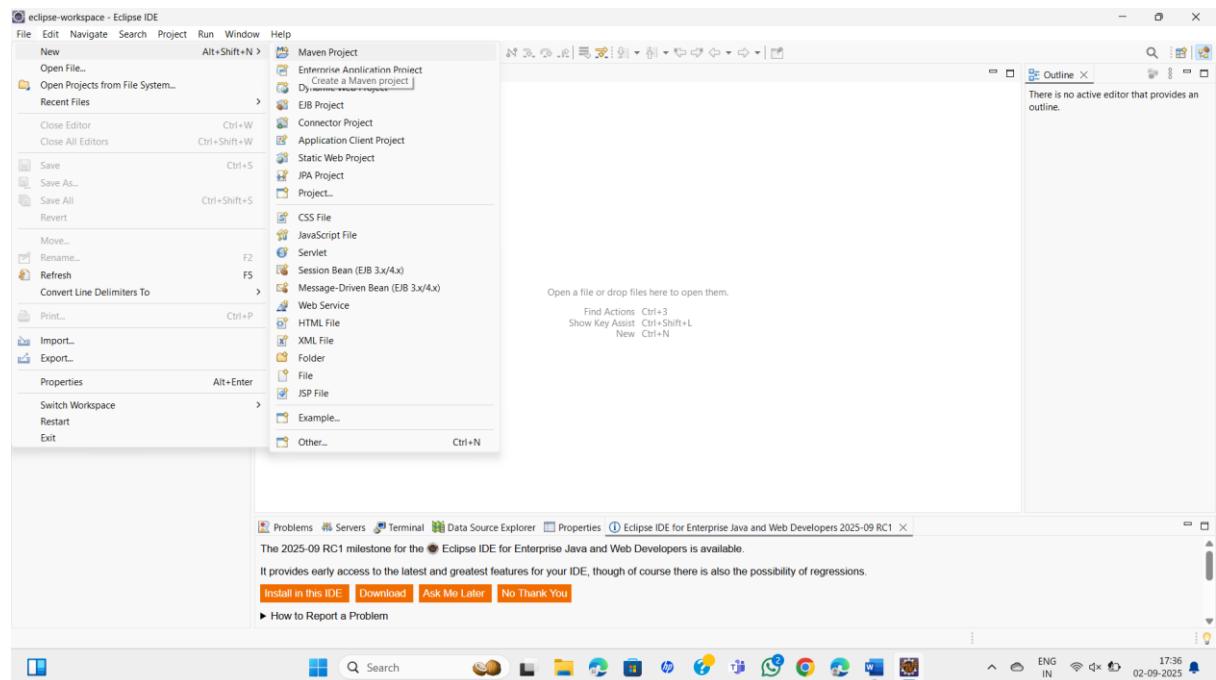
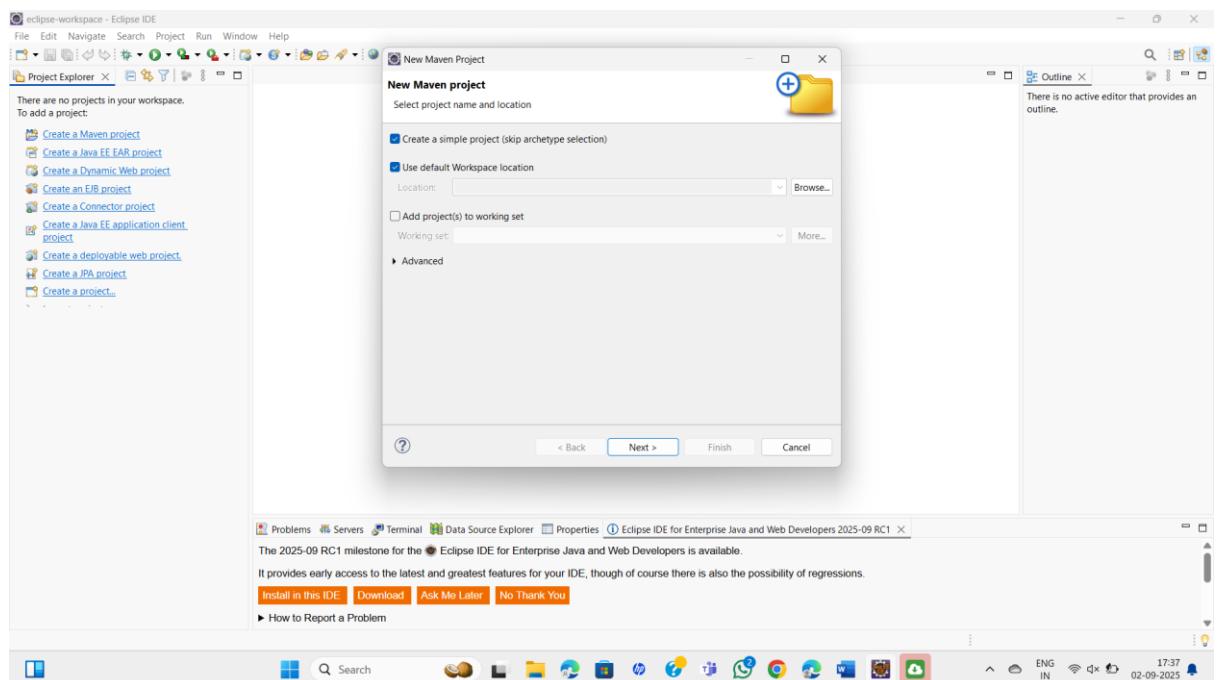


Creating a Multi-Module Maven Project:

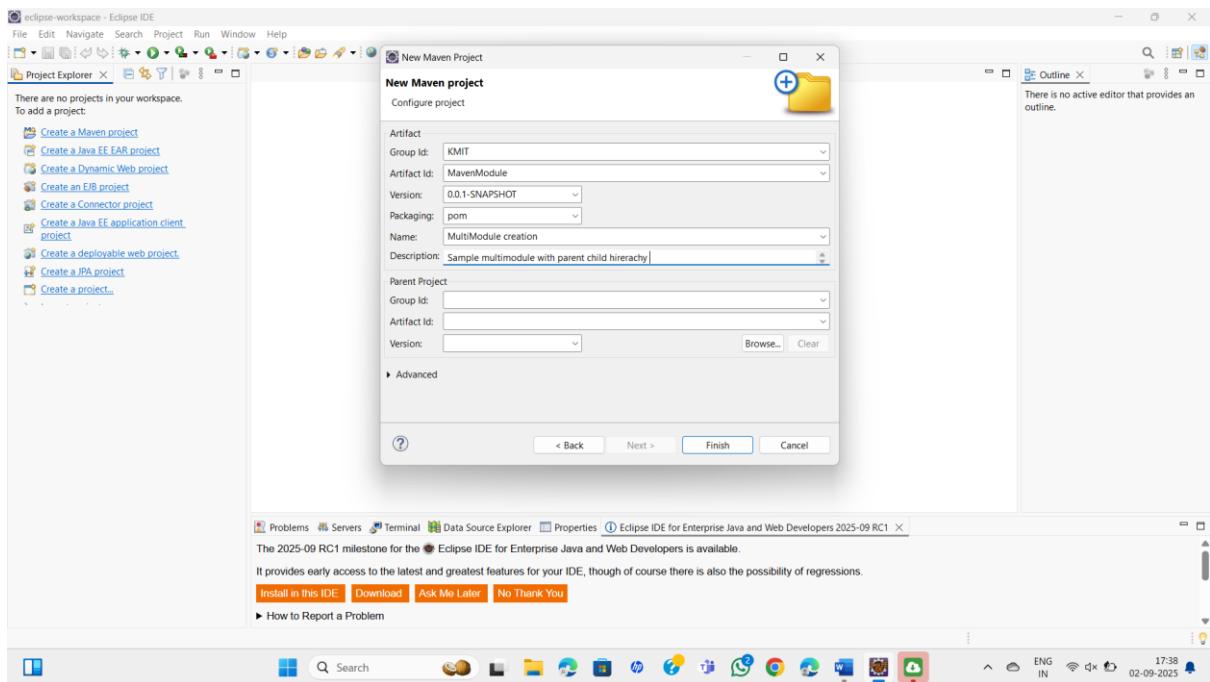
1. Open eclipse-> file-> new -> other -> Maven -> MavenProject ->click on next.



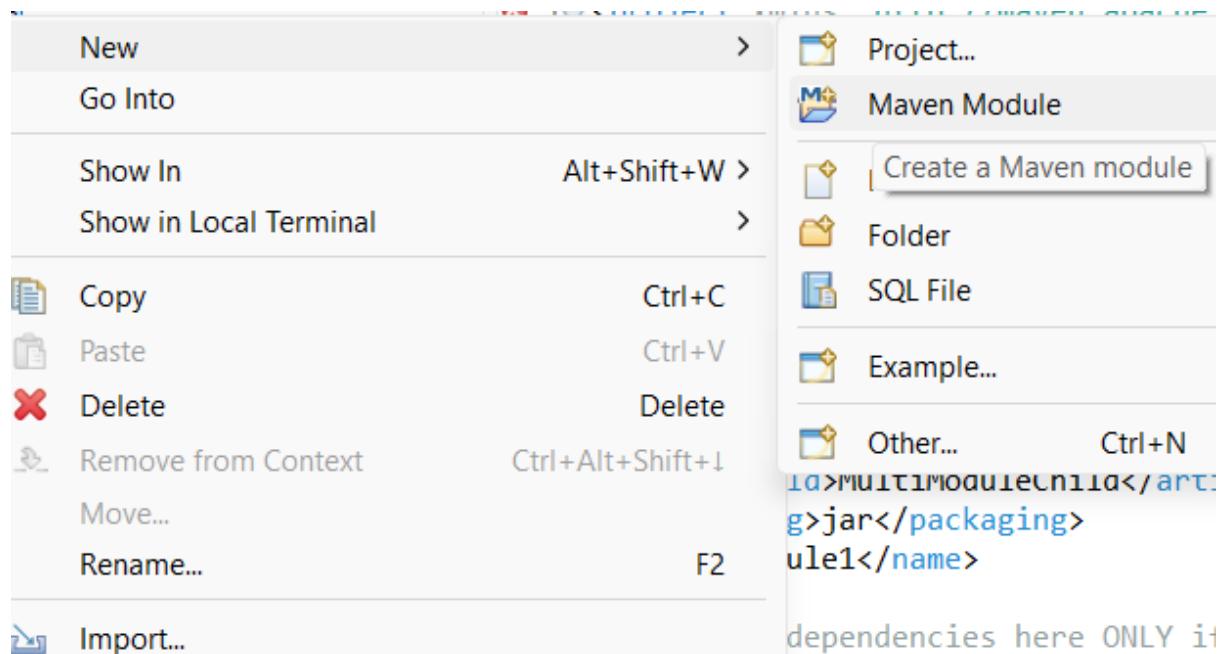
2.Check the first option: Create a Simple project(skip archetype selection) and click on next.



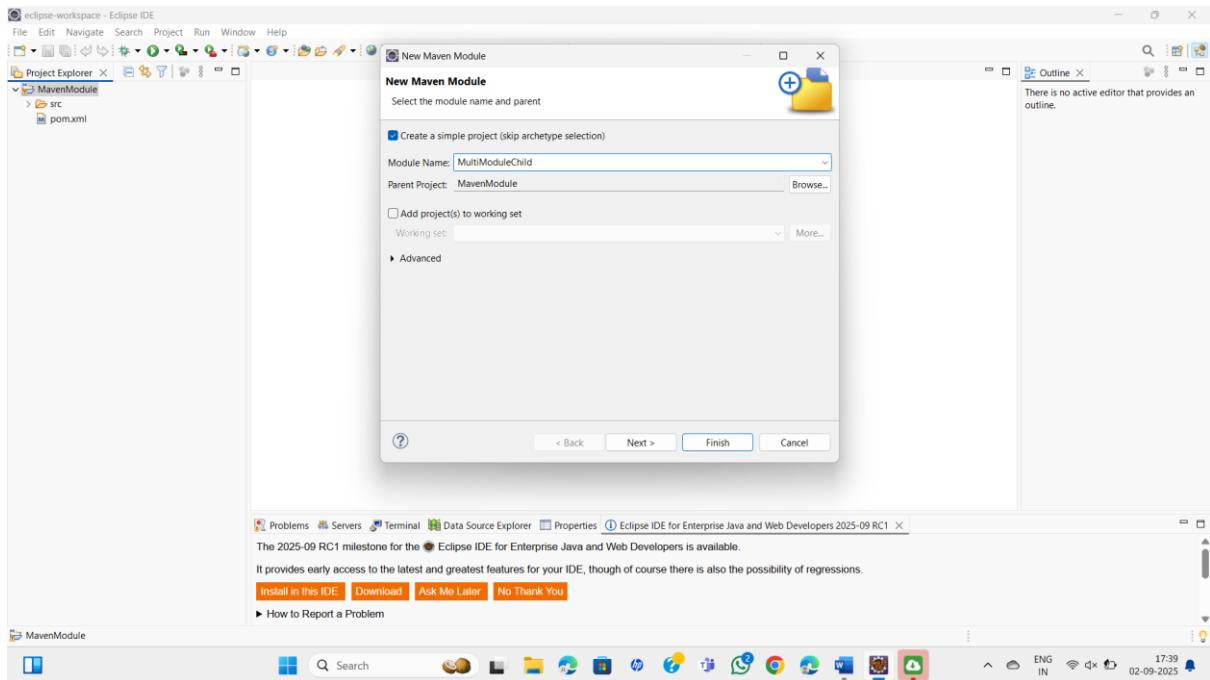
3.Give groupID: KMIT, artifact ID: MultiModule, in the packaging tab select the drop down and opt for pom.



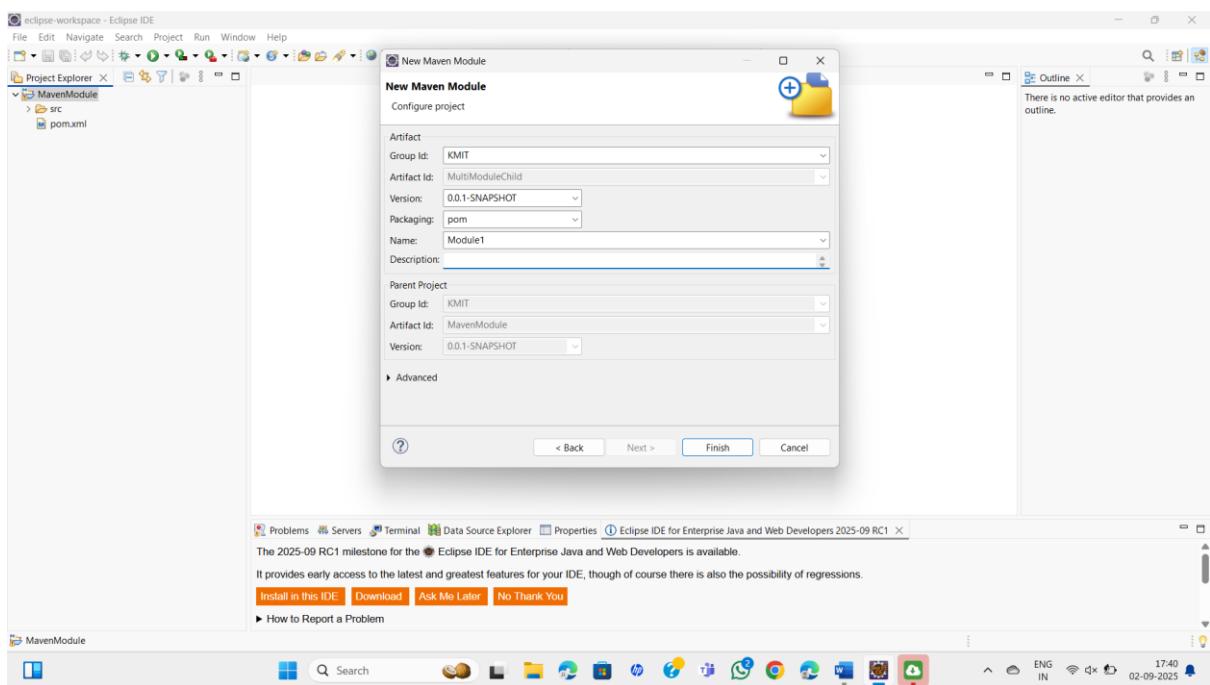
4.Give Name: Multimodule creation and Description: Sample multimodule with parent child hierarchy and click on next.



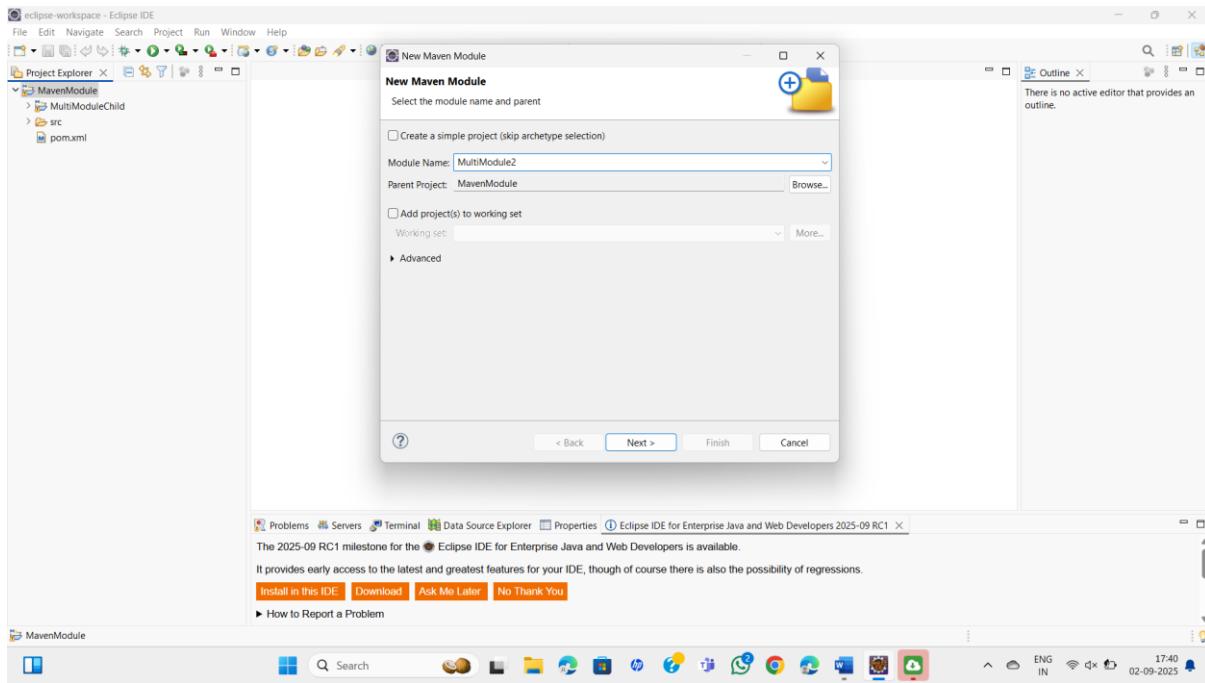
5.Now the Multimodule folder is created and displayed in the project explorer on the left. Right click on the folder and opt new -> mavenModule



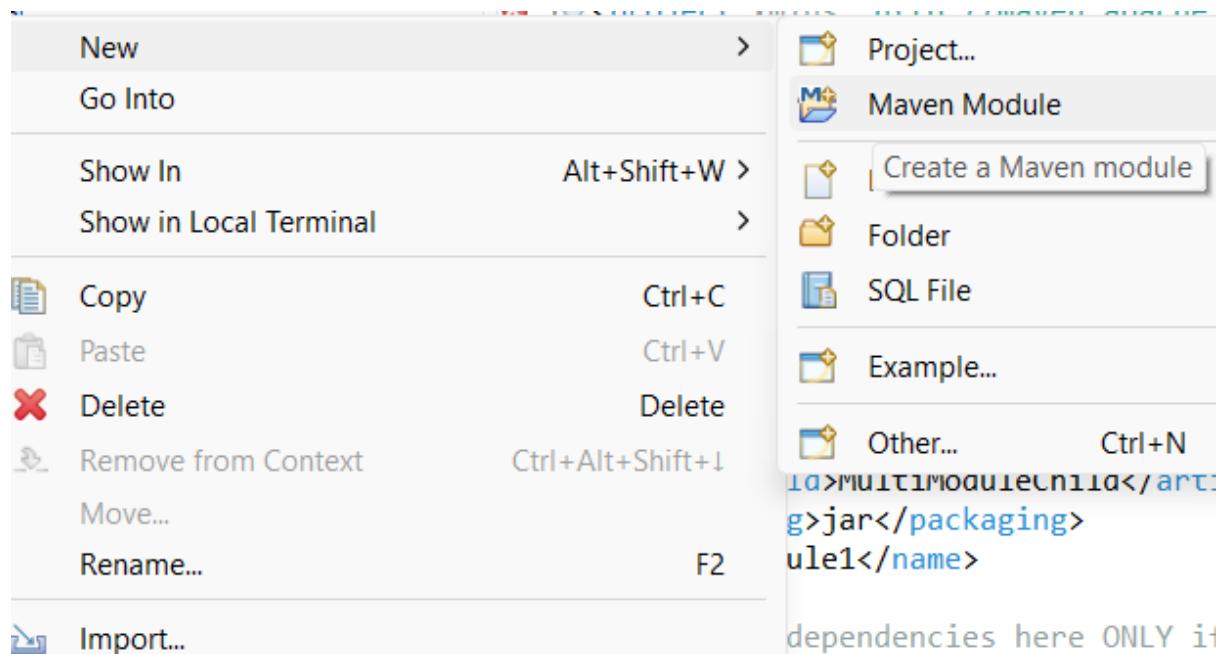
6.Check the option Create a Simple project(skip archetype selection), give the artifactID: MultiModuleChild1 and click on next and finish



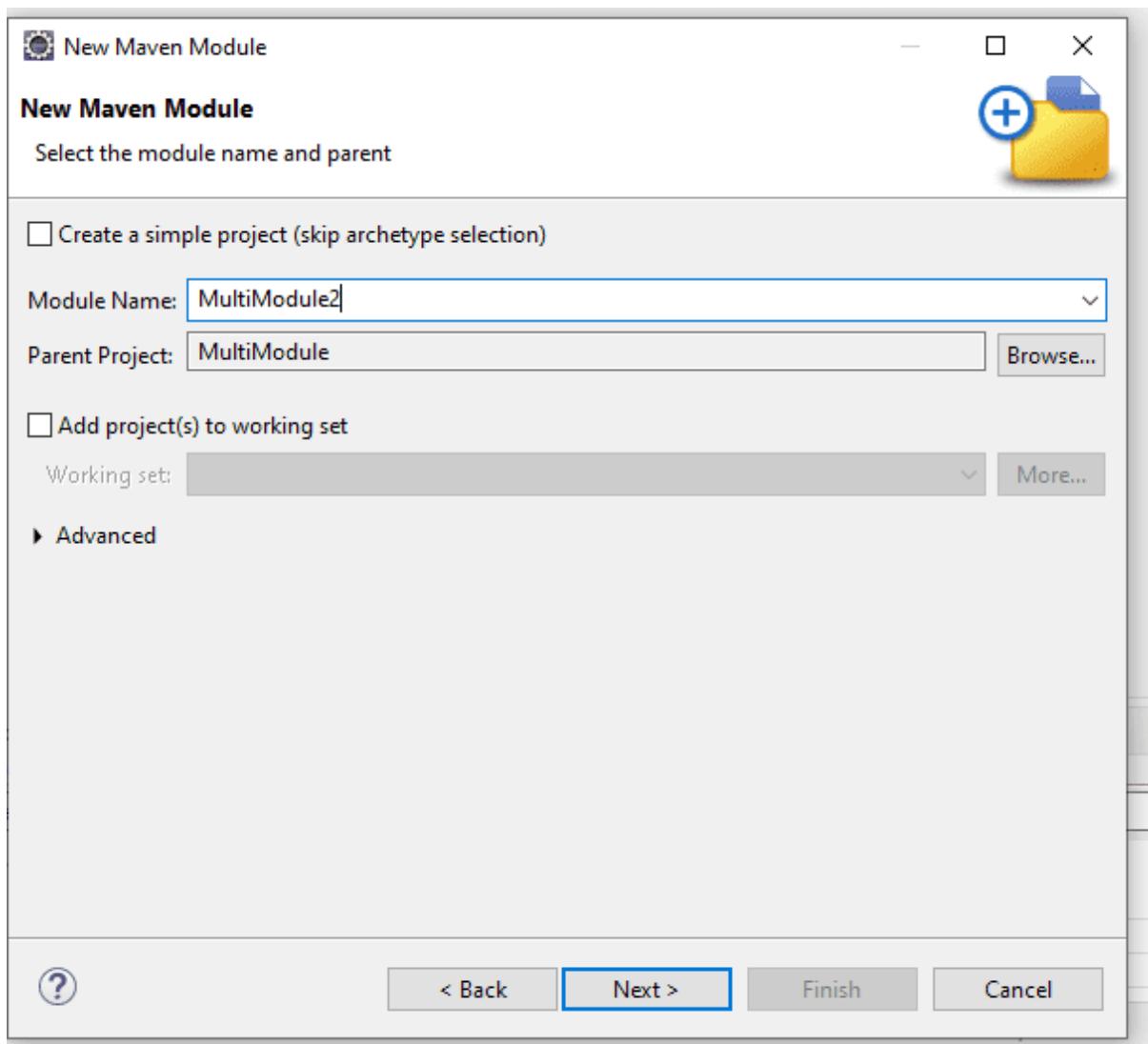
7.Now you can see, the module1 we created is displayed in the project explorer with a separate pom.xml file.



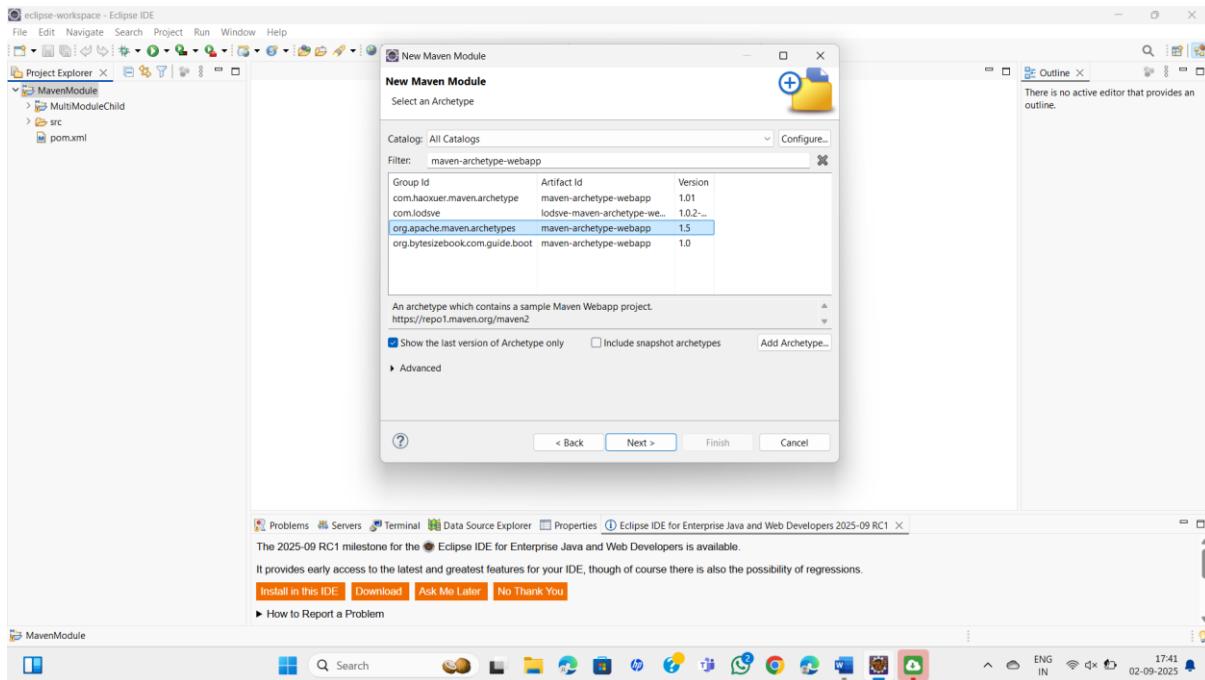
8. Right click on the MultiModule folder in the project explorer and opt new -> mavenModule



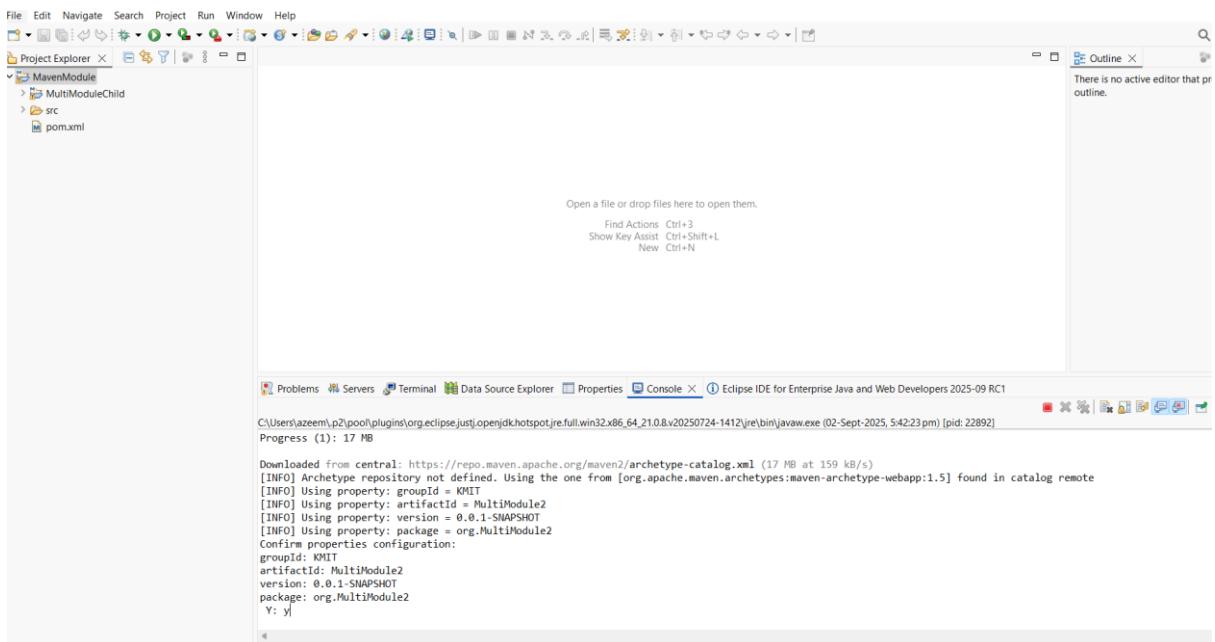
9. Give the artifactID: MultiModuleChild2 and click on next.



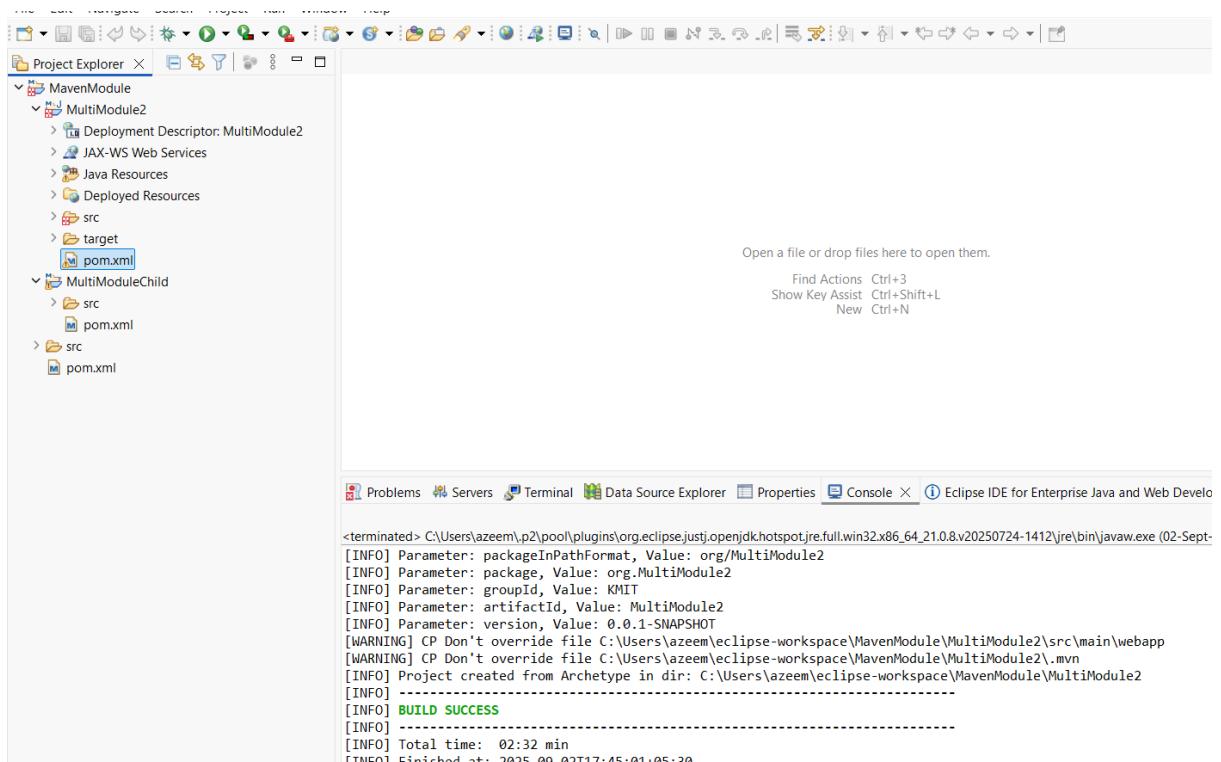
10.In filters search for maven-archetype-webapp, select the version 1.1/1.5 and click on next.



11. Now click on finish, and confirm with a Y in the console.

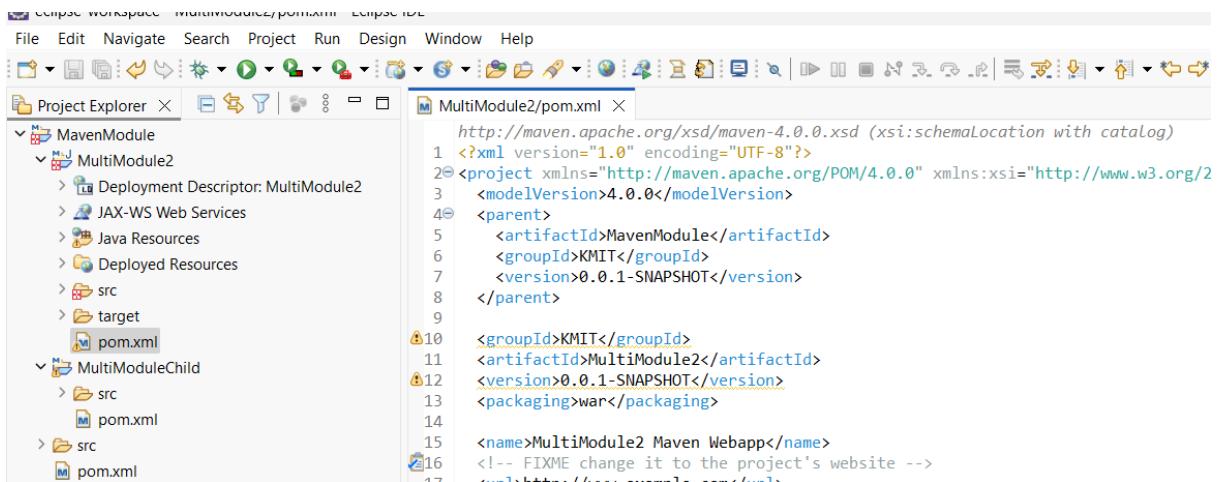


12. Now you can watch the new child is been added to the parent project.



Linking two modules in a Parent Project:

1. Goto pom.xml of child2.



2. Navigate to dependencies tag. Update the dependencies with child1 dependency as given below, and save pom.xml after update.

```

<!-- FIXME change it to the project's website -->
<url>http://www.example.com</url>

<properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>8</maven.compiler.source>
    <maven.compiler.target>8</maven.compiler.target>
</properties>

<dependencies>
    <dependency>
        <groupId>KMIT</groupId>
        <artifactId>MultiModuleChild</artifactId>
        <version>0.0.1-SNAPSHOT</version>
    </dependency>
</dependencies>

```

2. Now build the child2 by right clicking it and opting run as->maven build.

```

<!-- FIXME change it to the project's website -->
<url>http://www.example.com</url>

<properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>8</maven.compiler.source>
    <maven.compiler.target>8</maven.compiler.target>
</properties>

<dependencies>
    <dependency>
        <groupId>KMIT</groupId>
        <artifactId>MultiModuleChild</artifactId>
        <version>0.0.1-SNAPSHOT</version>
    </dependency>
</dependencies>

```

Output from the terminal:

```

<terminated> MultiModule2 [Maven Build] C:\Users\azeem\p2\pool\plugins\org.eclipse.jst.openjk.hotspot.jre.full.win32.x86_64_210.8.v20250724-1412\jre\bin\javaw.exe (02-Sept-2025, 5:48:32 pm - 5:48:39 pm elapsed:
[INFO] Scanning for projects...
[INFO]
[INFO] -----[ KMIT:MultiModule2 ]-----
[INFO] Building MultiModule2 Maven Webapp 0.0.1-SNAPSHOT
[INFO]   from pom.xml
[INFO]   -----[ war ]-----
[WARNING] The POM for KMIT:MultiModuleChild:jar:0.0.1-SNAPSHOT is missing, no dependency information available
[INFO]
[INFO] BUILD FAILURE
[INFO]
[INFO] Total time: 0.910 s
[INFO] Finished at: 2025-09-02T17:48:39+05:30
[INFO] -----
[ERROR] Failed to execute goal on project MultiModule2: Could not resolve dependencies for project KMIT:MultiModule2:war:0.0.1-SNAPSHOT
[ERROR] dependency: KMIT:MultiModuleChild:jar:0.0.1-SNAPSHOT (compile)
[INFO]

```

3. The build will be a *failure*. Because we haven't build the parent project and the child project. Child1 is dependent on parent. And Child2 is dependent on child2. SO we have to build ass the previous module first and then build the current child2.

4. After building parent and child1, build child2 now the build will be a *Success*

Parent

eclipse-workspace - MultiModuleChild/pom.xml - Eclipse IDE

File Edit Navigate Search Project Run Design Window Help

Project Explorer MavenModule MultiModule2 MultiModuleChild pom.xml

```
<parent>
    <groupId>com.azeeem.m2</groupId>
    <version>0.0.1-SNAPSHOT</version>
</parent>
<artifactId>MultiModuleChild</artifactId>
<packaging>jar</packaging>
<name>Module1</name>
<!-- Add dependencies here ONLY if this child needs external libraries -->
<dependencies>
    <!-- Example: 
        <dependency>
            <groupId>org.springframework</groupId>
            <artifactId>spring-context</artifactId>
            <version>6.1.0</version>
        </dependency>
    </dependencies>
</project>
```

Overview Dependencies Dependency Hierarchy Effective POM pom.xml

Problems Servers Terminal Data Source Explorer Properties Console Eclipse IDE for Enterprise Java and Web Developers 2025-09 RC1

```
<terminated> MavenModule [4] [Maven Build] C:\Users\azeem\p2\pool\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.win32.x86_64_21.0.8.v20250724-1412\jre\bin\javaw.exe (02-Sept-2025, 6:01:42 pm - 6:01:54 pm elapsed)
[INFO] Installing C:\Users\azeem\eclipse-workspace\MavenModule\MultiModule2\target\MultiModule2.war to C:\Users\azeem\.m2\repository\KMIT\MultiModule2\0.0.1-SNAPSHOT
[INFO] -----
[INFO] Reactor Summary for MultiModule creation 0.0.1-SNAPSHOT:
[INFO]
[INFO] MultiModule creation ..... SUCCESS [ 0.877 s]
[INFO] Module1 ..... SUCCESS [ 3.603 s]
[INFO] MultiModule2 Maven Webapp ..... SUCCESS [ 2.201 s]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 6.990 s
[INFO] Finished at: 2025-09-02T18:01:54+05:30
[INFO] -----
```

Child 1

eclipse-workspace - MultiModuleChild/pom.xml - Eclipse IDE

File Edit Navigate Search Project Run Design Window Help

Project Explorer MavenModule MultiModule2 MultiModuleChild pom.xml

```
<parent>
    <groupId>http://maven.apache.org/POM/4.0.0</groupId>
    <xsi:>http://www.w3.org/2001/XMLSchema-instance</xsi:>
    <xsi:schemaLocation>http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd</xsi:schemaLocation>
</parent>
<modelVersion>4.0.0</modelVersion>
<artifactId>MultiModuleChild</artifactId>
<packaging>jar</packaging>
<name>Module1</name>
<!-- Add dependencies here ONLY if this child needs external libraries -->
<dependencies>
    <!-- Example: 
        <dependency>
            <groupId>org.springframework</groupId>
            <artifactId>spring-context</artifactId>
            <version>6.1.0</version>
        </dependency>
    </dependencies>
</project>
```

Overview Dependencies Dependency Hierarchy Effective POM pom.xml

Problems Servers Terminal Data Source Explorer Properties Console Eclipse IDE for Enterprise Java and Web Developers 2025-09 RC1

```
<terminated> MultiModuleChild [Maven Build] C:\Users\azeem\p2\pool\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.win32.x86_64_21.0.8.v20250724-1412\jre\bin\javaw.exe (02-Sept-2025, 6:02:57 pm - 6:03:06 pm elapsed: 0:00)
[INFO] --- jar:3.4.1:jar (default-jar) @ MultiModuleChild ---
[WARNING] JAR will be empty - no content was marked for inclusion!
[INFO] Building jar: C:\Users\azeem\eclipse-workspace\MavenModule\MultiModuleChild\target\MultiModuleChild-0.0.1-SNAPSHOT.jar
[INFO] 
[INFO] --- maven-jar-plugin:3.1.2:jar (default-install) @ MultiModuleChild ---
[INFO] Installing C:\Users\azeem\eclipse-workspace\MavenModule\MultiModuleChild\pom.xml to C:\Users\azeem\.m2\repository\KMIT\MultiModuleChild\0.0.1-SNAPSHOT\MultiModu...
[INFO] 
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 4.323 s
[INFO] Finished at: 2025-09-02T18:03:06+05:30
[INFO] -----
```

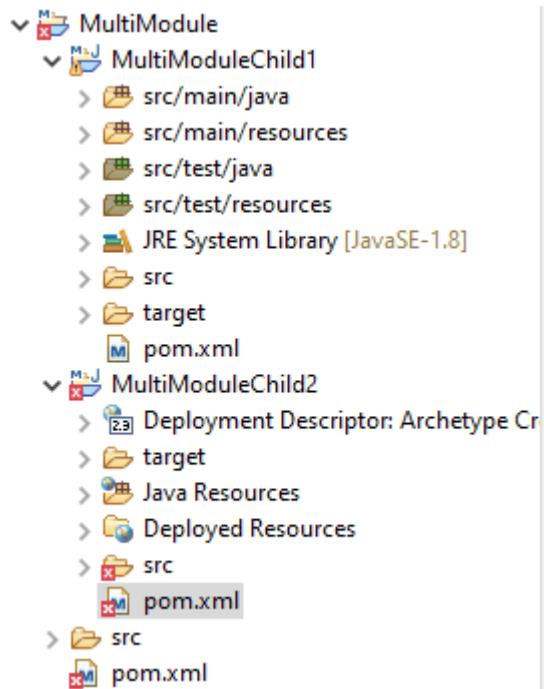
Child 2

The screenshot shows the Eclipse IDE interface with the following details:

- Project Explorer:** Displays the project structure with three modules: MultiModule, MultiModule2, and MultiModuleChild.
- MavenModule2/pom.xml:** The current file being edited, showing XML code for a Maven POM file. The code includes definitions for a parent module, a child module named MultiModuleChild, and various dependencies.
- Console:** A terminal window showing the output of a Maven build command. The log indicates the build was successful, with a total time of 4.546 seconds and a finished date of 2025-09-02T18:03:47+05:30.

```
<!--> <project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">
<modelVersion>4.0.0</modelVersion>
<parent>
  <groupId>KMIT</groupId>
  <artifactId>MavenModule</artifactId>
  <version>0.0.1-SNAPSHOT</version>
</parent>
<artifactId>MultiModuleChild</artifactId>
<packaging>jar</packaging>
<name>Module1</name>
<!-- Add dependencies here ONLY if this child needs external libraries -->
<dependencies>
  <!-- Example: -->
  <dependency>
    <!-->
  </dependency>
</dependencies>
<!-->
```

```
<terminated> MultiModule2 (1) [ Maven Build ] C:\Users\azeem\p2\pool\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.win32.x86_64_21.0.8.v20250724-1412\jre\bin\javaw.exe (02-Sept-2025, 6:03:38 pm - 6:03:47 pm elapsed: 0:00:0)
[INFO] Processing war project
[INFO] Copying webapp resources [C:\Users\azeem\eclipse-workspace\MavenModule\MultiModule2\src\main\webapp]
[INFO] Building war: C:\Users\azeem\eclipse-workspace\MavenModule\MultiModule2\target\MultiModule2.war
[INFO]
[INFO] --- maven-war-plugin:3.1.2:install (default-install) @ MultiModule2 ---
[INFO] Installing C:\Users\azeem\eclipse-workspace\MavenModule\MultiModule2\pom.xml to C:\Users\azeem\.m2\repository\KMIT\MultiModule2\0.0.1-SNAPSHOT\MultiModule2-0.0.1.war
[INFO] Installing C:\Users\azeem\eclipse-workspace\MavenModule\MultiModule2\target\MultiModule2.war to C:\Users\azeem\.m2\repository\KMIT\MultiModule2\0.0.1-SNAPSHOT\MultiModule2-0.0.1.war
[INFO]
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 4.546 s
[INFO] Finished at: 2025-09-02T18:03:47+05:30
[INFO] -----
```



Azeema firdous

23BD1A05A4

CSE-F