

Functional literacy

higher order functions















































































































































































































































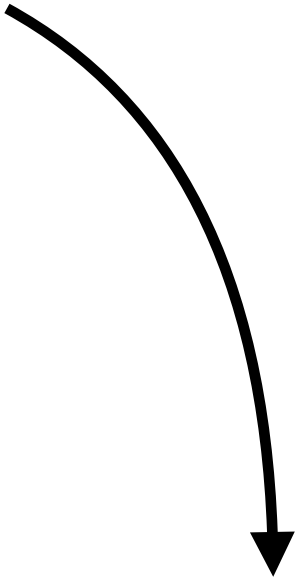












- f can be seen as a local extension function on the receiver type
- the receiver type is Int
- the lambda has no param, the param becomes **this**
- the receiver object (this) is 2 on the first call and the result of 2.f() (3) on the second call



fun applyTwice(n:Int, f:(Int) → Int): Int = f(f(n))

$$\text{app}[y \text{ twice}(2) \{ \text{it} + 1 \}]$$

```
fun appTwice(n: Int, f: Int.() -> Int): Int = n.f().f()
```

applyTwice(2){this + 1}

Functional literal with receiver

higher order functions

```
fun applyTwice(n: Int, f: (Int) → Int): Int = f(f(n))
```

```
applyTwice(2) { it + 1 }
```



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fun applyTwice(n: Int, f: Int.() -> Int): Int = n.f().f()
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applyTwice(2) { this + 1 }
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- f can be seen as a local extension function on the receiver type
- the receiver type is Int
- the lambda has no param, the param becomes **this**
- the receiver object (**this**) is 2 on the first call and the result of 2.f() (3) on the second call

Operator overloading