

Examples of Closure Use

General

Sorting, Filtering,
Working with
Collections

Area-specific

Animation,
Fetching Data, Callbacks,
Completion Handlers

Task-specific

Working with User
Interface Controls

“Closures let us take lines of code and group it together to use elsewhere in our program.”

Functions

```
// define it
myFunction() {
    // one or more lines of code
    // ...
}
```

```
// call it
myFunction()
```

Closures

```
{  
    // one or more lines of code  
    // ...  
}
```

Functions vs Closures

Function

a block of code
you intend to **call**

Closure

a block of code
you intend to **pass**

Passing Arguments

```
// Call a function that takes an Int  
myFunction(93278)
```

```
// Call a function that takes an String  
myFunction("Hello")
```

```
// Call a function that takes a Closure  
myFunction({  
    print("This is inside a closure")  
    // more code...  
})
```

Swift Function Type

(parameter types) -> return type

(String) -> Bool

"a block of code that takes a String
and returns a Bool"

// example functions

```
playMP3(filename: String) -> Bool { ... }
```

```
playOGG(oggFile: String) -> Bool { ... }
```

```
showImage(at url: String) -> Bool { ... }
```

```
loadVector(_ url: String) -> Bool { ... }
```

Swift Function Type

(parameter types) -> return type

(String) -> Bool

*"a block of code that takes a String
and returns a Bool"*

(Int) -> String

*"a block of code that takes an Int
and returns a String"*

(Double, Double) -> [String]

*"a block of code that takes two Doubles and returns an
Array of Strings"*


```
// are these two Book elements in the right order already?  
if firstBook.readingAge <= secondBook.readingAge {  
    return true  
} else {  
    return false  
}
```