Name: _____

Lab 14a – Jar & Packages

Jar files:

Create a Jar file for your final project (this is a final project requirement) or a Jar file from the Students_MakeAJar.zip in MyCourses. Since this was shown in class, there are no more instructions here.

Instructor / TA: _____

Packages:

This exercise will explore how to create packages and use classes from different packages using the import statement. This practice was written for a PC not a Mac. Depending on the configuration of the PC, the instructions may have to be modified.

Problem Specifics:

1. We will be changing the environment variable "CLASSPATH". Since we can't change the *system's* environmental variable on the lab computers we will temporarily change it within a command window. When this window goes away, so does the CLASSPATH definition.
2. Open a command from your Windows command window (Start then type **cmd**, and press Enter)
3. Change directory to where we will do our work, D:\
4. Before we change CLASSPATH, let's see the initial value of "CLASSPATH". At the DOS prompt enter: `set CLASSPATH`
5. We don't want to eliminate what CLASSPATH contains we want to add the path where our classes will reside to the CLASSPATH variable. Enter this command. Make sure you include the ; and . at the end of the line. Do not include any spaces.

   ```
   SET CLASSPATH=%CLASSPATH%;D:\;.
   ```

6. Create a subfolder called **pe14,** and under or that two subfolders: myutils, and mywork. To create directories use the `mkdir` or `md` command. You would end up with:

   ```
   D:\pe14\myutils
   D:\pe14\mywork
   ```

7. Now we create two packages. In the subfolder, D:\pe14\myutils, create the **ClassB.java** file: (Want a shortcut? Type in "cd myu" then press tab)

```
package myutils;
public class ClassB
{
  public void methodB1()
  {
     System.out.println("methodB1");
  }
}
```

8. In the subfolder, `D:\pe14\mywork`, create the ClassC.java file.

```
package mywork;
public class ClassC
{
  public void methodC1()
  {
    System.out.println("methodC1");
  }
}
```

9. In the folder `D:\pe14\` create the following **ImportEx1.java** file:

```
import myutils.*;
import mywork.*;
class ImportEx1
{
   public static void main(String args[])
   {
     ClassB b1 = new ClassB();
     b1.methodB1();
     ClassC c1 = new ClassC();
     c1.methodC1();
   }
}
```

10. Compile each of the above three files in its respective folder. And run the ImportEx1 program. What output did you get from this application?

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11. Save this program as **ImportEx2.java** (change the class name to match) then comment out the two **import** statements and try to compile. It will not compile. You will need to use fully qualified names for types to the main() so that the file compiles. For example:

```
ClassB b1 = new ClassB();
```

should be changed to

```
myutils.ClassB b1 = new myutils.ClassB();
```

12. Compile the ImportEx2.java file and run the ImportEx2 program. What output did you get from this application? Is this result the same as the above 10)?

Instructor / TA: _____