

# Exercises: Extension of existing classes

## Fibonacci II

Extend `Integer` with a function `fib` that calculates the corresponding fibonacci number.

## Shuffle

Extend `Array` with a method `shuffle` that creates a random permutation of the elements in the array.

```
1 [0,1,2,3,4,5].shuffle      » [0, 3, 4, 5, 1, 2]
2 [0,1,2,3,4,5].shuffle      » [4, 1, 0, 5, 3, 2]
3 [0,1,2,3,4,5].shuffle      » [3, 4, 2, 1, 0, 5]
```

## Set

Extend `Array` with the set methods `union` and `intersect`. E.g.:

```
1 a1 = [1, 2, 3]
2 a2 = [2, 3, 4]
3 a3 = [{:c => 'a', :v => 1}, {:c => 'b', :v => 2}]
4 a4 = [{:c => 'b', :v => 2}, {:c => 'c', :v => 3}]
5 a1.intersect(a2)           » [2, 3]
6 a2.intersect(a1)           » [2, 3]
7 a1.intersect(a3)           » []
8 a3.intersect(a4)           » [{:v=>2, :c=>"b"}]
9 a1.union(a2).union(a3)      » [1, 2, 3, 2, 3, 4, {:v=>1, :c=>"a"}, {:v=>2, :c=>"b"}]
10 a1.intersect(a1.union(a2)) » [1, 2, 3]
```

