1.Add a maven dependency and its related repository URL.

Dependency :

```
<dependency>
    <groupId>mysql</groupId>
    <artifactId>mysql-connector-java</artifactId>
    <version>8.0.28</version>
    <scope>compile</scope>

</dependency>
```

Repository:

```
<repository>
    <id>mysql-8</id>
    <url>https://repo1.maven.org/maven2/mysql/mysql-connector-java/8.0.28/</url>
</repository>
```

2.Add a new repository in the pom.xml and use its dependencies.

>>I am using remote repository of hibernate.

```
<!--adding new repository-->

<repository>
    <id>hibernate-id</id>
    <url>https://repo1.maven.org/maven2/org/hibernate/hibernate-core/5.5.6/</url>
</repository>
```

3.Using JAR plugin, make changes in the pom.xml to make the jar executable. Using java -jar JAR_NAME, the output should be printed as "Hello World"

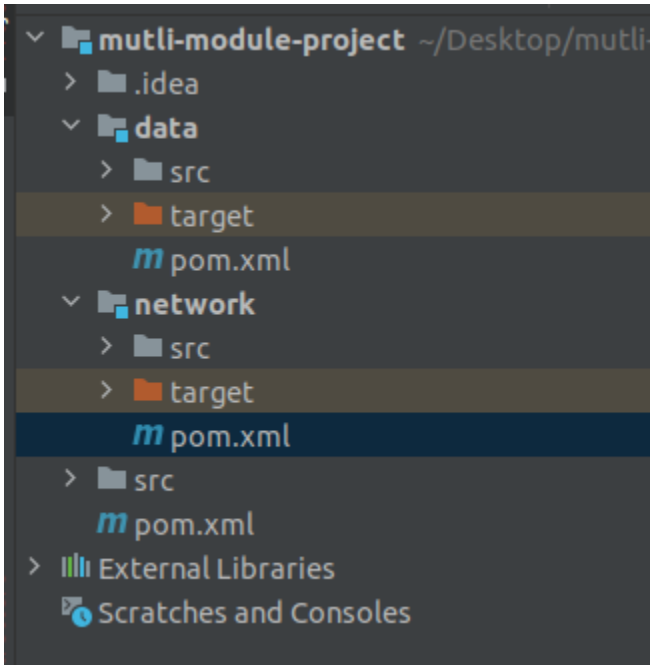
```xml
<build>
    <plugins>
        <plugin>
            <!-- Build an executable JAR -->
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-jar-plugin</artifactId>
            <version>2.4</version>
            <configuration>
                <archive>
                    <manifest>
                        <mainClass>HelloWorld</mainClass>
                    </manifest>
                </archive>
            </configuration>
        </plugin>

    </plugins>
</build>
```

```
lakshay@ttnpl-5752:~/Desktop/MavenAssignment/target$ java -jar BootCamp-Exercise-1.0-SNAPSHOT.jar
Hello World
lakshay@ttnpl-5752:~/Desktop/MavenAssignment/target$
```

4.Differentiate between the different dependency scopes: compile, runtime, test, provided using different dependencies being defined in your pom.xml.
>>**compile** - It is the default scope. It is needed to build,test and run the project.
>>**runtime** - They are not needed to build, but are part of the classpath to test and run the project.
>>**test** - They are needed to compile and run the unit tests.
>>**provided** - It is used for only build and testing the project. The dependencies are provided during runtime.

```
<dependency>
    <groupId>mysql</groupId>
    <artifactId>mysql-connector-java</artifactId>
    <version>8.0.28</version>
    <scope>compile</scope>
</dependency>
<dependency>
    <groupId>org.hibernate</groupId>
    <artifactId>hibernate-core</artifactId>
    <version>5.5.6</version>
    <scope>runtime</scope>
</dependency>
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.4</version>
    <scope>test</scope>
</dependency>
    <dependency>
        <groupId>log4j</groupId>
        <artifactId>log4j</artifactId>
        <version>1.2.14</version>
        <scope>provided</scope>
    </dependency>
```

5.Create a multi-module project. Run package command at the top level to make jar of every module.




```
[INFO] mutli-module-project ..............................  SUCCESS [  0.353 s]
[INFO] data ..............................................  SUCCESS [  1.022 s]
[INFO] network ...........................................  SUCCESS [  0.179 s]
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  1.690 s
[INFO] Finished at: 2022-02-24T23:36:33+05:30
```