# Coding challenges

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**Exercise 0.1** *Build a function which takes an array of integers and returns its minimum and maximum. For instance, if the array is [3, 6, -1, -8, 78, -33], the function returns [-33, 78].*

**Solution :** We declare two variables min and max and we initialize them by the first value of the array. Then we iterate through the items of the array and compare them two min and max, if min is greater than the item (resp. max is less than the item) we set min = item (resp. max = item).

```swift
import Foundation

func minMaxArray(array: [Int]) -> [Int] {
    let n = array.count
    var maxArray = array[0]                          5
    var minArray = array[0]                          5
                                                     5
    for i in 1..<n {
        if maxArray <= array[i] {
            maxArray = array[i]                      6
        }
        if minArray >= array[i] {
            minArray = array[i]                      (2 times)
        }

    }

    return [minArray, maxArray]                      [3, 6]
}


let Q = [5, 6, 3, 5, 3]                              [5, 6, 3, 5, 3]

minMaxArray(array: Q)                                [3, 6]
```