CS480: Java and Internet Applications

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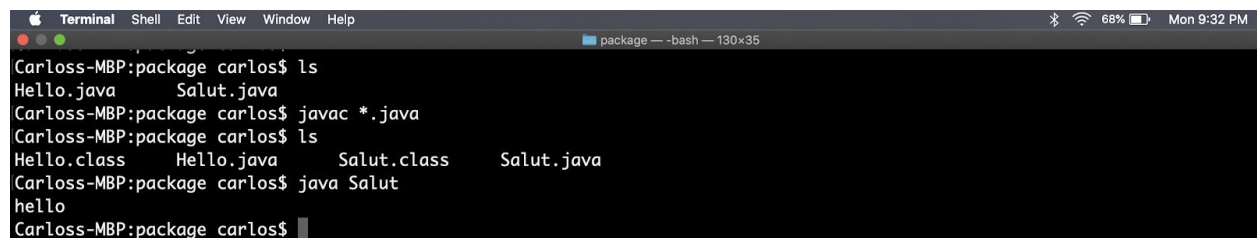
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Description: Homework 7 | Week 7

1. *Executing: Salut, Le Monde.*

```
Carloss-MBP:SalutLeMonde carlos$ ls
Salut.java
Carloss-MBP:SalutLeMonde carlos$ javac Salut.java
Carloss-MBP:SalutLeMonde carlos$ java Salut
Salut, Le Monde
Carloss-MBP:SalutLeMonde carlos$
```

2. *Compiling two files.*

```
Carloss-MBP:package carlos$ ls
Hello.java      Salut.java
Carloss-MBP:package carlos$ javac *.java
Carloss-MBP:package carlos$ ls
Hello.class     Hello.java      Salut.class     Salut.java
Carloss-MBP:package carlos$ java Salut
hello
Carloss-MBP:package carlos$
```

CLASSPATH environment variable

3. *Using classpath in the executing line.*

```
Carloss-MBP:package carlos$ ls
Hello.class      Hello.java       Salut.class      Salut.java
Carloss-MBP:package carlos$ cd /tmp/
Carloss-MBP:tmp carlos$ ls
com.apple.launchd.32dgv8k0NT      com.google.Keystone           reErr
com.apple.launchd.8bYUMGYHH5      powerlog                      tvPath
Carloss-MBP:tmp carlos$ java Salut
Error: Could not find or load main class Salut
Carloss-MBP:tmp carlos$ java ~/
.CFUserTextEncoding      .idlerc/              .zoomus/               NetBeansProjects/
.DS_Store                .lldb/                Applications/          Parallels/
.Trash/                  .netbeans-derby/      Applications (Parallels)/ Pictures/
.atom/                   .oracle_jre_usage/    Desktop/               Public/
.bash_history            .p2/                  Documents/             eclipse/
.bash_profile            .tooling/             Downloads/             eclipse-workspace/
.bash_sessions/          .viminfo              Library/
.cups/                   .vnc/                 Movies/
.eclipse/                .vscode/              Music/
Carloss-MBP:tmp carlos$ java -classpath ~/Documents/CS480/SalutLeMonde/package/ Salut
hello
Carloss-MBP:tmp carlos$
```

4. *Using classpath as an environment variable.*

```
/tmp
Carloss-MBP:tmp carlos$ echo $CLASSPATH

Carloss-MBP:tmp carlos$ export CLASSPATH="$CLASSPATH:~/Documents/CS480/SalutLeMonde/package"
Carloss-MBP:tmp carlos$ echo $CLASSPATH
:~/Documents/CS480/SalutLeMonde/package
Carloss-MBP:tmp carlos$ java Salut
Error: Could not find or load main class Salut
Carloss-MBP:tmp carlos$ export CLASSPATH="$CLASSPATH:~/Documents/CS480/SalutLeMonde/package/."
Carloss-MBP:tmp carlos$ echo $CLASSPATH
:~/Documents/CS480/SalutLeMonde/package:~/Documents/CS480/SalutLeMonde/package/.
Carloss-MBP:tmp carlos$ java Salut
Error: Could not find or load main class Salut
Carloss-MBP:tmp carlos$ export CLASSPATH=$CLASSPATH:~/Documents/CS480/SalutLeMonde/package/
Carloss-MBP:tmp carlos$ echo $CLASSPATH
:~/Documents/CS480/SalutLeMonde/package:~/Documents/CS480/SalutLeMonde/package/.:/Users/carlos/
e/
Carloss-MBP:tmp carlos$ java Salut
hello
Carloss-MBP:tmp carlos$
```

Package and Directory Structure

5. *Executing .java file within a package.*

```
[Carloss-MBP:foo carlos$
[Carloss-MBP:foo carlos$ ls
Hello.java       Salut.java
[Carloss-MBP:foo carlos$ pwd
/Users/carlos/Documents/CS480/SalutLeMonde/foo
[Carloss-MBP:foo carlos$ javac *.java
[Carloss-MBP:foo carlos$ java Salut
Error: Could not find or load main class Salut
[Carloss-MBP:foo carlos$ java foo.Salut
Error: Could not find or load main class foo.Salut
[Carloss-MBP:foo carlos$ cd ..
[Carloss-MBP:SalutLeMonde carlos$ java foo.Salut
Package: Hello.
Carloss-MBP:SalutLeMonde carlos$
```

Jar'ing Java code and Executing

6. *Jar'ing and executing .java files without a package.*

```
Carloss-MBP:SalutLeMonde carlos$ ls
Salut.class      Salut.java       foo
[Carloss-MBP:SalutLeMonde carlos$ jar cvf ./tools.jar *.class
added manifest
adding: Salut.class(in = 419) (out= 287)(deflated 31%)
[Carloss-MBP:SalutLeMonde carlos$ jar tvf tools.jar
     0 Tue Mar 17 00:06:02 PDT 2020 META-INF/
    69 Tue Mar 17 00:06:02 PDT 2020 META-INF/MANIFEST.MF
   419 Mon Mar 16 21:15:06 PDT 2020 Salut.class
[Carloss-MBP:SalutLeMonde carlos$ java -classpath tools.jar Salut
Salut, Le Monde
Carloss-MBP:SalutLeMonde carlos$
```

7. Jar'ing and executing .java files within a package.

```
Carloss-MBP:SalutLeMonde carlos$ ls
Salut.class       Salut.java       foo                tools.jar
Carloss-MBP:SalutLeMonde carlos$ jar cvf foo.jar foo
added manifest
adding: foo/(in = 0) (out= 0)(stored 0%)
adding: foo/Hello.class(in = 399) (out= 283)(deflated 29%)
adding: foo/Hello.java(in = 122) (out= 98)(deflated 19%)
adding: foo/Salut.java(in = 110) (out= 93)(deflated 15%)
adding: foo/Salut.class(in = 299) (out= 229)(deflated 23%)
Carloss-MBP:SalutLeMonde carlos$ ls
Salut.class       Salut.java       foo                foo.jar          tools.jar
Carloss-MBP:SalutLeMonde carlos$ jar tvf foo.jar
      0 Tue Mar 17 00:22:20 PDT 2020 META-INF/
     69 Tue Mar 17 00:22:20 PDT 2020 META-INF/MANIFEST.MF
      0 Mon Mar 16 23:48:24 PDT 2020 foo/
    399 Mon Mar 16 23:48:24 PDT 2020 foo/Hello.class
    122 Mon Mar 16 23:47:08 PDT 2020 foo/Hello.java
    110 Mon Mar 16 23:48:00 PDT 2020 foo/Salut.java
    299 Mon Mar 16 23:48:24 PDT 2020 foo/Salut.class
Carloss-MBP:SalutLeMonde carlos$ java -classpath foo.jar foo.Salut
Package: Hello.
Carloss-MBP:SalutLeMonde carlos$
```