

A Swift Kickstart

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Collections

Array

```
let numbers = [1, 2, 3]
```

Array

```
let numbers = [1, 2, 3]
```

```
numbers += [4]
```

Modifying an Array

```
var numbers = [1, 2, 3]
```

```
numbers += [4]
```

```
numbers[0] = 11
```

```
numbers[1...2] = [5, 6, 7, 8]
```

Modifying an Array

```
numbers.removeLast()
```

```
numbers.removeAtIndex(1)
```

```
numbers.append(7)
```

```
numbers.insert(3, atIndex: 3)
```

Modifying an Array

```
numbers += "Iguana"
```

Array

```
var places = ["Columbus", "Las Vegas", "Seattle"]
```


Array

```
var places: [String]
```

```
places = ["Columbus", "Las Vegas", "Seattle"]
```

No Array

```
var places: [String]
```

```
places += ["Columbus", "Las Vegas", "Seattle"]
```

Array

```
var places = [String]()
```

```
places += ["Columbus", "Las Vegas", "Seattle"]
```

Iterating an Array

```
var places = ["Columbus", "Las Vegas", "Seattle"]  
  
for i in 0...(places.count - 1) {  
    println(places[i])  
}
```

Iterating an Array

```
var places = ["Columbus", "Las Vegas", "Seattle"]  
  
for i in 0 ..< (places.count) {  
    println(places[i])  
}
```

Iterating an Array

```
var places = ["Columbus", "Las Vegas", "Seattle"]  
  
for place in places {  
    println(place)  
}
```

Iterating an Array

```
var places = ["Columbus", "Las Vegas", "Seattle"]  
  
for (index, place) in enumerate(places) {  
    println("(\\(index + 1)) \\(place)")  
}
```

Function Generator

```
var places = ["Columbus", "Las Vegas", "Seattle"]

func greetingForLocation(location:String) -> (String) -> String {
    func locationGreeting(name:String) -> String {
        return "\(name), welcome to \(location)."
    }
    return locationGreeting
}
```


Array of Functions

```
var greetings = [greetingForLocation(places[0]),  
                greetingForLocation(places[1]),  
                greetingForLocation(places[2])]
```

```
greetings[1]("CocoaConf Attendee")
```

map()

```
var greetings = places.map{(greetingForLocation($0))}  
greetings[1]("CocoaConf Attendee")
```

Dictionary

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

Modify Dictionary

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

```
tourStops["November"] = "Alaska"
```

Modify Dictionary

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

```
tourStops["November"] = "Alaska"
```

```
tourStops["November"] = "Boston"
```

Modify Dictionary

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

```
tourStops["November"] = "Alaska"
```

```
tourStops["November"] = "Boston"
```

```
tourStops.count
```

Modify Dictionary

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

```
tourStops["November"] = "Alaska"
```

```
tourStops["November"] = "Boston"
```

```
tourStops["Novmember"] = "London"
```

```
tourStops.count
```

Modify Dictionary

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

```
tourStops["November"] = "Alaska"
```

```
tourStops["November"] = "Boston"
```

```
tourStops["Novmember"] = "London"
```

```
tourStops.removeValueForKey("Novmember")
```

```
tourStops.count
```


Modify Dictionary

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

```
tourStops["November"] = "Alaska"
```

```
tourStops["November"] = "Boston"
```

```
tourStops["Novmember"] = "London"
```

```
tourStops.removeValueForKey("Novmember")
```

```
tourStops.removeValueForKey("Not here")
```

```
tourStops.count
```

Keys and Values

```
var tourStops = ["August": "Columbus",  
                "September": "Las Vegas",  
                "October": "Seattle"]
```

```
tourStops["November"] = "Alaska"
```

```
tourStops["November"] = "Boston"
```

```
tourStops["Novmember"] = "London"
```

```
tourStops.removeValueForKey("Novmember")
```

```
tourStops.removeValueForKey("Not here")
```

```
tourStops.count
```

```
let theKeys = tourStops.keys  
let theValues = tourStops.values
```

Some?

```
tourStops["November"] = "Alaska"
```

```
tourStops["November"] = "Boston"
```

```
tourStops["August"]
```

Optional

```
tourStops["August"]
```

```
tourStops["July"]
```

Optional

```
let august = tourStops["August"]  
let july = tourStops["July"]  
  
println(august)
```

String?

```
let august = tourStops["August"]  
let july = tourStops["July"]  
  
println(august)
```

String?

```
let month = "August"
let possibleStop = tourStops[month]

if possibleStop != nil {
    let stop = possibleStop!
    println(stop)
} else {
    println("no stop then")
}
```

String?

```
let month = "July"
let possibleStop = tourStops[month]

if possibleStop != nil {
    let stop = possibleStop!
    println(stop)
} else {
    println("no stop then")
}
```


String?

```
if let stop = tourStops["August"] {  
    println(stop)  
} else {  
    println("no stop then")  
}
```

Try this

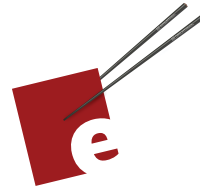
- Create a Dictionary named digits that uses the Strings "zero", "one", "two", ... "nine" as keys and the Ints 0,1,..., 9 as values
- Create a function named add() that takes an array of Strings as its argument. It sums the Int values of the entries.

Try this

```
let digits = ["zero": 0, "one": 1, "two": 2, "three": 3,  
"four": 4, "five": 5, "six": 6, "seven": 7, "eight": 8,  
"nine": 9]
```

```
func add(numbers:[String]) -> Int {  
    var sum = 0  
    for number in numbers {  
        if let validDigit = digits[number] {  
            sum += validDigit  
        }  
    }  
    return sum  
}
```

```
add(["two", "two", "three", "seven"])
```



A Swift Kickstart

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Introducing
the Swift Programming Language

Editors Cut

<https://itunes.apple.com/us/book/a-swift-kickstart/id891801923?mt=11&uo=4&at=11156E>