

Author: Hong Luu

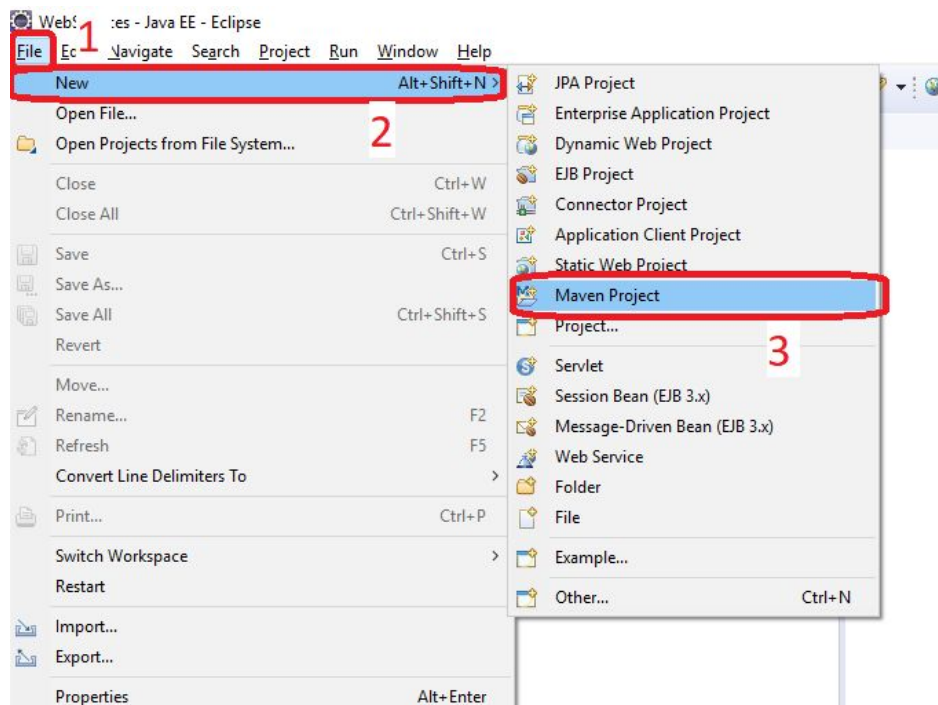
This document will show how to get a Maven Restful Web Service template that can produce JSON and XML. In addition, it solves the issue where unwanted null values appear in the output.

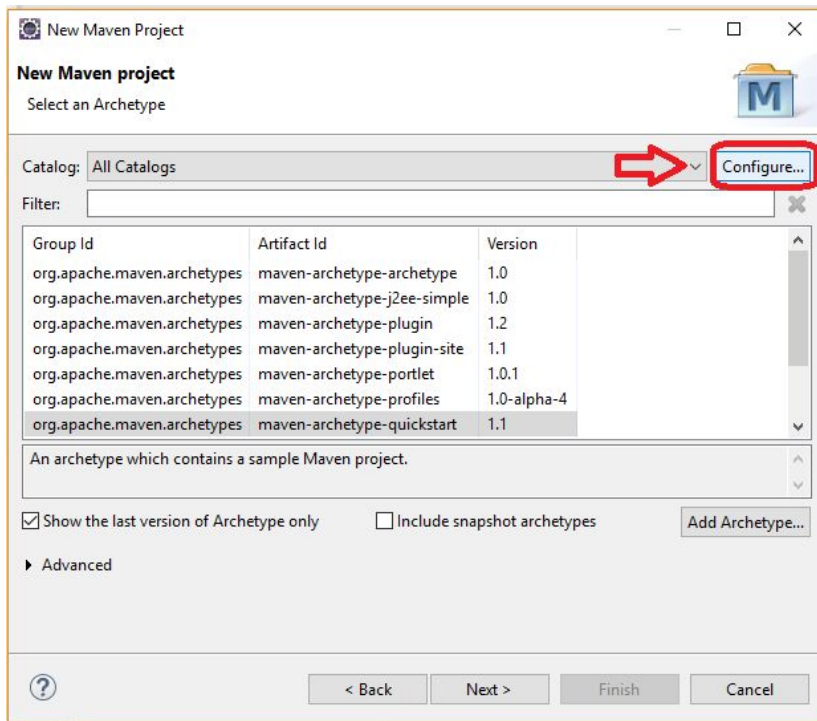
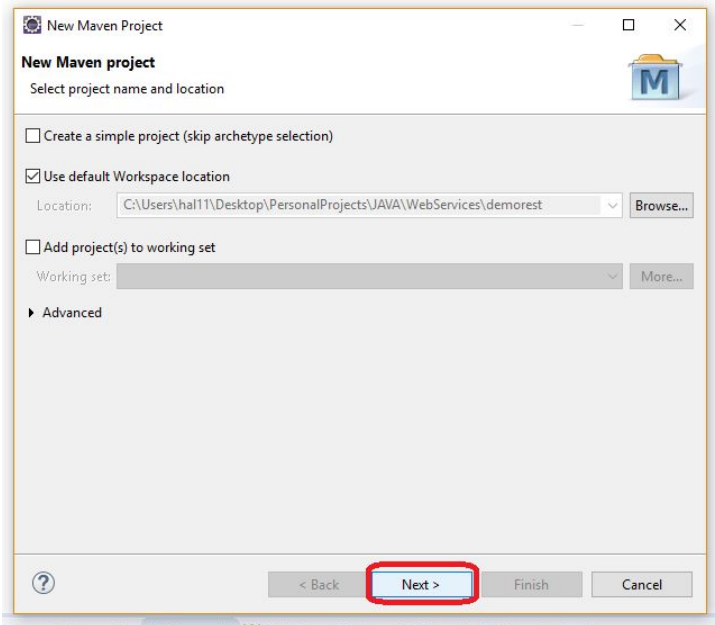
Assumption is you already have the following installed already:

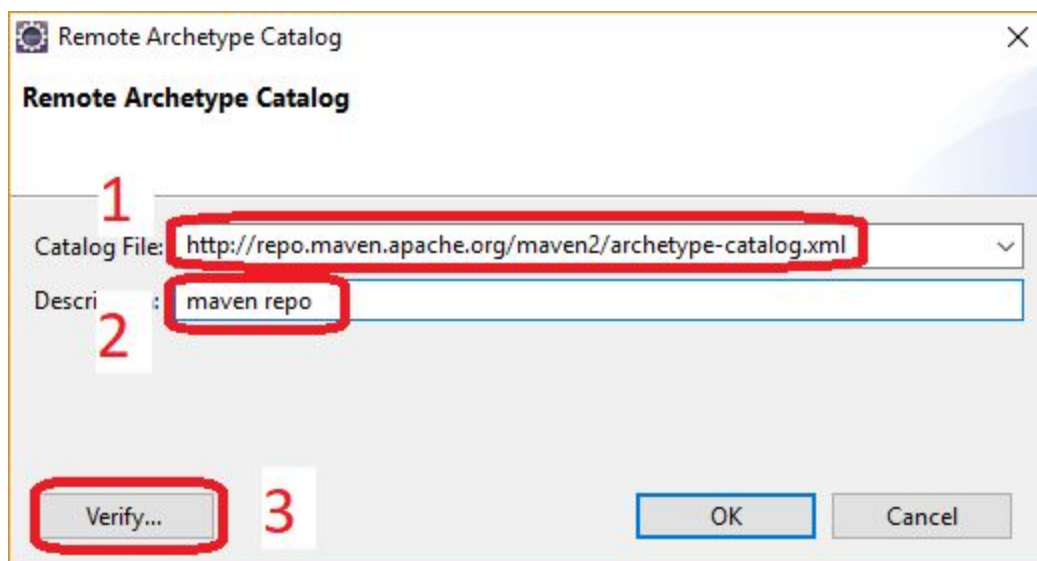
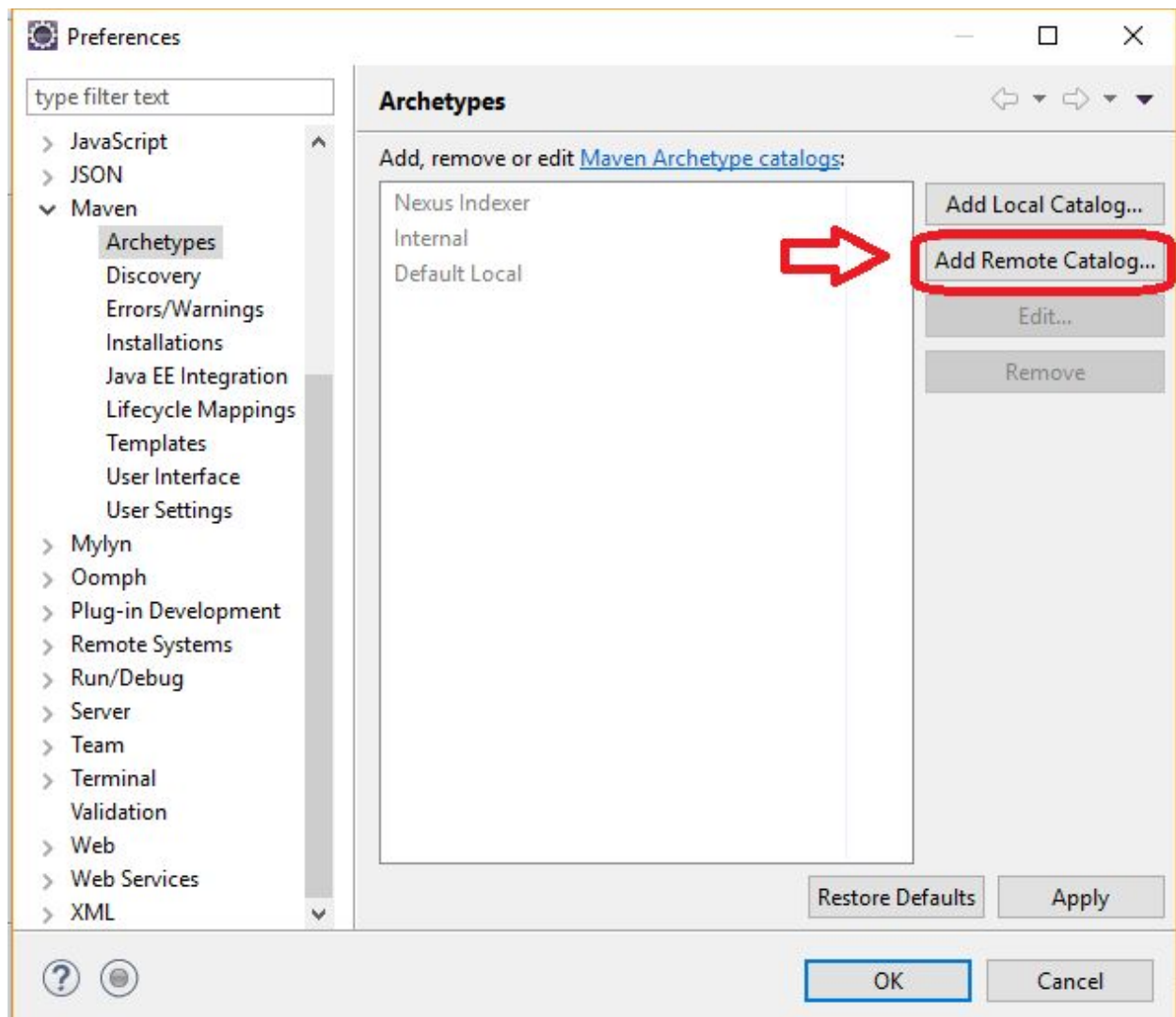
Eclipse JavaEE (I'm using Neon.2 Release)

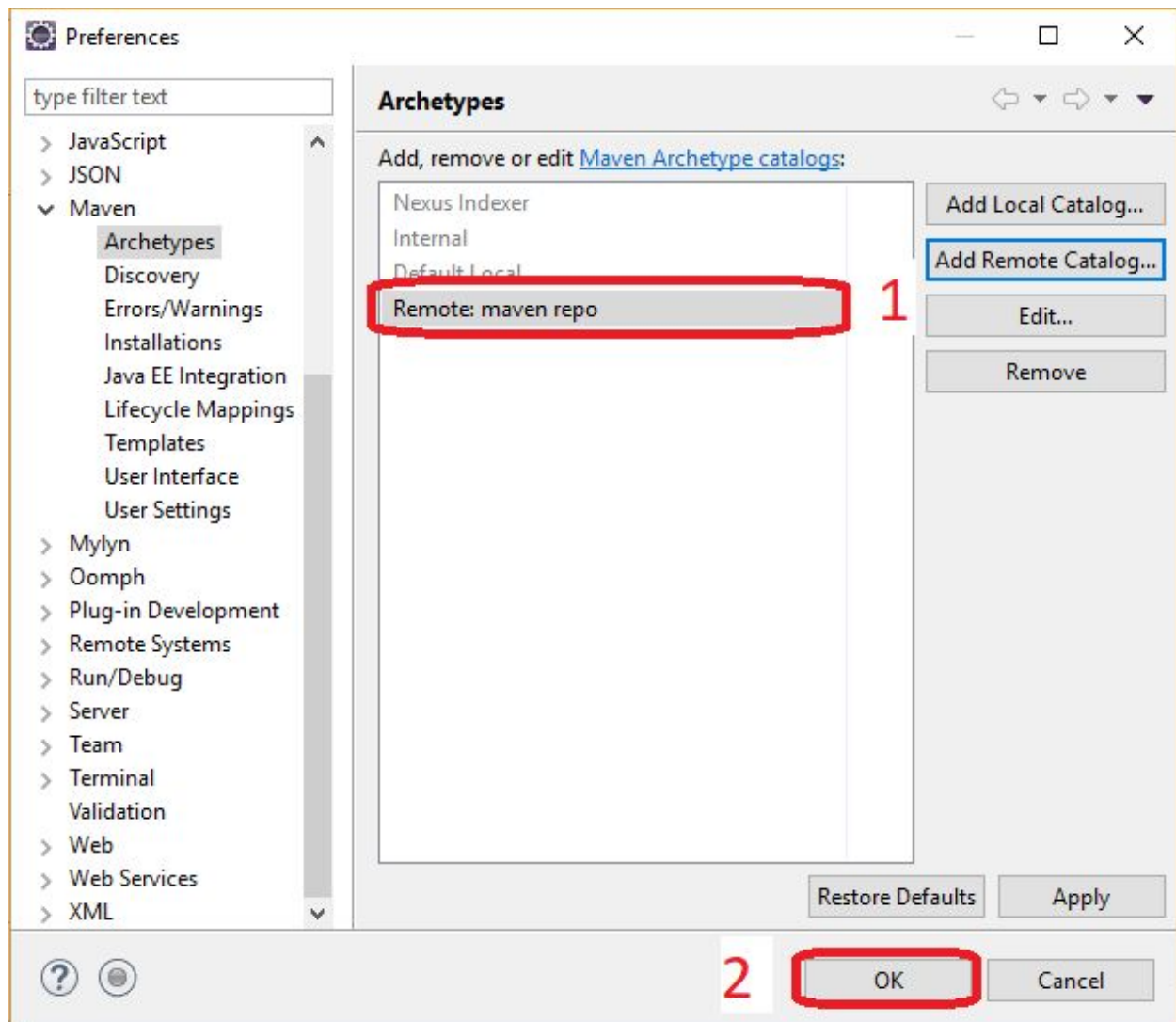
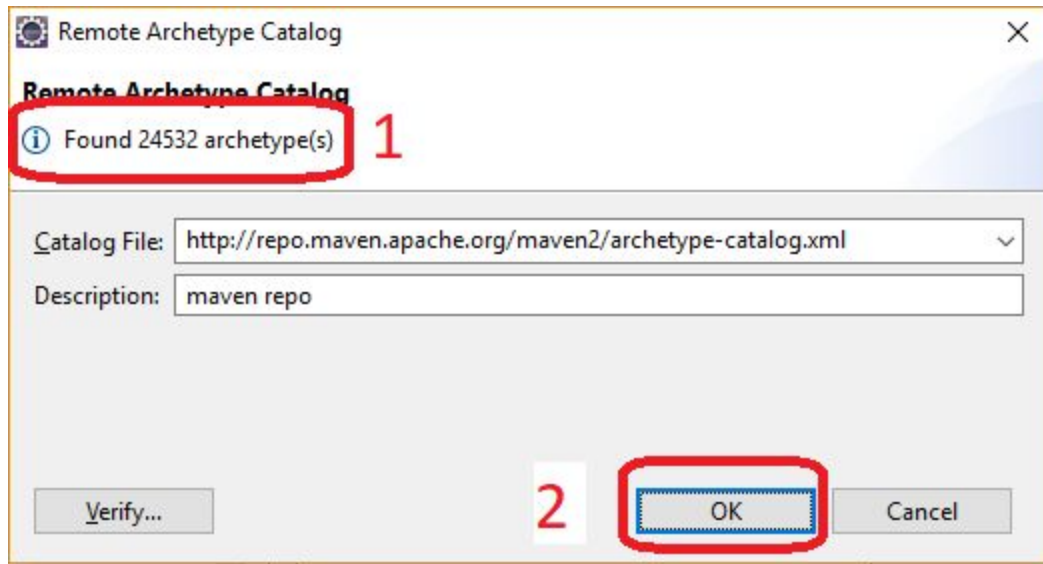
Java 1.7 (or above)

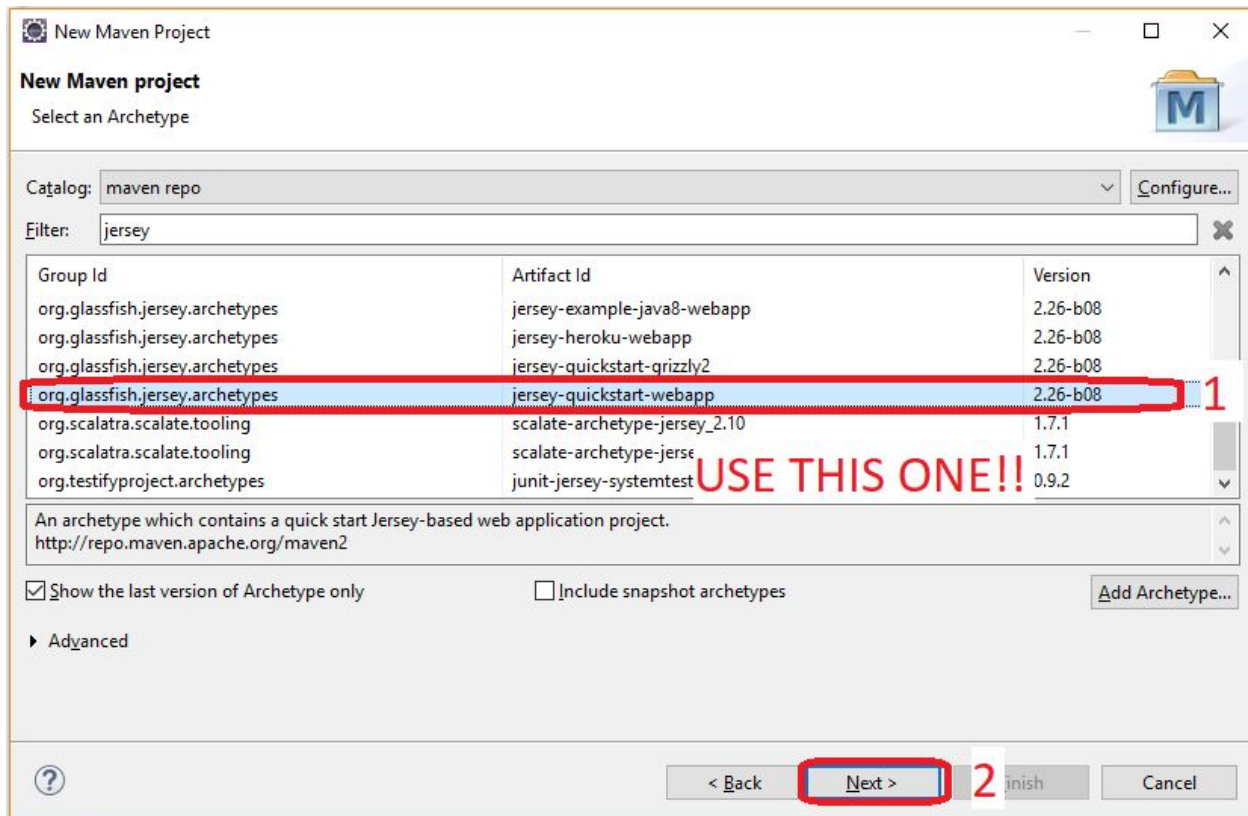
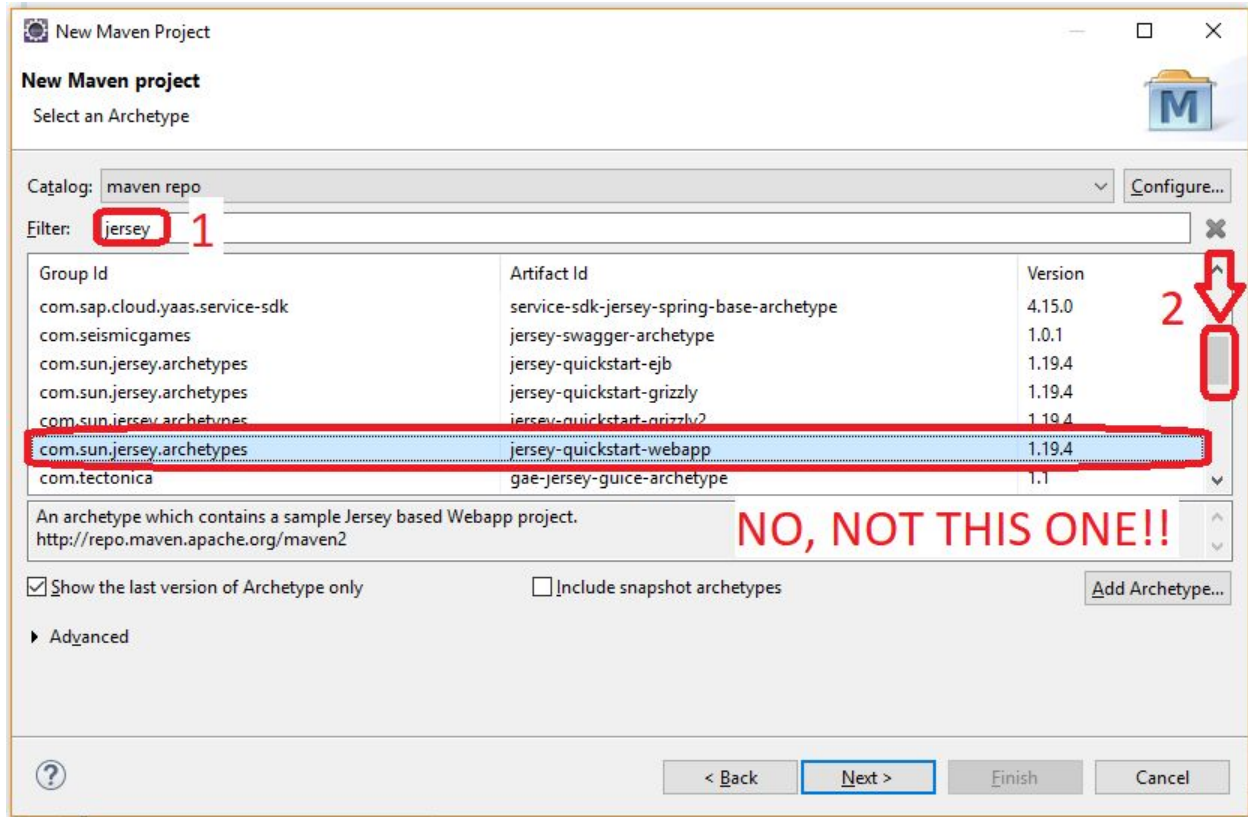
Apache Tomcat server (8.0x or above)











New Maven Project

Specify Archetype parameters

Group Id: **com.java.mystuff** 1

Artifact Id: **mavenExample** 2

Version: 0.0.1-SNAPSHOT

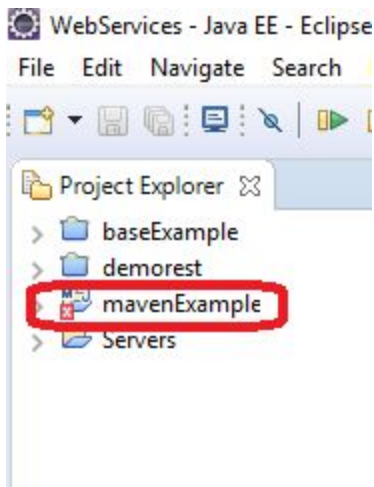
Package: com.java.mystuff.mavenExample

Properties available from archetype:

Name	Value

► Advanced

Finish 3



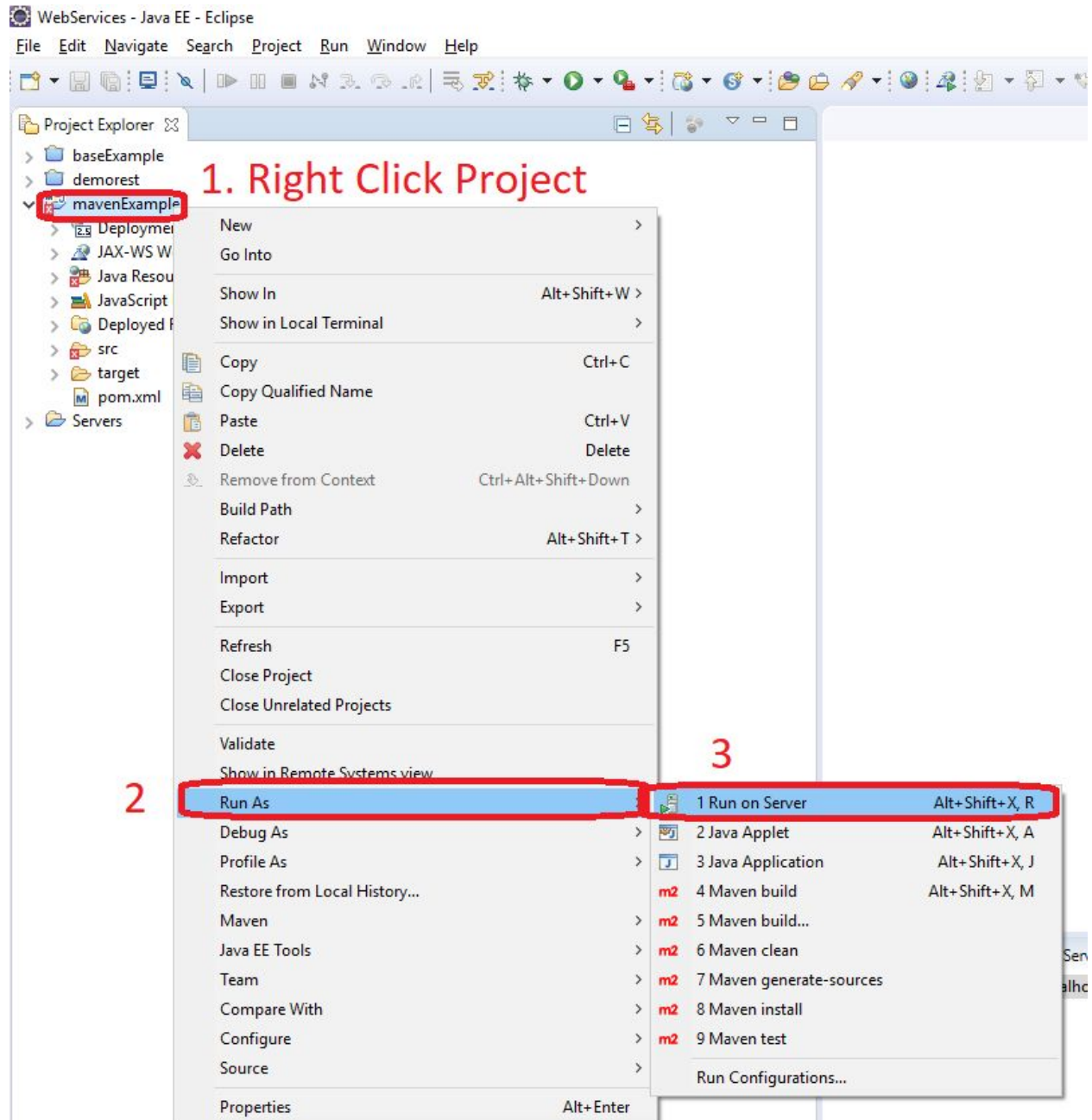
WebServices - Java EE - Eclipse

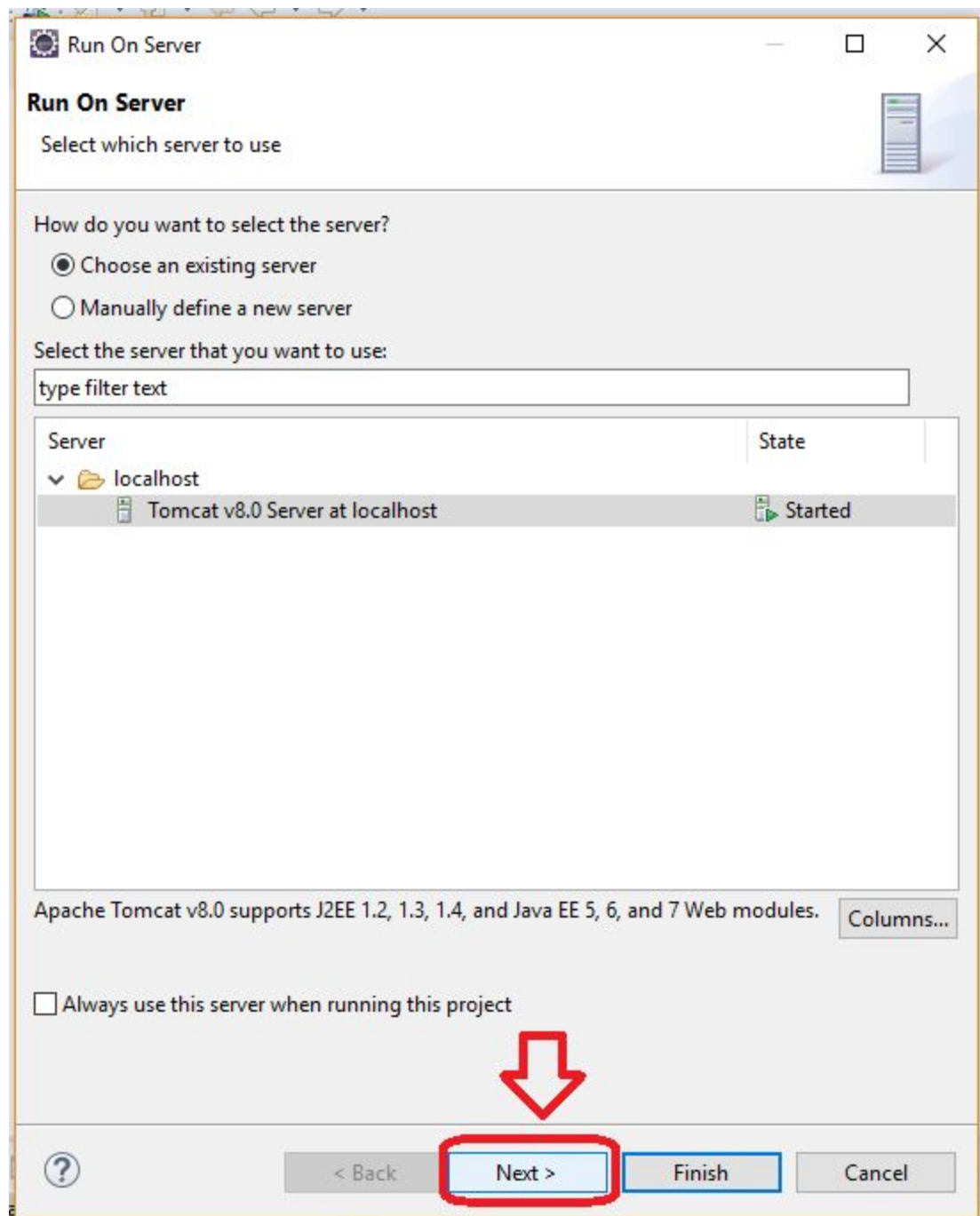
File Edit Navigate Search Project Run Window Help

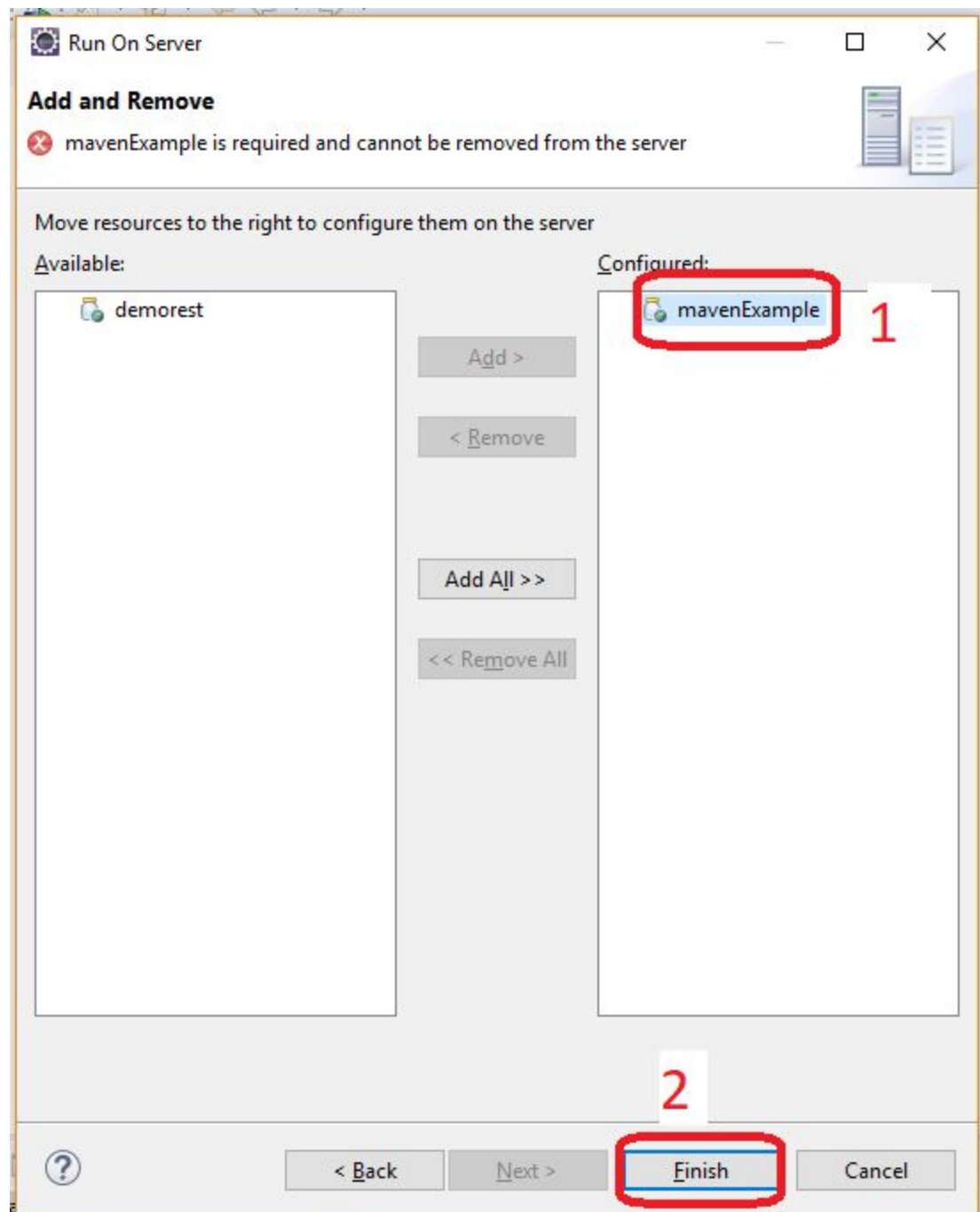


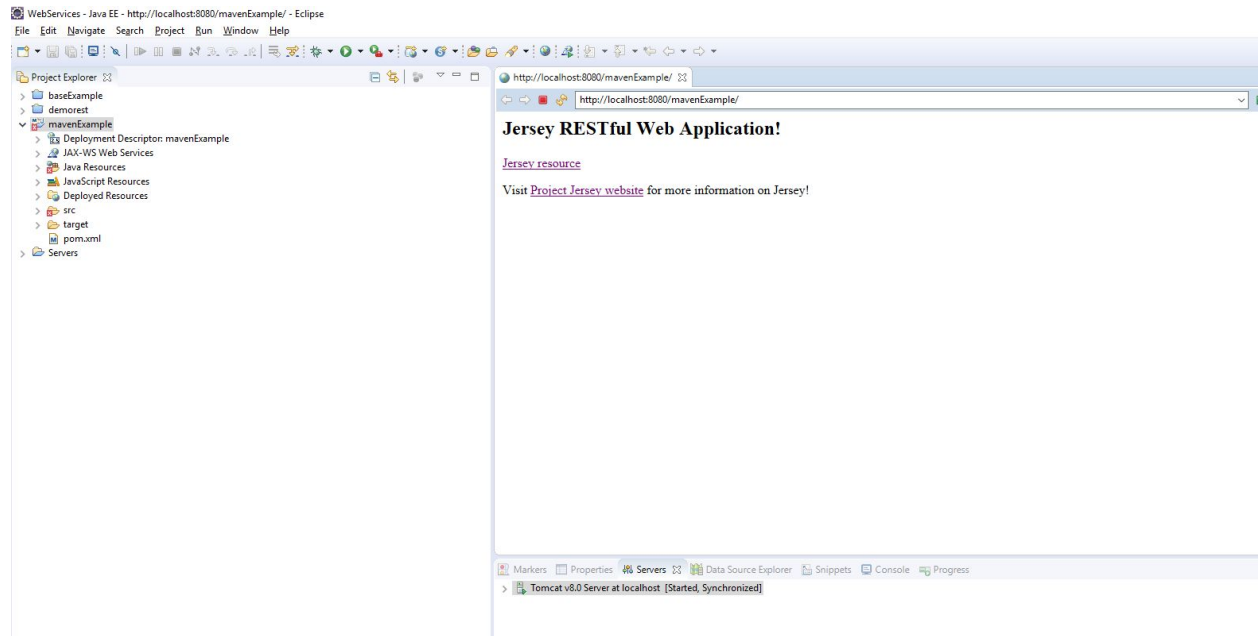
Project Explorer

- > baseExample
- > demorest
- ▼ mavenExample
 - > Deployment Descriptor: mavenExample
 - > JAX-WS Web Services
 - ▼ Java Resources
 - ▼ src/main/java
 - ▼ com.java.mystuff.mavenExample
 - > MyResource.java
 - src/main/resources
 - ▼ Libraries
 - > JRE System Library [JavaSE-1.7]
 - > Maven Dependencies
 - > JavaScript Resources
 - > Deployed Resources
 - ▼ src
 - ▼ main
 - ▼ java
 - ▼ com
 - ▼ java
 - ▼ mystuff
 - ▼ mavenExample
 - MyResource.java
 - resources
 - ▼ webapp
 - ▼ WEB-INF
 - web.xml
 - index.jsp
 - ▼ target
 - ▼ m2e-wtp
 - ▼ web-resources
 - ▼ META-INF
 - ▼ maven
 - ▼ com.java.mystuff
 - ▼ mavenExample
 - pom.properties
 - pom.xml
 - MANIFEST.MF
 - ▼ pom.xml
 - > Servers









WebServices - Java EE - Eclipse

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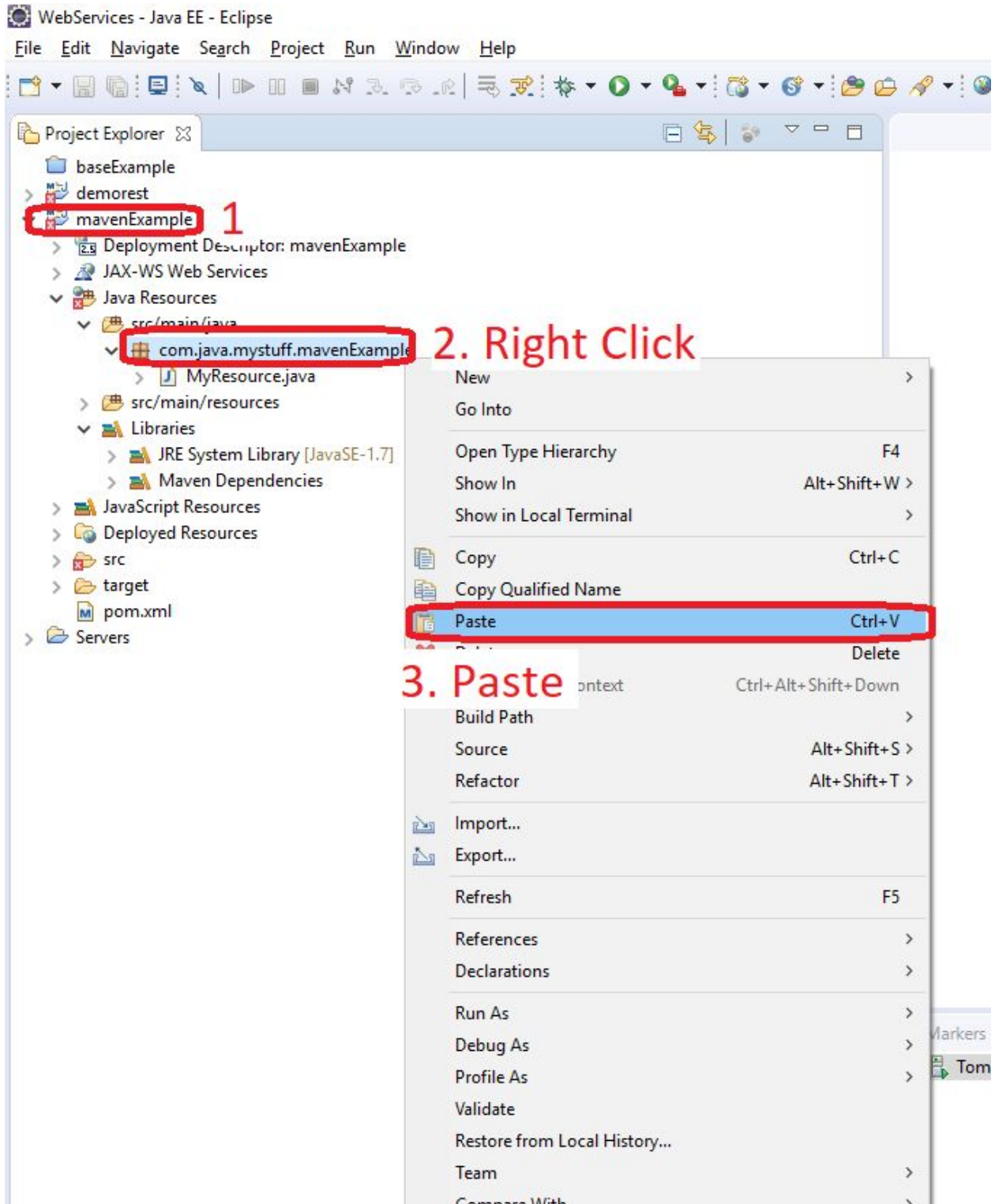


Project Explorer

- baseExample
 - ✓ demorest 1
 - > Deployment Descriptor: demorest
 - > JAX-WS Web Services
 - ✓ Java Resources
 - ✓ src/main/java
 - ✓ com.jersey.demorest
 - > User.java
 - > UserDao.java
 - > UserService.java
 - > src/main/resources
 - > Libraries
 - > JavaScript Resources
 - > Deployed Resources
 - > src
 - > target
 - > pom.xml
 - > mavenExample
 - > Servers

Getting files from
other project

2. Copy



WebServices - Java EE - mavenExample/src/main/java/com/java/mystuff/mavenExample/UserService.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help

Project Explorer

- baseExample
- demorest
- Deployment Descriptor: demorest
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- Java Resources
 - src/main/java
 - com.jersey.demorest
 - User.java
 - UserDao.java
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 - Maven Dependencies
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 - Deployed Resources
 - src
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 - pom.xml
 - Servers

UserService.java

```
1 package com.java.mystuff.mavenExample;
2
3 import java.util.List;
4
5 @Path("/UserService")
6 public class UserService {
7     UserDao userDao = new UserDao();
8
9     @GET
10    @Path("/users")
11    @Produces({MediaType.APPLICATION_XML, MediaType.APPLICATION_JSON})
12    public Response getUsers(@Context UriInfo uriInfo) {
13        GenericEntity<List<User>> entity = new GenericEntity<List<User>>(userDao.getAllUsers());
14        String format = uriInfo.getQueryParameters().getFirst("format");
15        if (format == null) {
16            System.out.println("format is null");
17        }
18        return Response.ok(entity, format==null? MediaType.APPLICATION_XML : MediaType.APPLICATION_JSON)
19            .build();
20    }
21 }
```

Remember Paths

Markers Properties Servers Data Source Explorer Snippets Console Progress

Tomcat v8.0 Server at localhost [Started, Synchronized]

Project Explorer

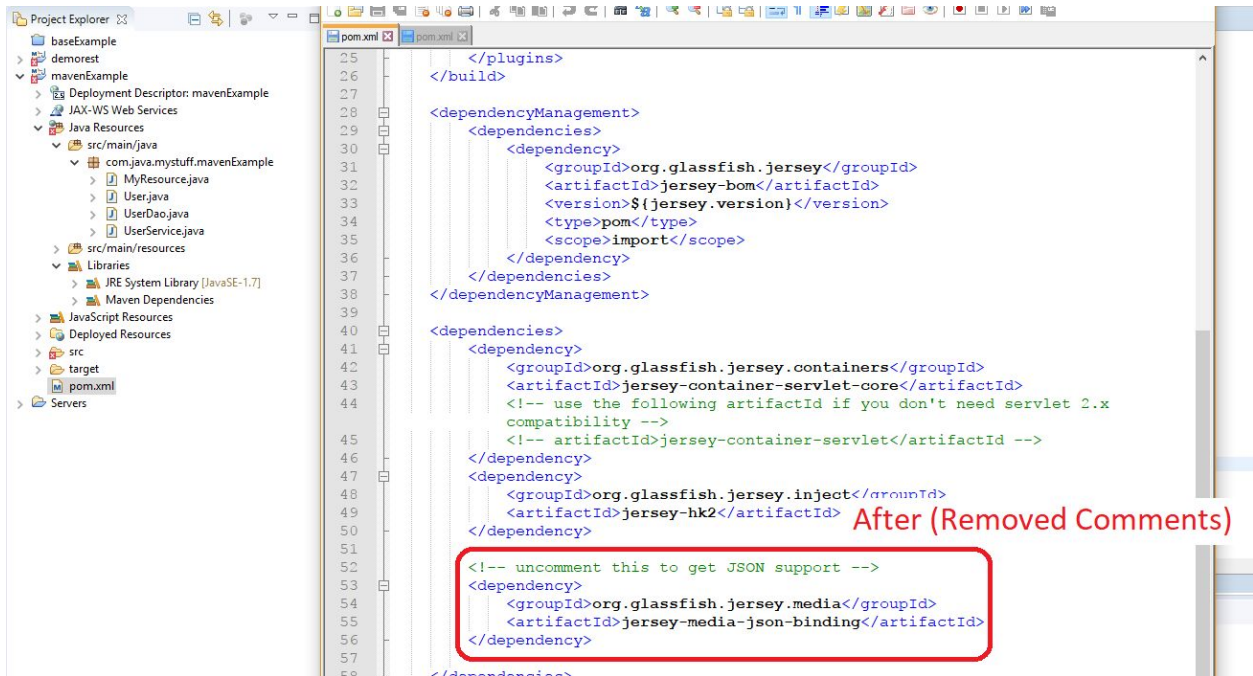
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- demorest
- mavenExample
 - Deployment Descriptor: mavenExample
 - JAX-WS Web Services
 - Java Resources
 - src/main/java
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 - Libraries
 - JRE System Library [JavaSE-1.7]
 - Maven Dependencies
 - JavaScript Resources
 - Deployed Resources
 - src
 - target
 - pom.xml
 - Servers

Open POM file from your directory

pom.xml

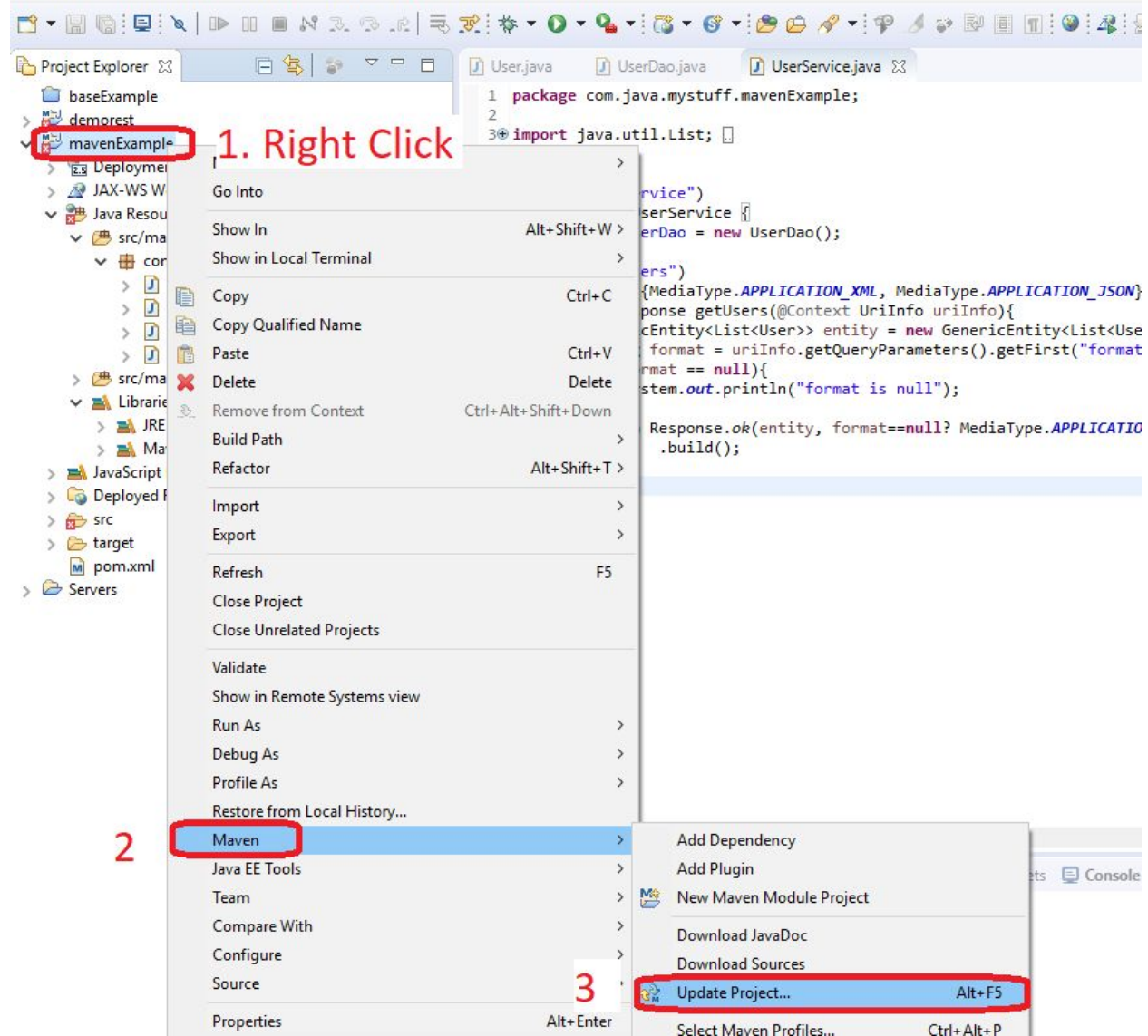
```
26 </build>
27
28 <dependencyManagement>
29     <dependencies>
30         <dependency>
31             <groupId>org.glassfish.jersey</groupId>
32             <artifactId>jersey-bom</artifactId>
33             <version>${jersey.version}</version>
34             <type>pom</type>
35             <scope>import</scope>
36         </dependency>
37     </dependencies>
38 </dependencyManagement>
39
40 <dependencies>
41     <dependency>
42         <groupId>org.glassfish.jersey.containers</groupId>
43         <artifactId>jersey-container-servlet-core</artifactId>
44         <!-- use the following artifactId if you don't need servlet 2.x compatibility -->
45         <!-- artifactId>jersey-container-servlet</artifactId -->
46     </dependency>
47     <dependency>
48         <groupId>org.glassfish.jersey.inject</groupId>
49         <artifactId>jersey-hk2</artifactId>
50     </dependency>
51     <!-- uncomment this to get JSON support -->
52     <dependency>
53         <groupId>org.glassfish.jersey.media</groupId>
54         <artifactId>jersey-media-json-binding</artifactId>
55     </dependency>
56 </dependencies>
57
58 <properties>
59     <jersey.version>2.26-b08</jersey.version>
60     <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
61 </properties>
62 </project>
```

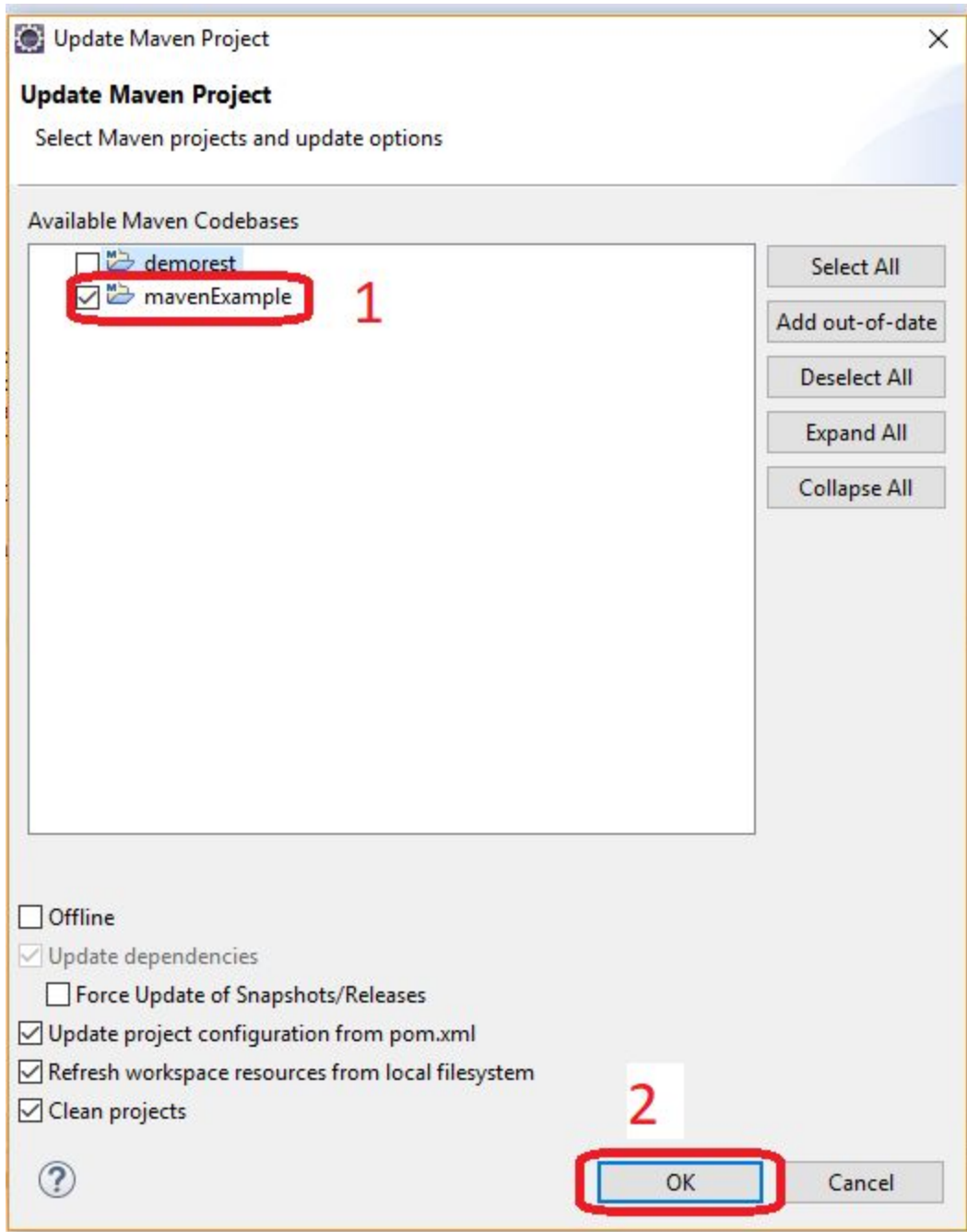
Before



WebServices - Java EE - mavenExample/src/main/java/com/java/mystuff/mavenExample/UserService.java - Eclipse

File Edit Source Refactor Navigate Search Project Run Window Help





The screenshot shows the Eclipse IDE interface. In the Project Explorer on the left, the 'mavenExample' project is selected and highlighted with a red box, with a red '1' and the text '1. Right Click' next to it. A context menu is open over this project, listing various actions like 'New', 'Go Into', 'Copy', 'Paste', etc. The 'Run As' option is highlighted with a red box and a red '2'. A submenu is open for 'Run As', listing options like '1 Run on Server', '2 Java Applet', '3 Java Application', etc. The '1 Run on Server' option is highlighted with a red box and a red '3'. The main editor on the right shows the code for 'UserService.java'.

```

1 package com.java.mystuff.mavenExample;
2
3 import java.util.List;

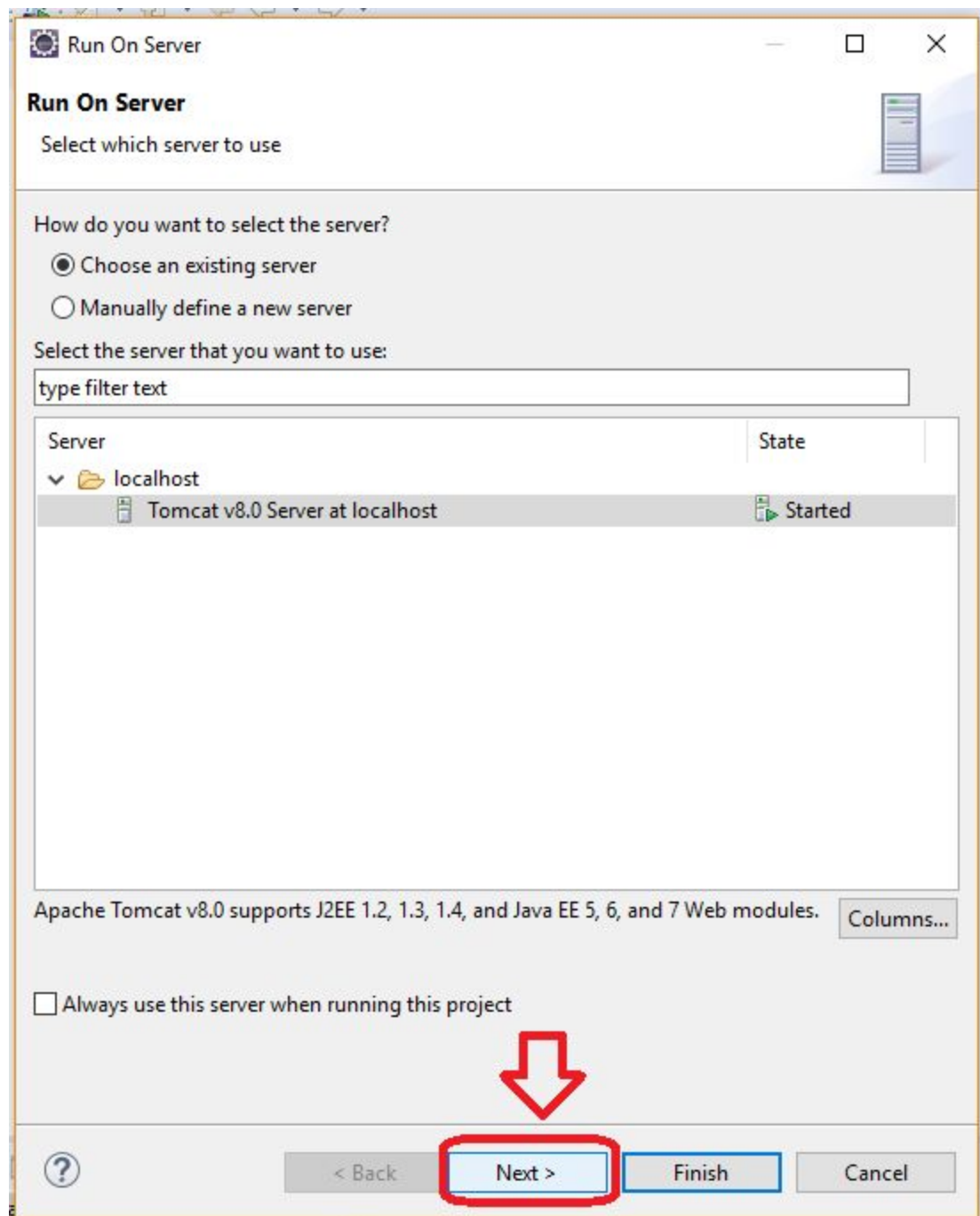
...

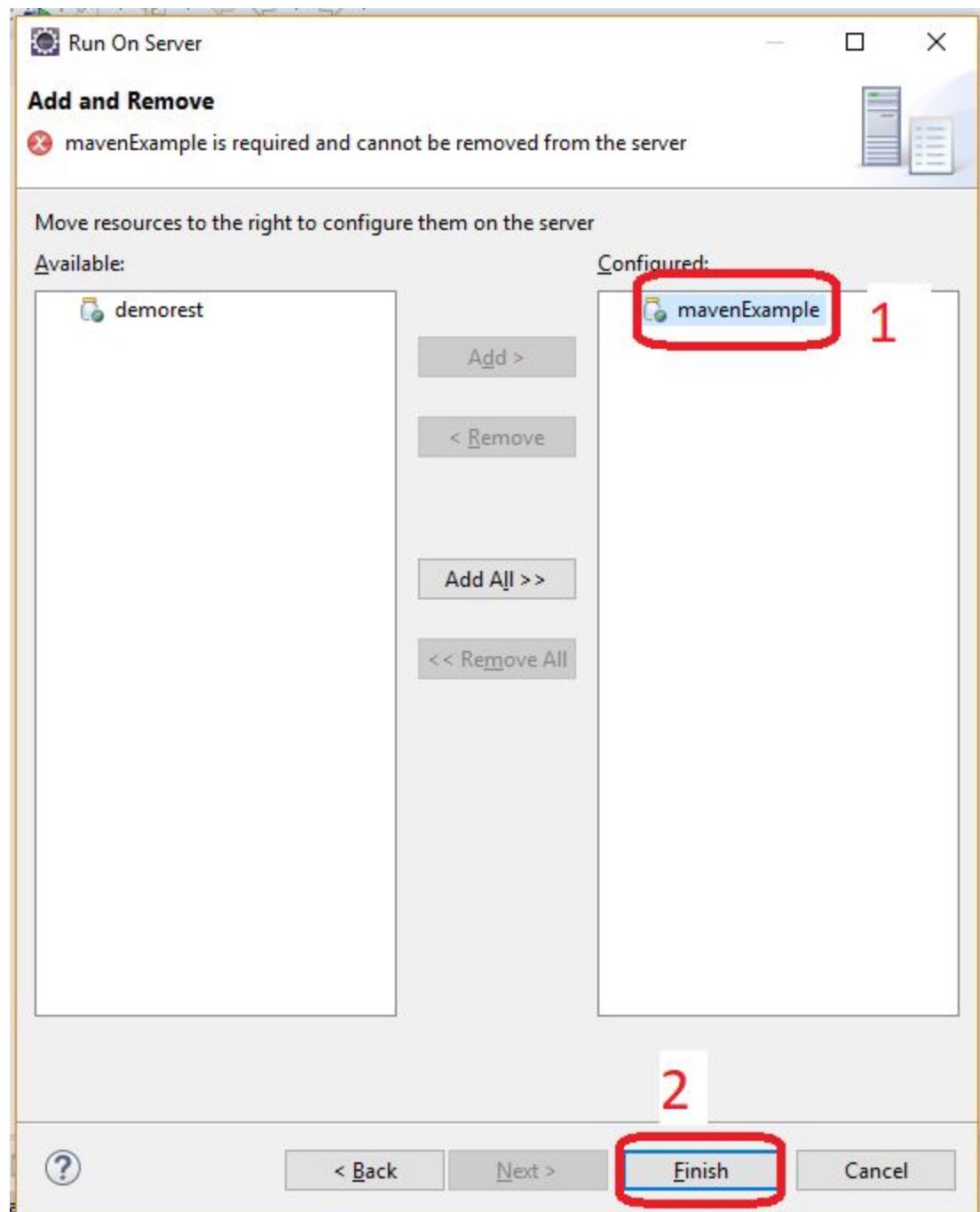
service")
UserService {
    UserDao = new UserDao();

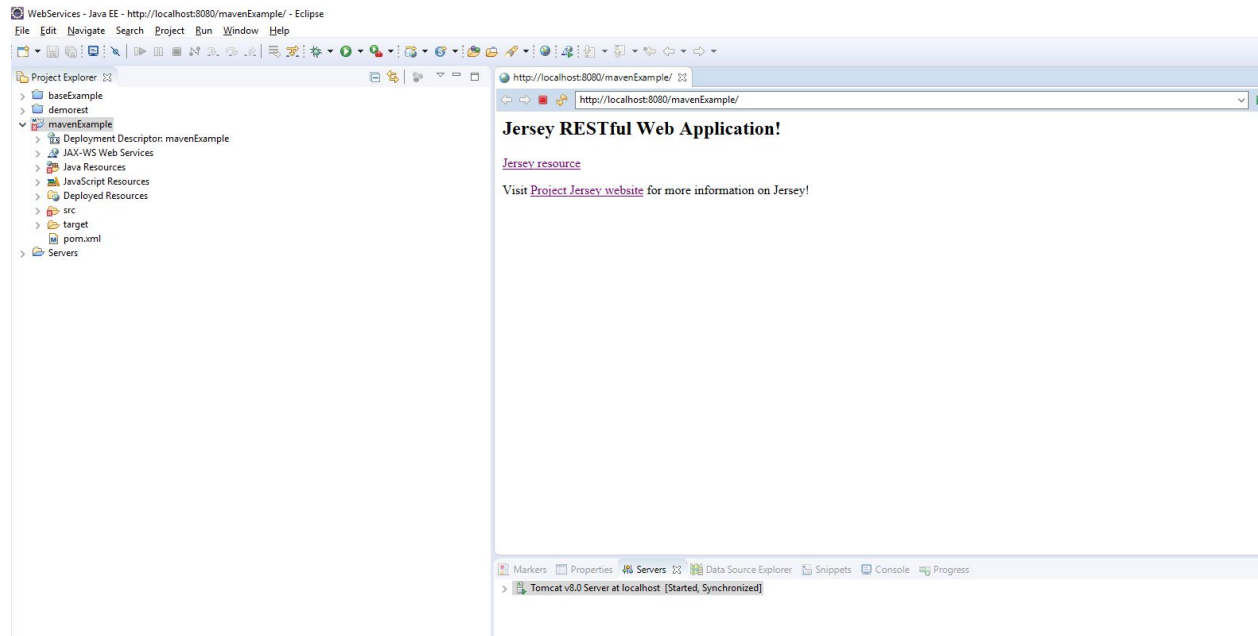
...

sers")
({MediaType.APPLICATION_XML, MediaType.APPLICATION
sponse getUsers(@Context UriInfo uriInfo){
    icEntity<List<User>> entity = new GenericEntity
g format = uriInfo.getQueryParameters().getFirs
ormat == null){
system.out.println("format is null");

n Response.ok(entity, format==null? MediaType.A
.build();
    
```







```
User.java UserDao.java UserService.java http://localhost:8080
1 package com.java.mystuff.mavenExample;
2
3 import java.util.ArrayList;
4
5
6 public class UserDao {
7     public List<User> getAllUsers(){
8
9         List<User> userList = null;
10        User user = new User(1, "Name01", "Teacher01");
11        User user2 = new User(2, null, "Teacher02");
12        userList = new ArrayList<User>();
13        userList.add(user);
14        userList.add(user2);
15        return userList;
16    }
17 }
```

NULL

Builder Team Library IN SYNC hluu114@...

http://localhost:8080/web-s http://localhost:8080/ X + No Environment

GET http://localhost:8080/mavenExample/webapi/UserService/users Params Send

Authorization Headers Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (4) Tests Status: 200 OK

Pretty Raw Preview XML

```
1 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
2 <users>
3   <user>
4     <id>1</id>
5     <name>Name01</name>
6     <profession>Teacher01</profession>
7   </user>
8   <user>
9     <id>2</id>
10    <profession>Teacher02</profession>
11  </user>
12 </users>
```

XML output without NULLS

Builder Team Library IN SYNC hluu114@...

http://localhost:8080/web-s http://localhost:8080/ X + No Environment

GET http://localhost:8080/mavenExample/webapi/UserService/users?format=json Params Send

Authorization Headers Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (4) Tests Status: 200 OK

Pretty Raw Preview JSON

```
1 [
2   {
3     "id": 1,
4     "name": "Name01",
5     "profession": "Teacher01"
6   },
7   {
8     "id": 2,
9     "profession": "Teacher02"
10  }
11 ]
```

JSON output without NULLS