



SWIFT: THE LANGUAGE OF IOS DEVELOPMENT

Section 4 Exercise

```
1 ▶ import UIKit
2
3 var x:Int = 100
4 var output:String = ""
5 while
6
7
8
9
10 print (output)
11
```

100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0

1. Create a new playground file and title it **Section 4.playground**.
2. Examine the code on the left. Review the result in the terminal area at the bottom of the screen. Using Xcode, recreate the code filling in the necessary code for the blurred area. Keep in mind that the counter (x) is an Integer variable and that the output variable is, by necessity, a String. When concatenating to the output variable in the loop, you'll need to use the String() function to convert x to a String or you will receive an error.

```
1 import UIKit
2
3 var x:Int = 100
4 var output:String = ""
5 while(x > -1){
6     output += String(x)
7     output += " "
8     x -= 5
9 }
10 print (output)
11
```



100

""

(21 times)

(21 times)

(21 times)


"100 95 9..."

100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0

```

1  import UIKit
2
3  let rows:Int = 4
4  let columns:Int = 20
5
6  var x:Int = 0
7  while (x < ) {
8      //
9      var rowOut:String = ""
10     while(y ) {
11         //
12     }
13     print(rowOut)
14
15
16 }

```



3. This code exercise is more difficult than the others, because it requires the use of a loop within a loop (also known as “nested loops”).

The variables **rows** and **columns** should determine the number of rows and columns of asterisks are output. Remember that the print() function automatically appends a carriage return. Fill in the correct code to substitute for the blurred areas to obtain the result that appears in the terminal area.

(4 times)

```

*****
*****
*****
*****

```

```

1 import UIKit
2
3 let rows:Int = 4
4 let columns:Int = 20
5
6 var x:Int = 0
7 while (x < rows){
8     var y:Int = 0
9     var rowOut:String = ""
10    while(y < columns){
11        rowOut += "*"
12        y += 1
13    }
14    print(rowOut)
15    x += 1
16 }

```

SOLUTION

4

20

0

(4 times)

(4 times)

(80 times)

(80 times)

(4 times)

(4 times)

```

*****
*****
*****
*****

```