

## Creating JAR file

Jar cf myjar.jar HelloWorld.class

— this creates a jar file myjar and puts HelloWorld.class inside it.

— to add myjar to class path and run HelloWorld

```
Java -classpath myjar.jar HelloWorld
```

Unzip myjar.jar

Gives you META-INF which contains MANIFEST.MF which is a simple text describing what to do with the jar files. It is a jar specification.

If we have external libraries inside any folder like /lib/

And if we are using that package inside our program then we have to add that to class path

```
Javac -classpath ./lib/* HelloWorld.java
```

In order to run it:

```
Java -classpath ./lib/*:./ HelloWorld
```

Here we are also specifying the current working directory after colon.

What type of compression is used to create jar, war, and ear files? Zip

An uber-JAR, also known as a fat JAR or JAR with dependencies, is a JAR file that contains not only a Java program but embeds its dependencies as well, and might also contain the web application that needs to be executed. The Uber-JAR contains all the program dependencies packaged in the JAR file. It includes not only your application classes that you have written but also all the dependencies needed at runtime.

For a JAR file to run, the JAR itself must contain at least one class that has a **runnable main method**.

Furthermore, the class with the main method must be listed as the *main-class* in the JAR's manifest file. If not, the class must be explicitly stated on the command line when the JAR is run.