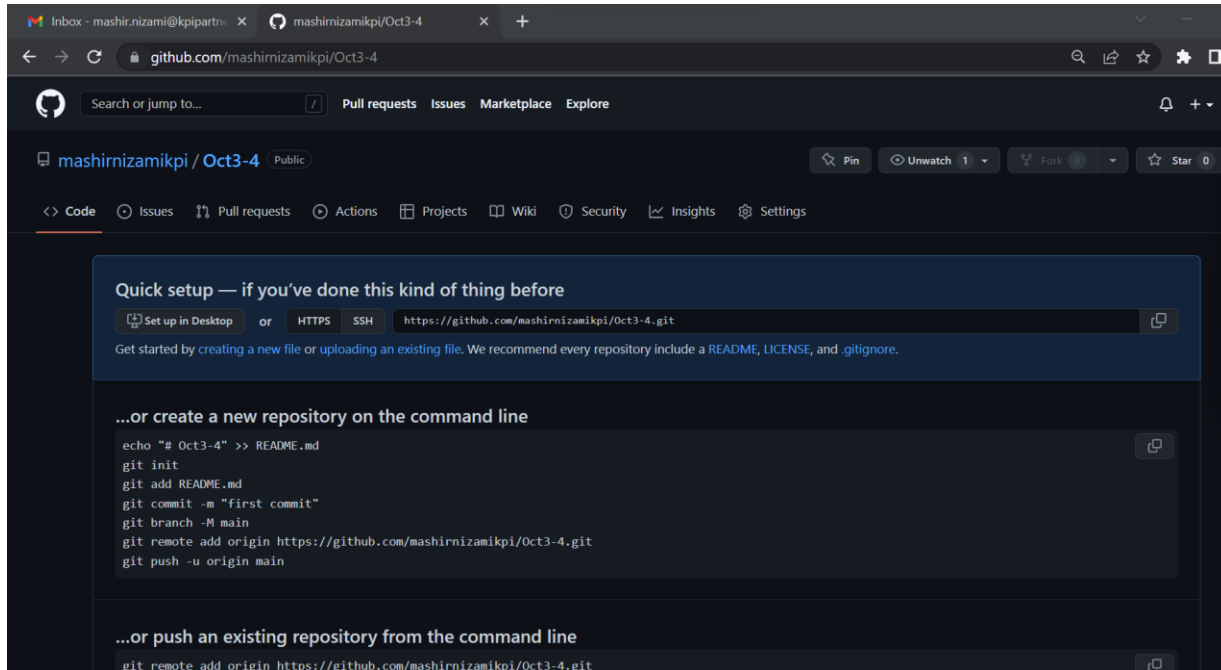
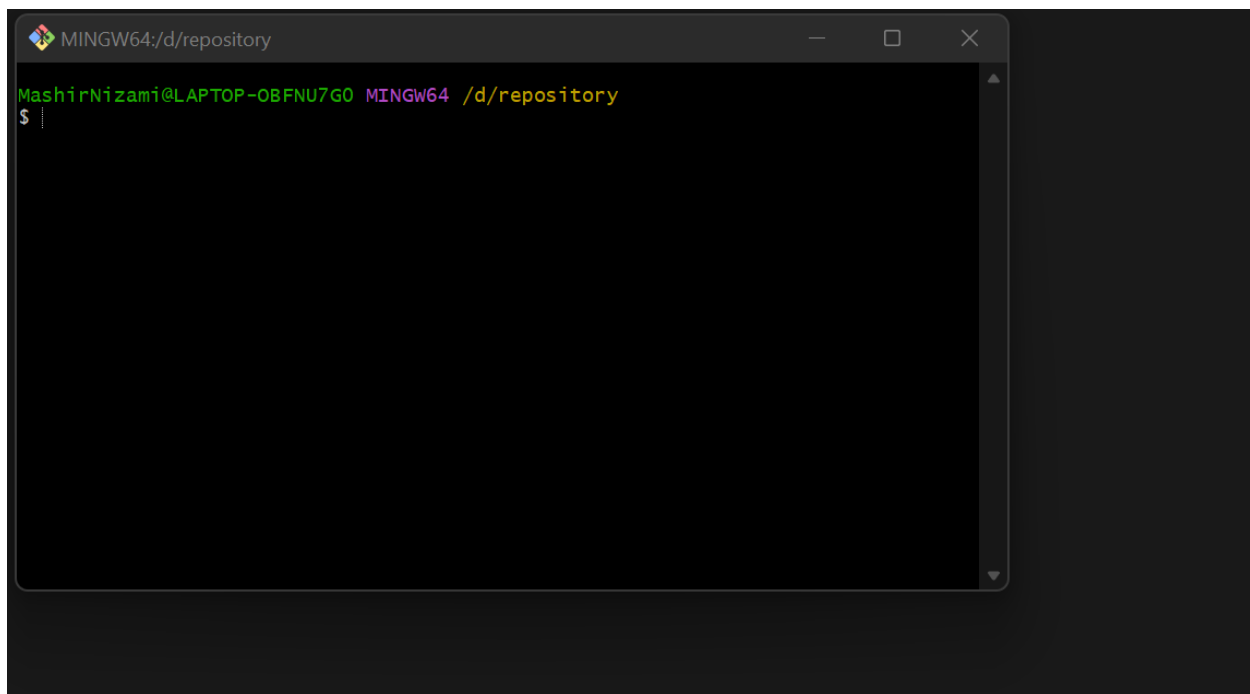


Sol.1:

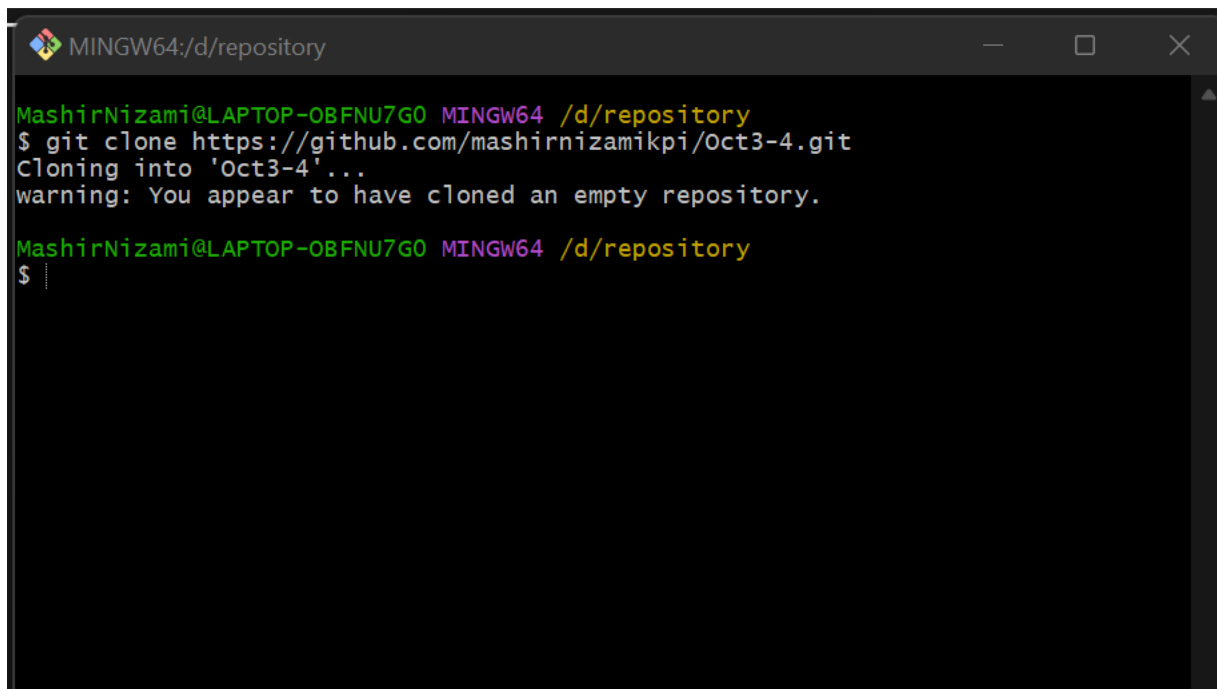
1.Create a new repository on github website.



2.Open Gitbash on particular location where you want to create your new repository.



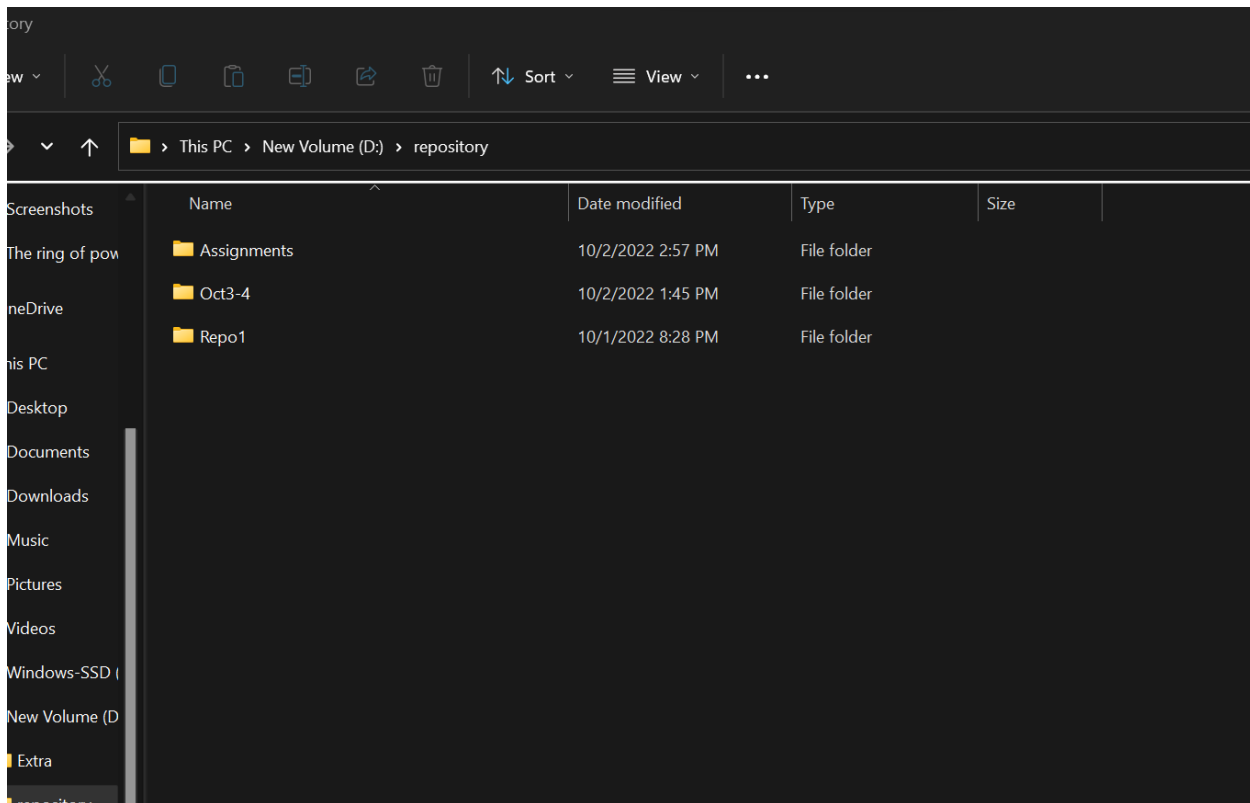
3. Use command Git Clone followed by http in the pic 1.



```
MINGW64:/d/repository
MashirNizami@LAPTOP-OBFNU7G0 MINGW64 /d/repository
$ git clone https://github.com/mashirnizamikpi/Oct3-4.git
Cloning into 'Oct3-4'...
warning: You appear to have cloned an empty repository.
MashirNizami@LAPTOP-OBFNU7G0 MINGW64 /d/repository
$
```

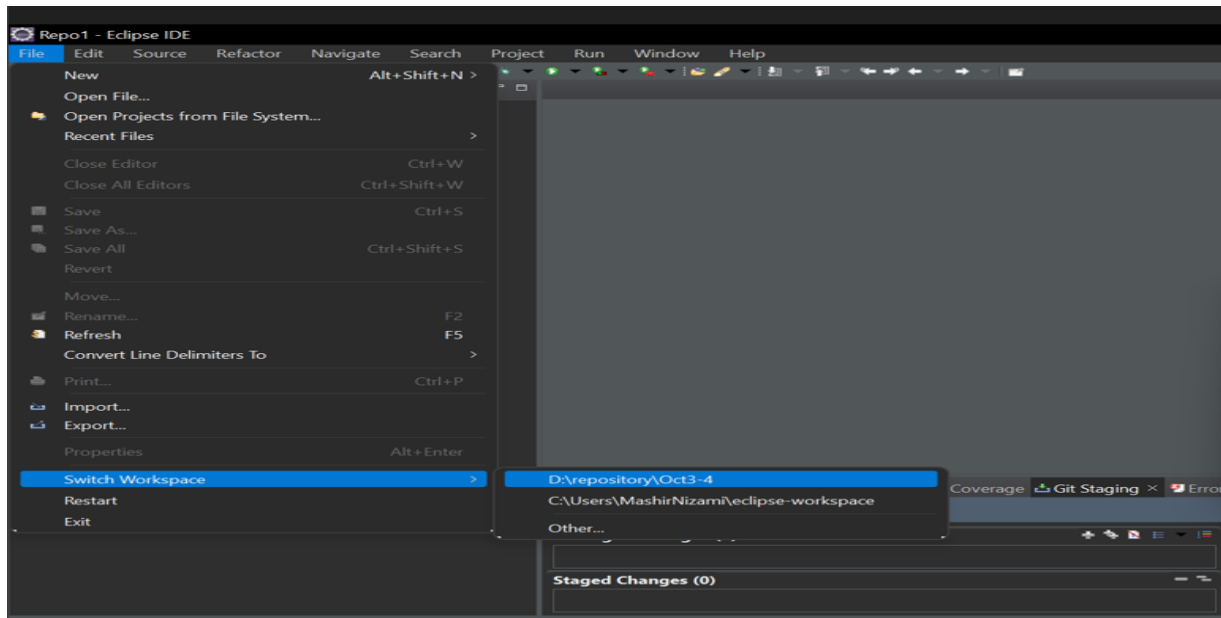
4.

Hence new repository on local drive created .

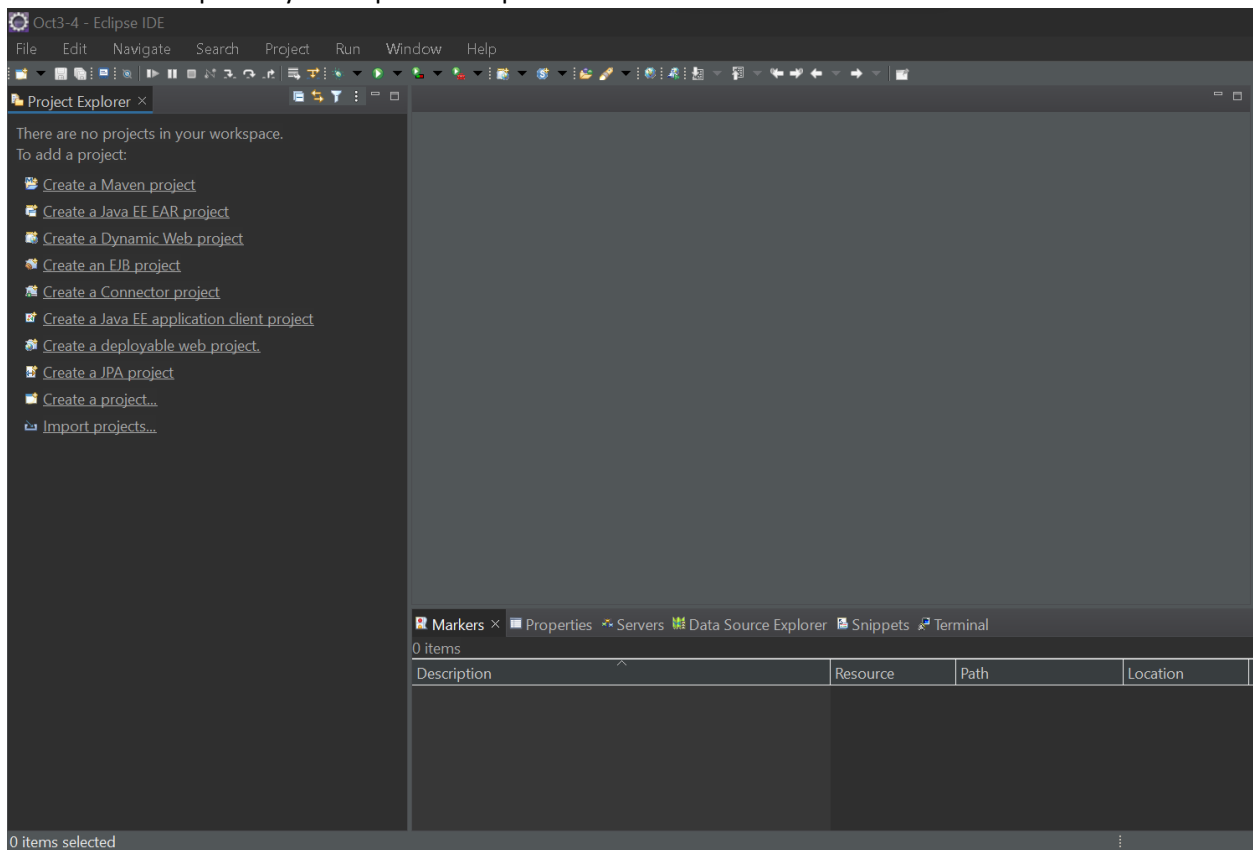


Sol 3 .

We can switch our workspace easily by:

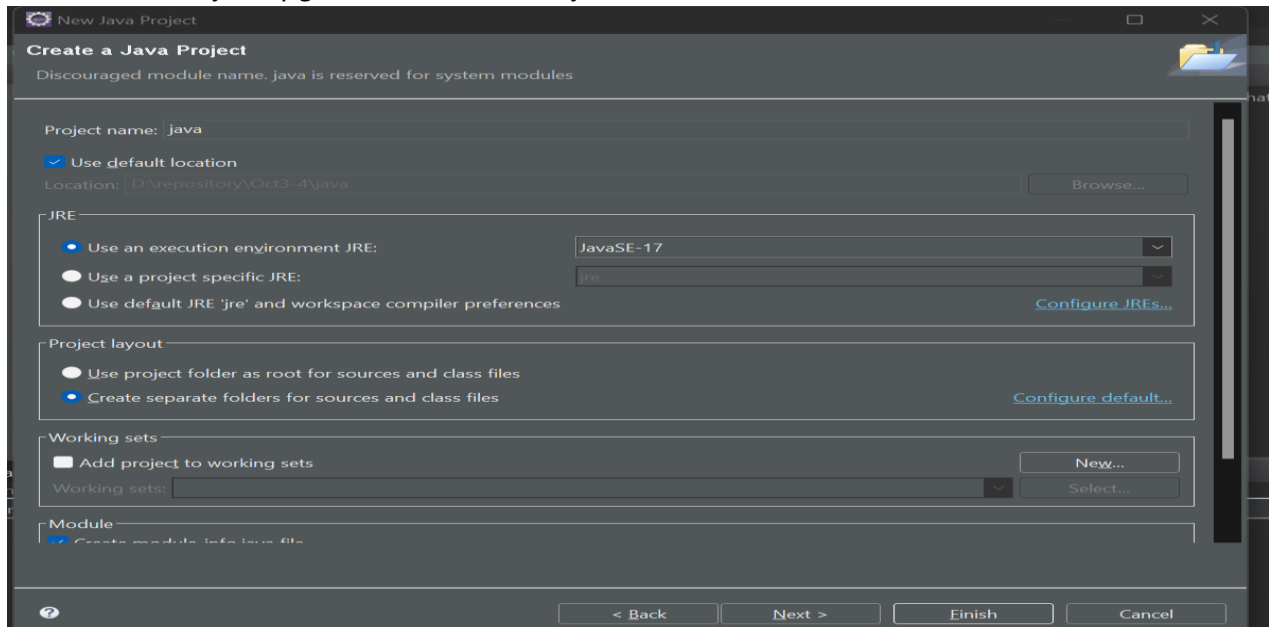


Now our new repository workspace will open as follow:

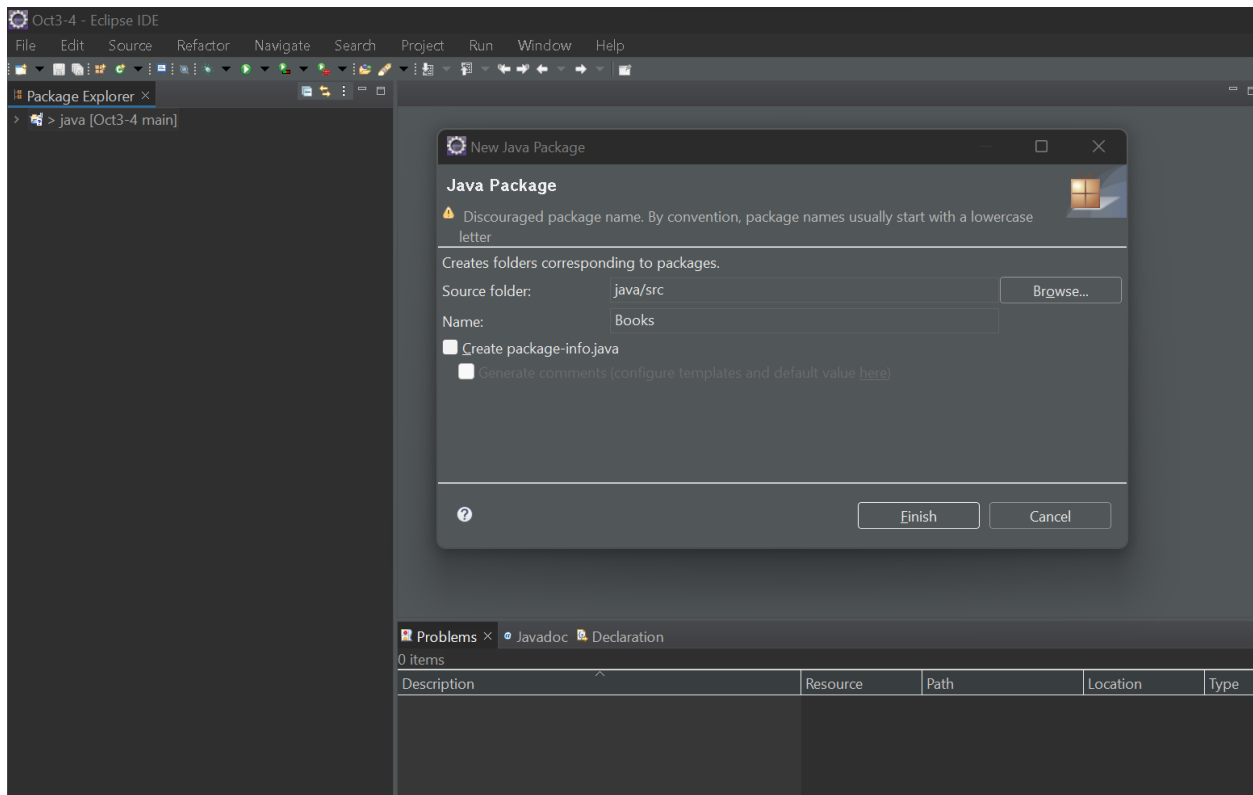


Now we can create new project java

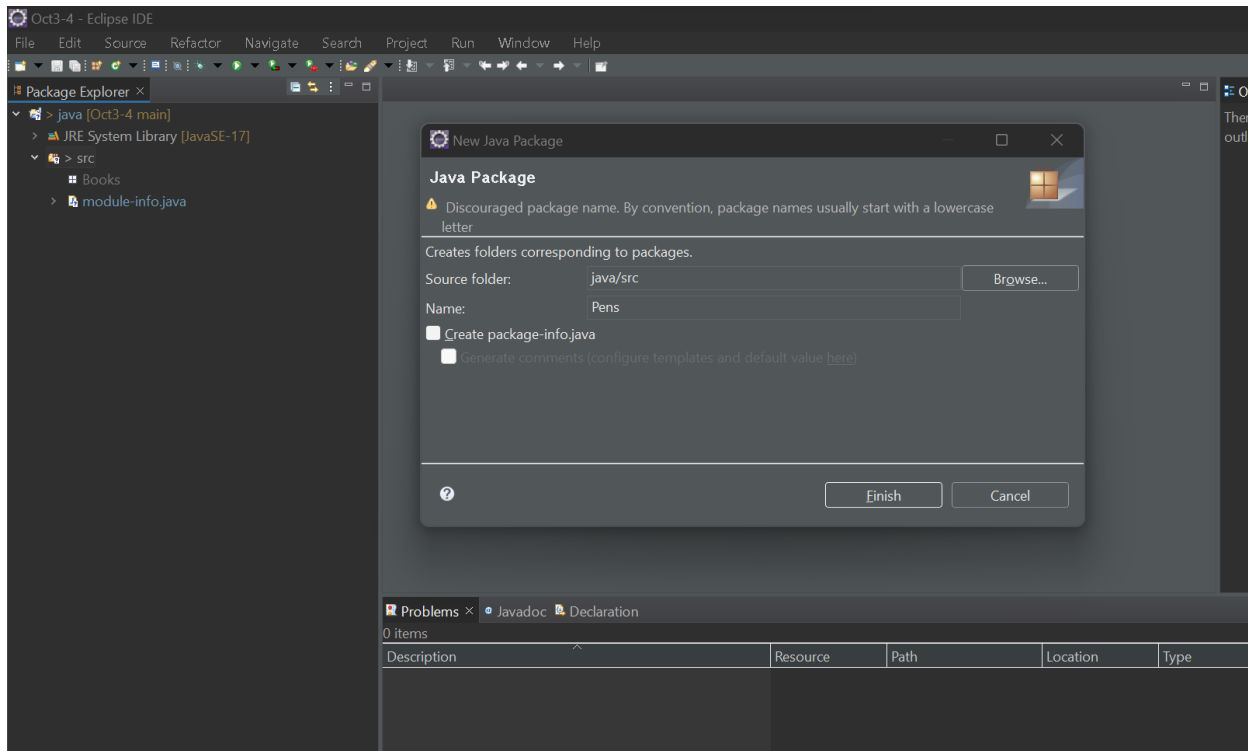
## 1. Create Java Project by go into New -> Java Project



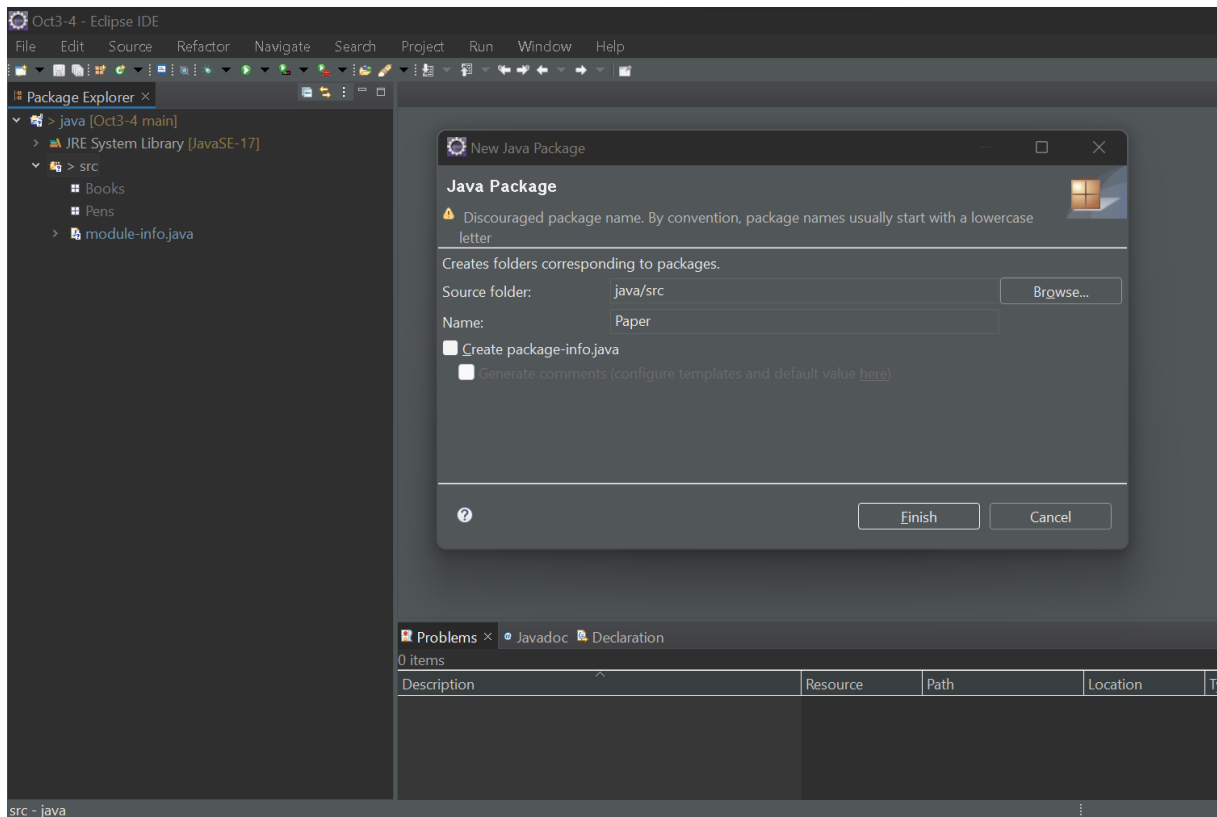
## 2. Now create a package Books.



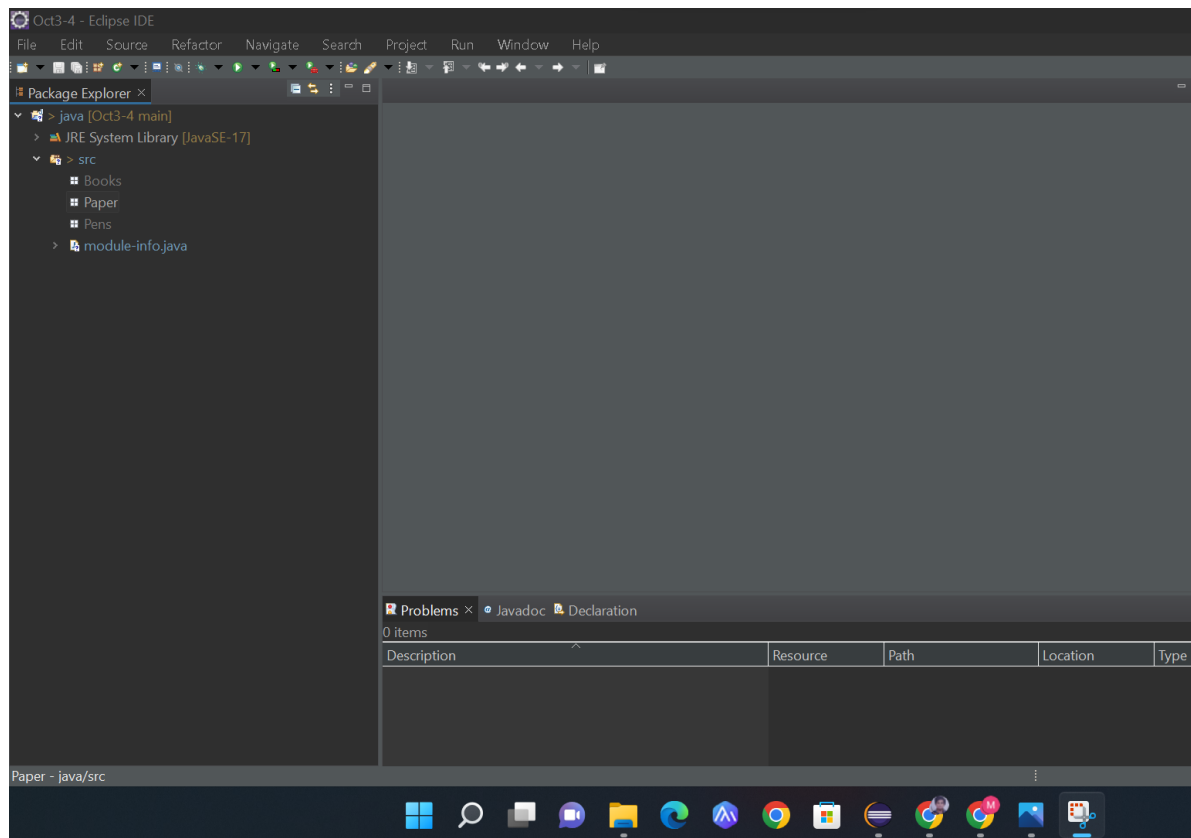
4. Now again create a new package Pen.



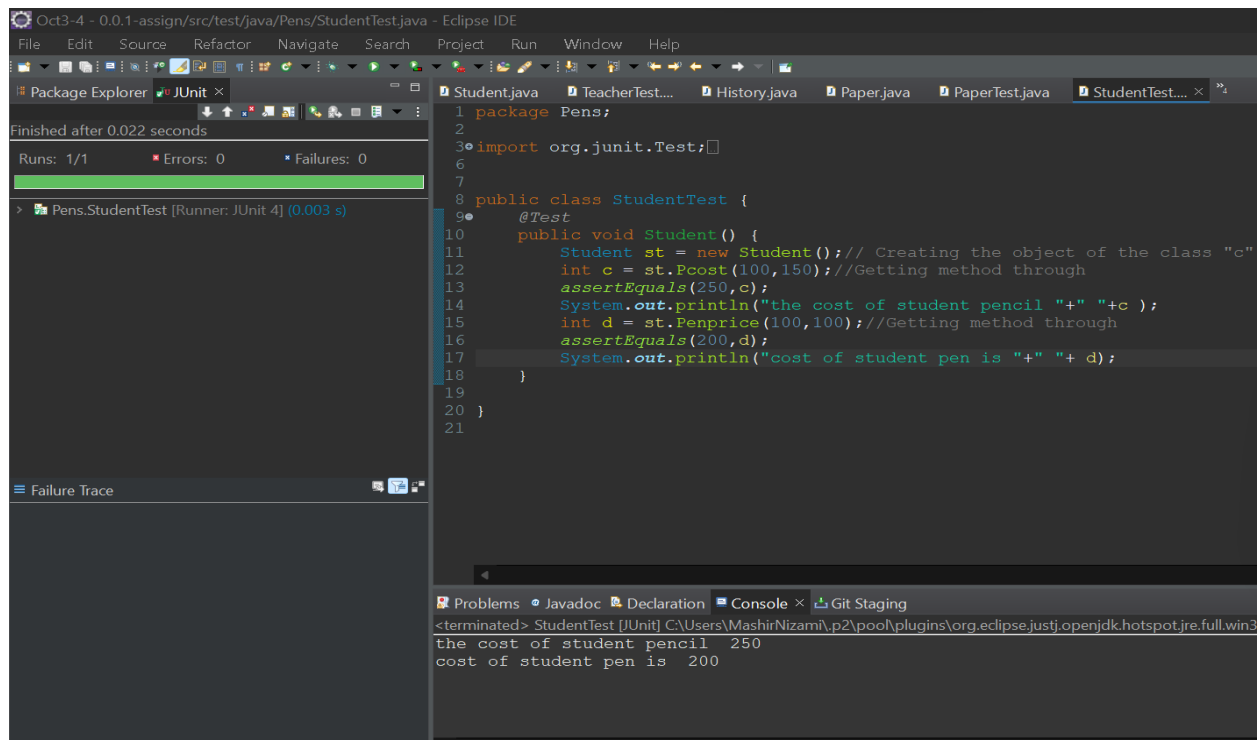
5. now Create a new package Paper.



Hence our project Java has created.



### Q3. All oops Concept:



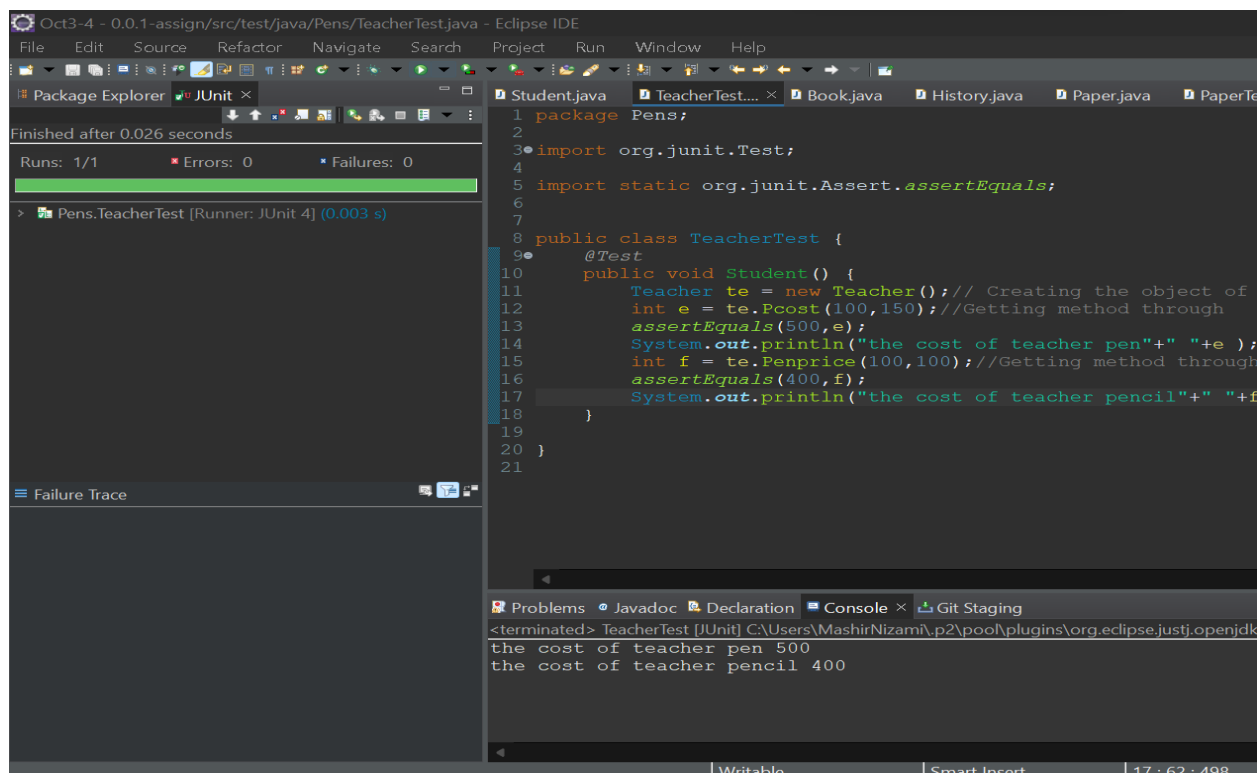
```
Oct3-4 - 0.0.1-assign/src/test/java/Pens/StudentTest.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer JUnit x
Finished after 0.022 seconds
Runs: 1/1 Errors: 0 Failures: 0
> Pens.StudentTest [Runner: JUnit 4] (0.003 s)
StudentTest [JUnit] C:\Users\MashirNizami\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32
the cost of student pencil 250
cost of student pen is 200
```

Code in StudentTest.java:

```
1 package Pens;
2
3 import org.junit.Test;
4
5
6
7
8 public class StudentTest {
9     @Test
10    public void Student() {
11        Student st = new Student(); // Creating the object of the class "c"
12        int c = st.Pcost(100,150); // Getting method through
13        assertEquals(250,c);
14        System.out.println("the cost of student pencil "+" "+c );
15        int d = st.Penprice(100,100); // Getting method through
16        assertEquals(200,d);
17        System.out.println("cost of student pen is "+" "+ d);
18    }
19 }
20 }
21
```

By using polymorphism, inheritance in Student, We get above result (1)

By using Polymorphism in teacher we get below result (2)

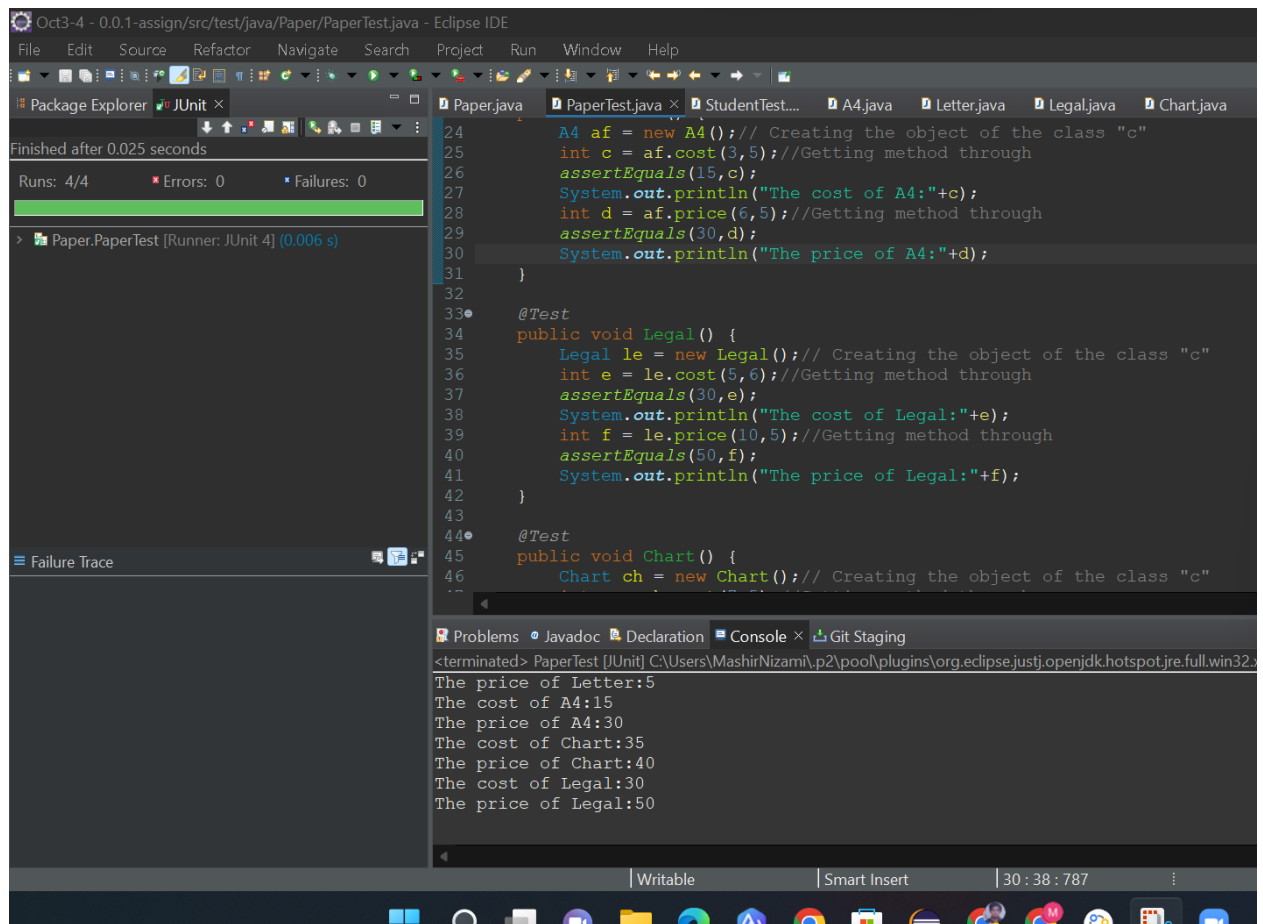


```
Oct3-4 - 0.0.1-assign/src/test/java/Pens/TeacherTest.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer JUnit x
Finished after 0.026 seconds
Runs: 1/1 Errors: 0 Failures: 0
> Pens.TeacherTest [Runner: JUnit 4] (0.003 s)
TeacherTest [JUnit] C:\Users\MashirNizami\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32
the cost of teacher pen 500
the cost of teacher pencil 400
```

Code in TeacherTest.java:

```
1 package Pens;
2
3 import org.junit.Test;
4
5 import static org.junit.Assert.assertEquals;
6
7
8 public class TeacherTest {
9     @Test
10    public void Student() {
11        Teacher te = new Teacher(); // Creating the object of
12        int e = te.Pcost(100,150); // Getting method through
13        assertEquals(500,e);
14        System.out.println("the cost of teacher pen"+" "+e );
15        int f = te.Penprice(100,100); // Getting method through
16        assertEquals(400,f);
17        System.out.println("the cost of teacher pencil"+" "+f );
18    }
19 }
20 }
21
```

For abstraction class ,we are using abstract class and keyword in Paper.java



The screenshot shows the Eclipse IDE interface. The main editor displays the `PaperTest.java` file, which contains several test methods. The left sidebar shows the Package Explorer with the `Paper` package selected. The bottom console shows the output of the test run.

```
Oct3-4 - 0.0.1-assign/src/test/java/Paper/PaperTest.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer JUnit x
Finished after 0.025 seconds
Runs: 4/4 Errors: 0 Failures: 0
> Paper.PaperTest [Runner: JUnit 4] [0.006 s]
24 A4 af = new A4(); // Creating the object of the class "c"
25 int c = af.cost(3,5); //Getting method through
26 assertEquals(15,c);
27 System.out.println("The cost of A4:"+c);
28 int d = af.price(6,5); //Getting method through
29 assertEquals(30,d);
30 System.out.println("The price of A4:"+d);
31 }
32
33 @Test
34 public void Legal() {
35     Legal le = new Legal(); // Creating the object of the class "c"
36     int e = le.cost(5,6); //Getting method through
37     assertEquals(30,e);
38     System.out.println("The cost of Legal:"+e);
39     int f = le.price(10,5); //Getting method through
40     assertEquals(50,f);
41     System.out.println("The price of Legal:"+f);
42 }
43
44 @Test
45 public void Chart() {
46     Chart ch = new Chart(); // Creating the object of the class "c"
47 }
48
49 Problems Javadoc Declaration Console x Git Staging
<terminated> PaperTest [JUnit] C:\Users\MashirNizami\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64.jdk\jre\bin
The price of Letter:5
The cost of A4:15
The price of A4:30
The cost of Chart:35
The price of Chart:40
The cost of Legal:30
The price of Legal:50
Writable Smart Insert 30 : 38 : 787
```