

Building Blocks

Compile, Run and Archive Java Files

Compiling code with packages

- First class:
 - `C:\com\udemy\ocppackage\Ocp.java` (windows)
 - `/com/udemy/ocppackage/Ocp.java` (*nix)
- Second class:
 - `C:\com\udemy\ocapackage\Oca.java` (windows)
 - `/com/udemy/ocapackage/Oca.java` (*nix)
- Take the common-ground position:
 - `cd C:\com\udemy` (windows)
 - `cd /com/udemy` (*nix)

```
javac ocppackage/Ocp.java ocapackage/Oca.java
```

```
-> output: .class files
```

```
/ocppackage
```

```
Ocp.java
```

```
Ocp.class
```

```
// alternative
```

```
javac ocppackage/*.java ocapackage/*.java
```

```
/ocapackage
```

```
Oca.java
```

```
Oca.class
```

```
// run Ocp application
```

```
java ocppackage.Ocp
```

```
// N.B. not Ocp.class !!
```

// what if we want classes in another directory?

```
javac -d classes ocppackage/Ocp.java ocapackage/Oca.java
```

/ocppackage

Ocp.java

/ocapackage

Oca.java

// three ways to run Ocp application:

```
java -cp classes ocppackage.Ocp
```

```
java -classpath classes ocppackage.Ocp
```

```
java --class-path classes ocppackage.Ocp
```

/classes

/ocppackage

Ocp.class

/ocapackage

Oca.class

// N.B. <classpath> option can be used with javac command

// to specify location of classes needed to compile the program

// our application depends on other files to run

// some of files are in package "deps", and some are in myJar.jar

```
java -cp ".;C:\com\udemy\deps;C:\com\udemy\myJar.jar" myPackage.MyApp
```

```
java -cp ".:com/udemy/deps:com/udemy/myJar.jar" myPackage.MyApp
```

// if you have many jars in a folder, you can use wildcards:

```
java -cp ".;C:\com\udemy\myjars\*" myPackage.MyApp
```

```
java -cp ".:com/udemy/myjars/*" myPackage.MyApp
```

// N.B. wildcards doesn't include subfolders !!

// create your own jar file (from files in current folder)

```
jar -cvf myNewJarFile.jar .
```

```
jar --create --verbose --file myNewJarFile.jar .
```

// create your own jar file (from files in custom folder)

```
jar -cvf myNewJarFile.jar -C myFolder
```

```
jar --create --verbose --file myNewJarFile.jar -C myFolder
```

// Fun fact: there is no long version of -C