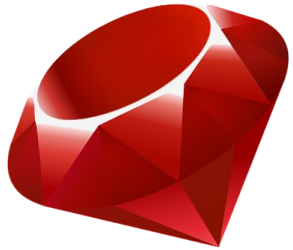
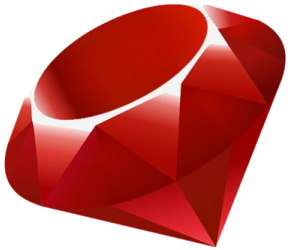
Introducing Ruby



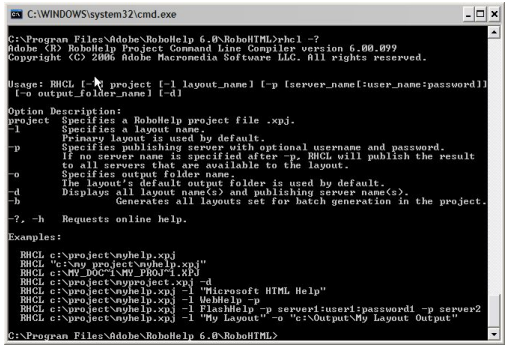
First Session

Agenda

- Command line
- Numbers
- Strings
- Exercises



Command Line



Introduction

What is the command line?

- Textual interaction with the computer
- Also called “Terminal”, “Shell”, “bash”, “console”, “PowerShell”
- Can look differently depending on operating system or user settings

How does it work?

1. Computer “asks” for command
2. You input a command, followed by the return key
3. Computer executes the command
4. Computer prints the output of the command

Command line

- Always in a **working directory**
- You can do most things you can do in a graphical interface
- You can do a lot of things quicker than with a graphical interface (once you've practiced a bit)
- Command followed by arguments (separated by spaces)
- Cryptic commands might seem scary at first

Directories

- Where am I?
  - `pwd`
  - “Print working directory”
  - Windows: You can use “cd ,”
- How do I go somewhere else?
  - `cd`
  - “Change directory”
  - Examples
    - `cd testdirectory`
    - `cd ..`
    - `cd ~`

Directories

- How do I create directories?
  - `mkdir`
  - “make directory”
  - e.g. `mkdir rubymonstas`
- How do I delete directories?
  - `rmdir`
  - “remove directory”
  - e.g. `rmdir rubymonstas`

Directories and files

- How do I see what's inside a directory?
  - `ls`
  - "list"
  - Windows: You can use "dir"
  - Examples
    - `ls`
    - `ls rubymonstas`
    - `ls ..`
    - `ls ~`

Ruby-specific commands

- How do I run a Ruby script?
  - `ruby`
  - e.g. `ruby myscript.rb`
- How do I try something or play around with Ruby?
  - `irb`
  - “interactive ruby shell”
  - Command line for Ruby

Numbers

Introduction

Numbers

- Integers: whole numbers
  → ?
- Floats: decimal numbers
  → ?

Numbers

- Integers: whole numbers
  → 1, 2, 3...
- Floats: decimal numbers
  → 1.5, 3.09, 4.12...

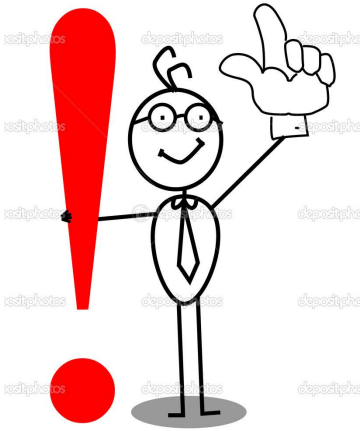
Calculations

- Addition → +
- Subtraction → -
- Multiplication → *
- Division → /
- Modulo → %

Division - Attention!

- Division of Integers
- Division of Floats

- 6 / 4 = ?
- 6 / 4.0 = ?



Modulo

- Gives the remainder of a division

  → 13 % 6 = ?

  → 21 % 8 = ?

Modulo

- Gives the remainder of a division

  → 13 % 6 = 1

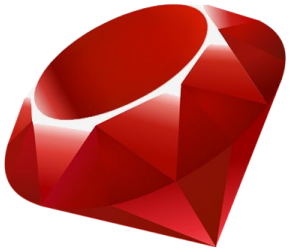
  → 21 % 8 = 5

Strings

Introduction

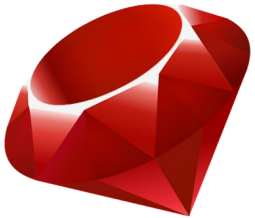
String Definition

- Words or phrases
- Single quotes ‘ . . . ’
- Double quotes “ . . . ”



Methods

- “Talk to” an object
- Manipulate an object
- Objects and methods are separated by a .

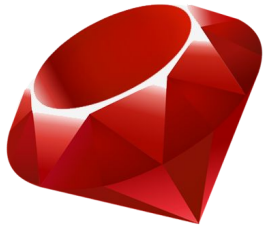


String Methods

- .length

```
> "I love Ruby".length
=> 11
```

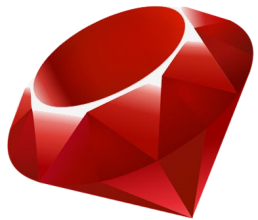
→ includes white spaces



String Methods

- .reverse

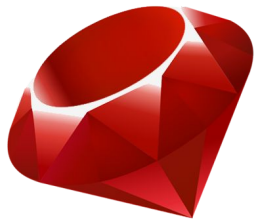
```
> "I love Ruby".reverse
=> ?
```



String Methods

- .reverse

```
> "I love Ruby".reverse
=> "ybuR evol I"
```



String Methods

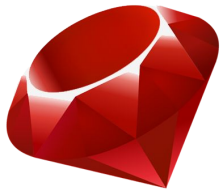
- .include?

```
> "I love Ruby".include?("Ruby")
=> ?

> "I love Ruby".include?("Rails")
=> ?
```

String Methods

- .include?

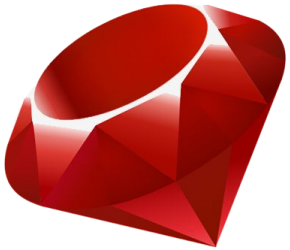
```
> "I love Ruby".include?("Ruby")
=> true

> "I love Ruby".include?("Rails")
=> false
```



String Methods

- .upcase

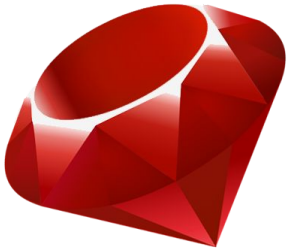
```
> "Ruby".upcase
=> ?
```



String Methods

- .upcase

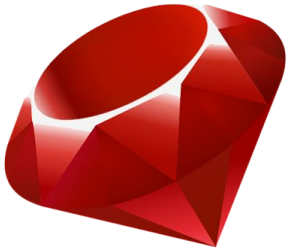
```
> "Ruby".upcase
=> "RUBY"
```



String Methods

- .downcase

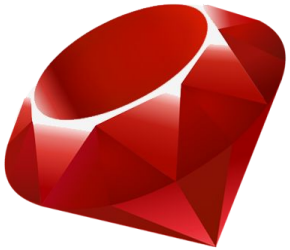
```
> "Ruby".downcase
=> "ruby"
```



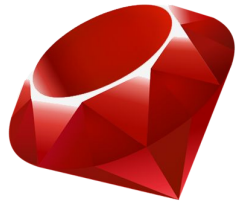
String Methods

- .capitalize

```
> "ruby".capitalize
=> "Ruby"
```



Ruby Documentation



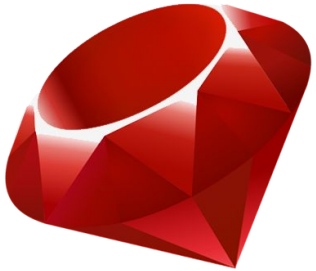
Everything is online!

Ruby documentation

- Google!
- For example “ruby doc string reverse”

http://ruby-doc.org/core/String.html

Time to practice



Let’s get to it!