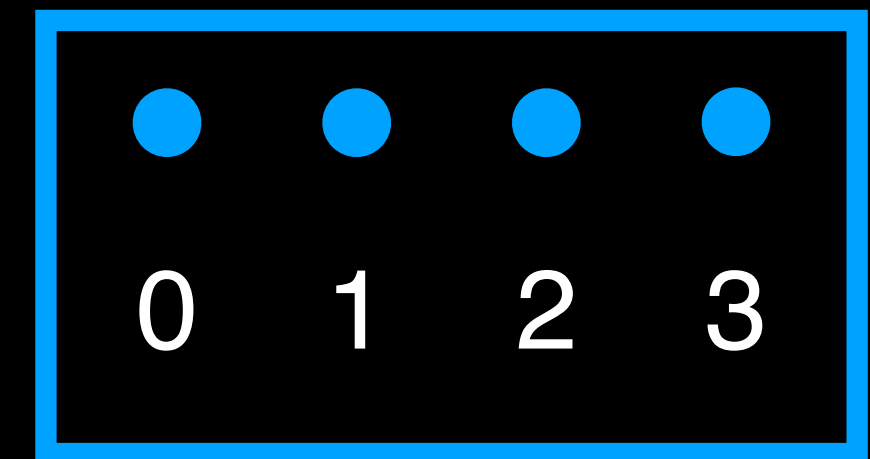# Unit 2—Lesson 5: Collections

Collection Types

Array is an ordered collection of values accessible by index

Collection Types

	Array	
0	Cat	
1	Dog	
2	Dolphin	
3	Tiger	
4	Monkey	

Arrays
Defining

```
[value1, value2, value3]
```

```swift
var names: [String] = ["Anne", "Gary", "Keith"]
```

Arrays
Defining

```
[value1, value2, value3]
```

```
var names = ["Anne", "Gary", "Keith"]
```

Arrays
Defining

```
var numbers = [1, -3, 50, 72, -95, 115]
```

Arrays
contains

```swift
let numbers = [4, 5, 6]
if numbers.contains(5) {
  print("There is a 5")
}
```

```
There is a 5
```

Working with arrays
Accessing or setting a specific item

```swift
var names = ["Anne", "Gary", "Keith"]
let firstName = names[0]
print(firstName)
```

```
Anne
```

```swift
names[1] = "Paul"
print(names)
```

```
["Anne", "Paul", "Keith"]
```

Working with arrays
Appending

```
var names = ["Amy"]
names.append("Joe")
names += ["Keith", "Jane"]
print(names)
```

```
["Amy", "Joe", "Keith", "Jane"]
```

Working with arrays
Inserting

```swift
var names = ["Amy", "Brad", "Chelsea", "Dan"]
names.insert("Bob", at: 0)
print(names)
```

```
["Bob", "Amy", "Brad", "Chelsea", "Dan"]
```

Working with arrays
Removing

```swift
var names = ["Amy", "Brad", "Chelsea", "Dan"]
let chelsea = names.remove(at:2)
let dan = names.removeLast()
print(names)
```

```
["Amy", "Brad"]
```

```swift
names.removeAll()
print(names)
```

```
[]
```

Working with arrays

```
var myNewArray = firstArray + secondArray
```

Working with arrays
Arrays within arrays

```
let array1 = [1,2,3]
let array2 = [4,5,6]
let containerArray = [array1, array2]
let firstArray = containerArray[0]
let firstElement = containerArray[0][0]
print(containerArray)
print(firstArray)
print(firstElement)
```

```
[[1, 2, 3], [4, 5, 6]]
[1, 2, 3]
1
```

Unit 2—Lesson 5
Lab: Collections

Open and complete the exercises in `Lab — Collections.playground`