

1. Write a mutable class called `Length`. Give it a single member variable: `int len`. Implement standard `set()` and `get()` methods that provide access to `len`. Package the class according to the following path: `mypackage/java/scalar`. Be sure the class and its methods are accessible outside the package, but that `len` is only accessible within the class.

```
package mypackage.java.scalar;

public class Length {
    private int len;

    public int get() {
        return len;
    }

    public void set(int x) {
        len = x;
    }
}
```

2. Rewrite the `set()` method from above so that the class is immutable. (Don't write anything else but the new `set()` method).

```
public Length set(int x) {
    Length l = new Length();
    l.len = x;
    return l;
}
```

3. Consider the following class:

```
package java.foo;

class Foo {
    void bar() {
        System.out.print("bar");
    }

    public static void main(String [] args) {
        System.out.print("Foo ");

        Foo f = new Foo();
        for(int i = 0; i < args.length; i++)
            f.bar();
    }
}
```

Given that you are in the parent directory of `java/`, make a call to `Foo`'s `main()` method giving whatever command line arguments you like. Then write the output produced by that call.

```
[user@notnotbc]$ java java.foo.Foo any args you like
Foo barbarbarbar
[user@notnotbc]$
```