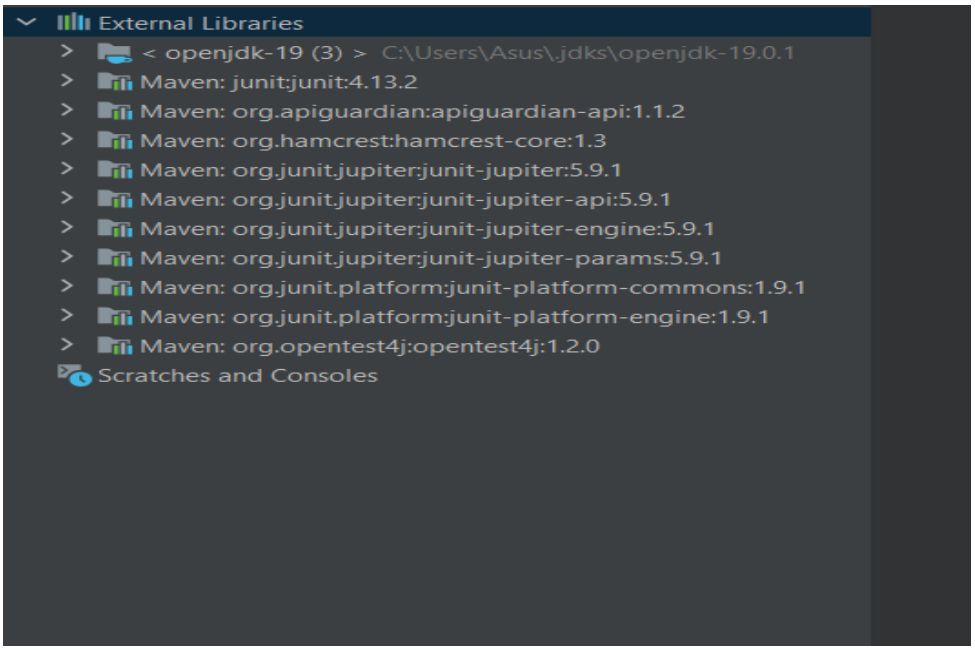
MathUtilTest is Automatically created with Test directory.

After that you need to add the junit Jupiter dependency.

Click the Add Junit5 to class path



After that Add all the maven Jupiter dependency in External Libraries.



Step-06.

Your Test Class should be like this .

```java
import org.junit.jupiter.api.Test;

import static org.junit.jupiter.api.Assertions.*;

class MathUtilTest {
    @Test
    void test_Add() { assertEquals( expected: 5, MathUtil.add(3, 2)); }

    @Test
    void test_Multiply() { assertEquals( expected: 15, MathUtil.multiple(3, 5)); }

    @Test
    void test_Devide() { assertEquals( expected: 5, MathUtil.devide( num: 25,  by: 5)); }

    @Test
    void testIs_Prime() { assertTrue(MathUtil.isPrime( num: 13)); }


}
```

Step-07

After that Run the Test class ,Your Test case Execution Result.