

## Suggestions for experimentation with packages for Inf2C SE thread

The following are just suggestions for some things to try that may help your understanding of Java packages and check that you remember basic Java – if your understanding is complete, you will be able to do all of the following without difficulty. Feel free to veer off at tangents.

You may do these at the command line or in Eclipse, as you prefer; for a further exercise, try both.

1. Create a new class `Foo` in a file `Foo.java`. Give `Foo` a string attribute with value “Hello World”, to be shared between all objects of class `Foo`.
2. Create a new class `Bar` in a file `Bar.java`. Give `Bar` a `main` function such that you will be able to type “`java Bar`” at the command line and see “Success!” printed out.
3. Compile `Foo.java` and `Bar.java` and run `Bar`; check that this works as you expect.
4. Declare that `Foo` is in package `my.test` and `Bar` in `my.test.package`.
5. Compile and fix.
6. Try running “`java Bar`” as before. What goes wrong?
7. Fix it: i.e., leaving the package declarations as they are, work out what to do with your files and how to run the application so as to get “Success!” printed once again.
8. Now try to make `Bar`’s main function print out the value of `Foo`’s string attribute. Under what circumstances can you do it and under what circumstances does it give an error? You may want to experiment with altering: the way you refer to the attribute; import specifications; the access specifiers of classes or attributes.
9. Think about the software engineering implications.
10. Continue to experiment with variations until you cannot surprise yourself. Then...
11. Create a puzzle for your colleagues: invent a simple situation (two or three classes, a few lines in each) with a simple question e.g. “does this compile?” that will fox as many people as possible. Swap with one another and discuss until you can all answer all the questions correctly.