

Exercises - Session 6



In case you get stuck anywhere, don't be afraid to ask the coaches!
They are here to help and will gladly explain everything to you!
Take notes during the exercises. Even if you never look at them again, they will help you memorise things!

Boolean Operators

Exercise 1

The following exercise might be a bit dry, but it's quite important in the daily life of a programmer.

Imagine the “condition” is part of your code, like this:

```
if condition
  puts “A”
else
  puts “B”
end
```

Also, we have the following variables:

```
list = [2, 3, 4]
title = “Ruby Monstas”
```

Analyze the following conditions and note their return type like in the first example. Also write what the code would execute in the if statement above.

Fill this out without trying it on your computer. After that, check your answers with irb.

condition	result (return value)	puts ...
<code>1 < 2</code>	true	A
<code>title.include?("Ruby")</code>		
<code>list.length == 3</code>		
<code>"test" == 1</code>		
<code>true false</code>		
<code>true && false</code>		
<code>1 < 2 1 > 2</code>		
<code>list.length > 3 && title.length == 12</code>		
<code>!(list.length == 3)</code>		
<code>!(list[1] == 3 10 != 12)</code>		
<code>1 == 1 && (!("testing" == 1 1 == 0))</code>		
<code>3 != 4 && !("A" != "a" "Ruby" == "Ruby")</code>		

Exercise 2

Let's turn it around. Let's say we have two variables called "one" and "two". This is our desired truth table:

one	two	condition result
false	false	false
true	false	true
false	true	true
true	true	false

- a) How would you describe this condition? When is it true and when is it false?
- b) What does your condition look like that the result is correct?

Exercise 3

Consider this boolean condition:

```
false && x
```

Can you tell what the result is without knowing the value of x? Why?