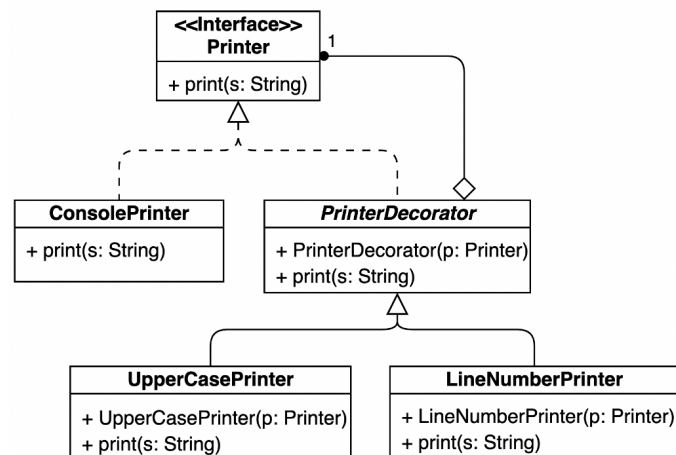


CSF202 – Lab Class 6 – Wednesday 28/10/2020

This lab class involves getting some hands-on experience with coding an example of the Decorator Design Pattern in Java.

□ Task 6.1

Recreate the Decorator Pattern as it was applied in the lecture, some code is available in the slides the rest you will have to write yourself.



□ Task 6.2

Add the **FilePrinter** component class. This should work in a similar manner to **ConsolePrinter** but strings that are “printed” should be written to a file. The filename should be provided in the constructor.

□ Task 6.3

Add the **LineWrappingPrinter** decorator class. This should add line wrapping behaviour to the component that it decorates. The constructor should take, in addition to a **Printer**, an integer which represents the maximum number of characters to be printed on any one line. If we set this number to **5** and printed the string “*Tom’s labs are the best labs.*” the output should be:

```
Tom's
labs
are
the b
est l
abs.
```

Lab continues on next page...

□ Task 6.4

Add one more decorator class of your choosing then **test everything you have done**.

- Try decorating a ConsolePrinter with various decorators.
- Try decorating a FilePrinter with various decorators.
- Write a simple method that makes use of a Printer argument. Try providing the method with both a concrete printer object and with a decorated printer object. *Notice that your method didn't have to change.*