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# Ruby Monstas



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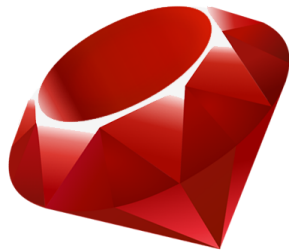
## Session 4

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# Agenda

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- Interactive Recap?
- Control structures
- Exercises



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# Control structures

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## Introduction

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# If

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Sometimes we want to execute code depending on the situation.

**If** a certain situation is given, we want to execute a body of code.

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# The condition

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```
if condition
```

```
  # the condition is true
```

```
end
```

**condition** is a **boolean**.

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# What could be a condition?

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`1 < 2`

`"Hello" == "World"`

`"Hello".include?("llo")`

`[4, 5, 6].include?(7)`

`{"Marion" => 7}.has_key?("Marion")`

**Anything that returns `true` or `false`!**

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# If: example

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```
irb(main):001:0> number = 42
```

```
=> 42
```

```
irb(main):002:0> if number > 10
```

```
irb(main):003:1>   puts "#{number} is greater than 10"
```

```
irb(main):004:1> end
```

```
42 is greater than 10
```

```
=> nil
```

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# If / else: the pattern

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```
if condition
  # the condition is true
else
  # the condition is false
end
```



# If, else: example

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```
irb(main):001:0> number = 4
```

```
=> 4
```

```
irb(main):002:0> if number > 10
```

```
irb(main):003:1>   puts "#{number} is greater than 10"
```

```
irb(main):004:1> else
```

```
irb(main):005:1>   puts "#{number} is lower or equal to 10"
```

```
irb(main):007:1> end
```

```
4 is lower or equal to 10
```

```
=> nil
```

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# If / else: the pattern

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```
if condition1
    # condition1 is true
elsif condition2
    # condition2 is true
else
    # none of the conditions are true
end
```

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# If, elsif, else: example

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```
irb(main):001:0> season = "spring"
=> "spring"
irb(main):002:0> if season == "summer"
irb(main):003:1>   puts "It's too hot!"
irb(main):004:1> elsif season == "winter"
irb(main):005:1>   puts "It's too cold!"
irb(main):006:1> else
irb(main):007:1>   puts "It's just right!"
irb(main):008:1> end
It's just right!
=> nil
```

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# Loop

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A **loop** cycles through code until we tell it to stop with **break**.

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# Loop: the pattern

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```
loop do
  if condition
    break
  end
end
```

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# Loop: Example

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```
irb(main):001:0> counter = 1
=> 1
irb(main):002:0> loop do
irb(main):003:1>   puts counter
irb(main):004:1>   counter = counter + 1
irb(main):005:1>   if counter > 3
irb(main):006:1>     break
irb(main):007:1>   end
irb(main):008:1> end
1
2
3
=> nil
```

---

# Each: the pattern

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```
array = []  
array.each do |element|  
  # do stuff with element  
end
```

# Each: example

---

```
irb(main):001:0> names = ["Alice", "Bob", "Eve"]
```

```
=> ["Alice", "Bob", "Eve"]
```

```
irb(main):002:0> names.each do |name|
```

```
irb(main):003:1>   puts name
```

```
irb(main):004:1> end
```

Alice

Bob

Eve

```
=> ["Alice", "Bob", "Eve"]
```

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# Coming up

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- Boolean operators
  - Methods
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# Demo

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Todo Script

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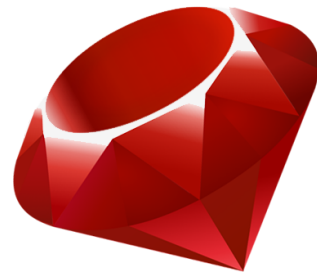
**Tip: Work in pairs**

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# Time to practice



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Let's get to it!

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