INF3522 Développement d'Applications N-tier



Dr El Hadji Bassirou TOURE

Département Informatique – DI

UFR Sciences et Techniques – UFR ST

2022 - 2023

Dr. E_H_B. TOURE / Inf3522 / UASZ

```
import java.util.List;

public class FP01Structured {

public static void main(String[] args) {

printAllNumbersInListStructured(List.of(12,9,13,4,6,2,4,12,15));

}
```

```
private static void printAllNumbersInListStructured(List<Integer> numbers) {
    //How to loop the numbers?
    for(int number:numbers) {
        System.out.println(number);
    }
}

20
21 }
```

```
import java.util.List;
   public class FP01Structured {
 6
       public static void main(String[] args) {
           printAllNumbersInListStructured(List.of(12,9,13,4,6,2,4,12,15));
10
11
       private static void printAllNumbersInListFunctional(List<Integer> numbers) {
17⊜
           //What to do?
18
19
           numbers.stream()
20
               .forEach(System.out::println);//Method Reference
21
22
23 }
```

```
private static void printEvenNumbersInListStructured(List<Integer> numbers) {

// How to loop the numbers?

for (int number : numbers) {

if (number % 2 == 0) {

System.out.println(number);

}

Writable Smart Insert 10:81
```

```
16
17⊕
        private static boolean isEven(int number) {
             return number%2 == 0;
18
 19
 20
27€
        private static void printEvenNumbersInListFunctional(List<Integer> numbers) {
            //What to do?
 28
            numbers.stream()
 30
                 //Filter - Only Allow Even Numbers
                 .filter(FP01Functional::isEven)
 31
                 .forEach(System.out::println);//Method Reference
 32
33
34
 35 }
36
                                                               Writable
                                                                         Smart Insert
                                                                                  31:42
```

```
16
170 private static boolean isEven(int number) {
18 return number%2 == 0;
19 }
20
```

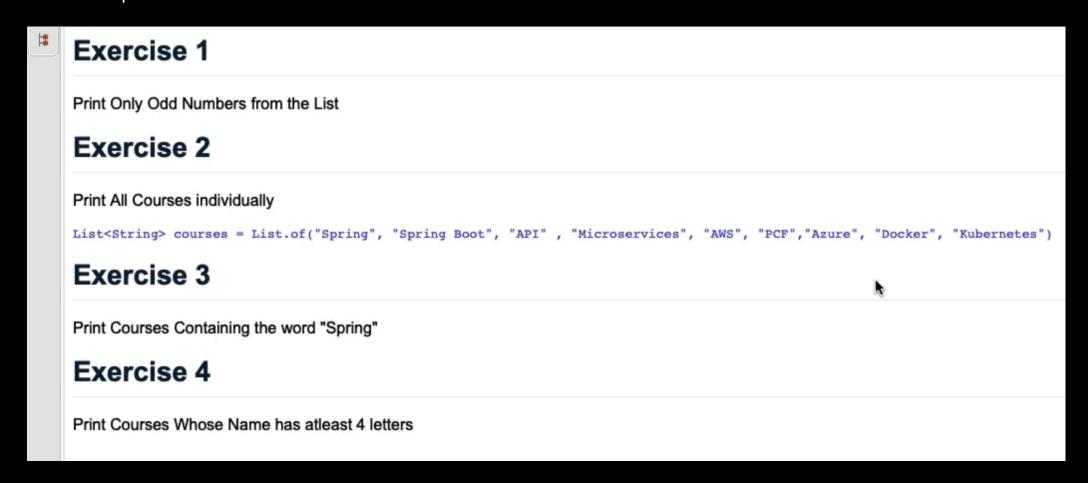
```
// number -> number%2 == 0
private static void printEvenNumbersInListFunctional(List<Integer> numbers) {
    //What to do?

numbers.stream()
    .filter(number -> number%2 == 0) //Lamdba Expression
    .forEach(System jout::println);//Method Reference

//.filter(FP01Functional::isEven)//Filter - Only Allow Even Numbers

//.filter(FP01Functional::isEven)//Filter - Only Allow Even Numbers

//.filter(FP01Functional::isEven)//Filter - Only Allow Even Numbers
```



```
1. import java.util.List;
2 import java.util.Optional;
 import java.util.function.Predicate;
 public class PlayingWithOptional {
     public static void main(String[] args) {
         List<String> fruits = List.of("apple", "banana", "mango");
         Predicate<? super String> predicate = fruit -> fruit.startsWith("b");
         Optional<String> optional = fruits.stream().filter(predicate).findFirst();
         System.out.println(optional);
         System.out.println(optional.isEmpty());
         System.out.println(optional.isPresent());
         System.out.println(optional.get());
```

Programmation fonctionnelle

En résumé

