

Lesson 18: Java Programming Activity 1

Title: Printer

Lesson: Threads

Duration: 30 minutes

Instructions: Design a Java program where a printer is able to print different kinds of documents.

Project Filename: `<FamilyName>_L18Activity1`

Task 1: In the `Printer` class (only choose one if it extends `Thread` or it implements `Runnable`) where it has a parameterized constructor that initializes the name of the document with a `String` field.

The class also has a private function called `printDocuments()`, which will display the status of the document if it is Printing or is Finished printing. The printing of the documents must have a delay of 2 secs.

In addition, a `run()` function that invokes the `printDocuments()` function.

Task 2: In the `main()` function in the `Main` class where two threads, each assigned with different documents, are instantiated. Using the instantiated threads, it will invoke the `start()` function to start printing the two documents.

Do not forget to end/terminate the threads *Hint: `join()`*, and check if the instantiated threads are still alive (label it as “running”) or not (label it as “terminated”) *Hint: `isAlive()`*

If you wish to implement Lambda in your code structure, you may do so as long as you follow the aforementioned requirements and sample output below.

Output:

```
Printing: Manuscript_Final.pdf
Printing: Manuscript_Final_Final.pdf

Thread-1 status: running

Finished printing: Manuscript_Final.pdf

Thread-0 status: running

Finished printing: Manuscript_Final_Final.pdf

Thread has ended.
Thread-0 status: terminated
Thread-1 status: terminated
```

Hint: `getName()` or `getId()` for the specific identity of threads (e.g. `Thread-1` and `Thread-0`)