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# The **Ruby** Academy, 2013

# 1st part: **The Ruby**

I. Intro + Ruby Basics

II. Ruby

III. More Ruby!

# 2nd part: **Tests & Rails**

IV. Testing: why & how

V. Rails

VI. More Rails

# The **Ruby** ~~programming~~ Language



# Ruby is **Easy to Read**.

We can no longer truthfully call it a computer language.

It is coderspeak.

It is the language of our thoughts.



# Examples

# Read Aloud!

```
5.times { print "0delay!" }
```

```
exit unless "restaurant".include? "aura"
```

```
['toast', 'cheese', 'wine'].each { |food|  
  print food.capitalize  
}
```

# Read Aloud!

```
5.times { print "Odelay!" }  
# Five times print "Odelay!".
```

```
exit unless "restaurant".include? "aura"  
# Exit unless the word restaurant includes the word aura.
```

```
['toast', 'cheese', 'wine'].each { |food|  
  print food.capitalize  
}  
# With the words 'toast', 'cheese', and 'wine':  
# take each food and print it capitalized.
```

# Read Aloud!

```
5.times { print "0delay!" }  
# => 0delay!0delay!0delay!0delay!0delay!
```

```
exit unless "restaurant".include? "aura"  
# => <program exits>
```

```
['toast', 'cheese', 'wine'].each { |food|  
  print food.capitalize  
}  
# => ToastCheeseWine
```

# Ruby is basically built from sentences.

Not exactly English, but short collections of words and punctuation which encompass a single thought.

These sentences can form books, pages, entire novels. Novels that can be read by humans & computers.

# The parts of the **Speech**

# Variables

# Any plain, lowercase word is a Variable

x

y

banana2

phone\_a\_quail

not

234\_starts\_with\_number



# Use variables to nickname stuff

```
teddy_bear_fee = 121.08
```

```
total = orphan_fee + teddy_bear_fee + gratuity
```



# Numbers

# Integers: digits with options + or -

1

23

-10000

# also, to make big numbers readable:

population = 12\_000\_000\_000

# Decimals (Floats), Scientific, Hex, Bin

3.14

-808.08

12.043e-04

0xC1A0

0b01100100100101

# Strings

# Double or Single “quotes”

```
"sealab"
```

```
'2021'
```

```
"These cartoons are hilarious!"
```

```
avril_quote = "I'm a lot wiser. Now I know  
what the business is like -- what you have  
to do and how to work it."
```

```
print avril_quote
```

# Decimals (Floats), Scientific, Hex, Bin

3.14

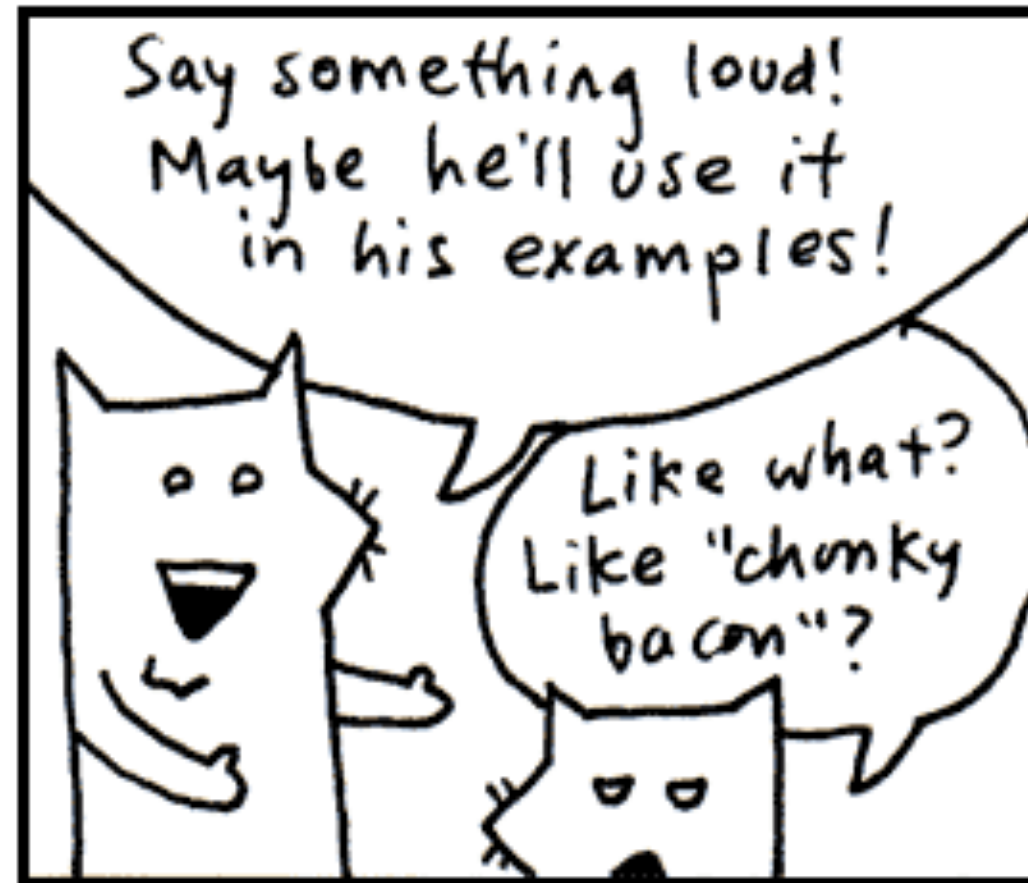
-808.08

12.043e-04

0xC1A0

0b01100100100101





# Symbols

# Symbols are lightweight strings

# use when need string that you won't print

:a

:b

:ponce\_de\_leon

# they're easier to digest for the computer,

# the colon indicates the bubbles

# trickling up from your computer's stomach

# as it digests the symbol



# Constants

# Constants: like variables, but capitalized

Time

Array

Bunny\_Lake\_is\_Missing

# can't be changed after they're set

EmpireStateBuilding = "350 5th Avenue, NYC, NY"



# Methods



if variables and constants are the  
names, **methods are the verbs**

# Methods: attached.with.a.dot

```
front_door.open  
front_door.open.close
```

```
front_door.is_open?  
front_door.shut!
```

```
# “.is_open?” could have been written like this:  
Door.test_to_see_if_its_open
```

# Method arguments

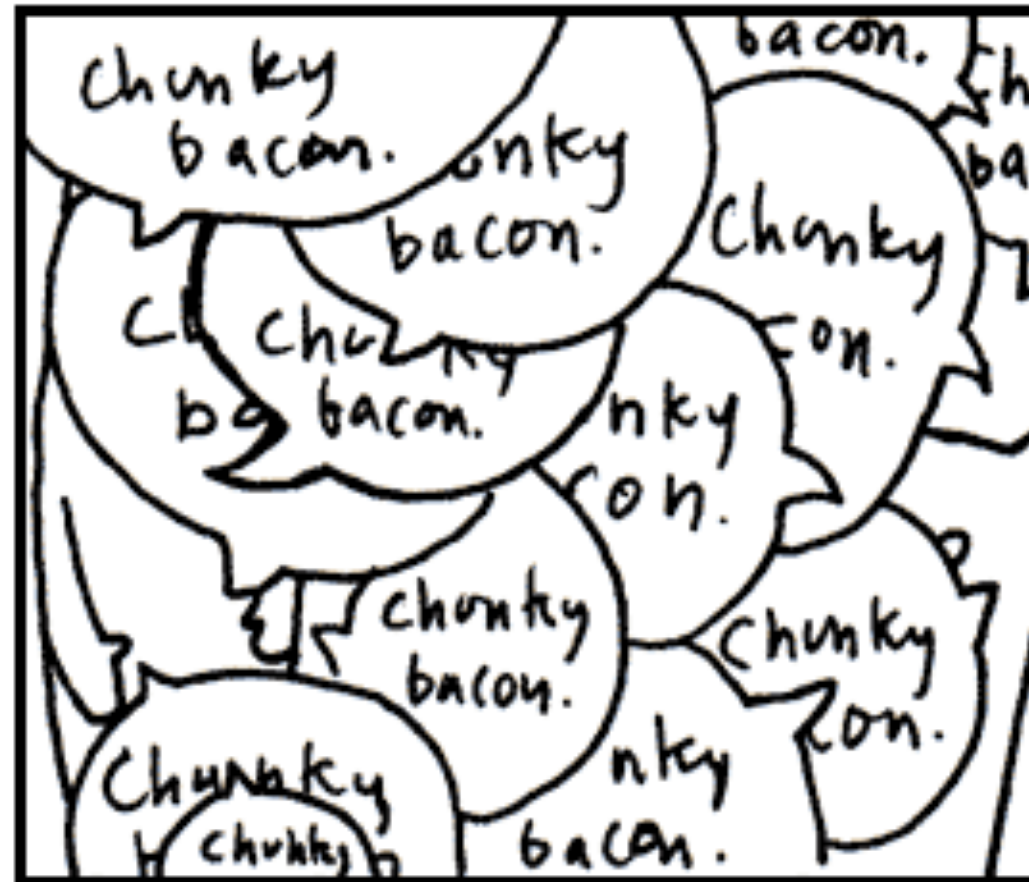
Method arguments are attached to the end of a method.

The arguments are **usually** surrounded by parentheses and separated by commas.

# Methods: attached.with.a.dot

```
front_door.paint(3, :red)
front_door.paint(3, :red).dry(30).close

print "See, no dot."
```



# Global variables

# Globals: the value of \$\$

\$x

\$1

\$chunky

\$CHunKY\_bACOn



# Instance variables

# Instance vars: “@” stands for at-tribute

@x

@y

@only\_the\_chunkiest\_cut\_of\_bacon\_I\_have\_ever\_seen

# Blocks

# Blocks: curly or do/end

```
2.times {  
  print "Yes, I've used chunky bacon in my examples,  
but never again!"  
}
```

```
loop do  
  print "Much better."  
  print "Ah.  More space!"  
  print "My back was killin' me in those crab pincers."  
end
```

# Block arguments: down the pipe!

|x|

|x,y|

|up, down, all\_around|

{ |x,y| x + y }



*Ceci n'est pas une pipe.*

# Ranges

# Ranges: surrounded by () and separated by an ...

# is a range, representing the numbers 1 through 3.  
(1..3)

# is a range, representing a lowercase alphabet.  
( 'a' .. 'z' )

# represents the numbers 0 through 4.  
(0...5)

# the extra dot kicks off the last value in the range



# Arrays

Ranges: surrounded by () and separated by an ...

```
[1, 2, 3]
```

```
# is an array of numbers.
```

```
['coat', 'mittens', 'snowboard']
```

```
# is an array of strings.
```

# The caterpillar

[ $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ,  $\emptyset$ ]







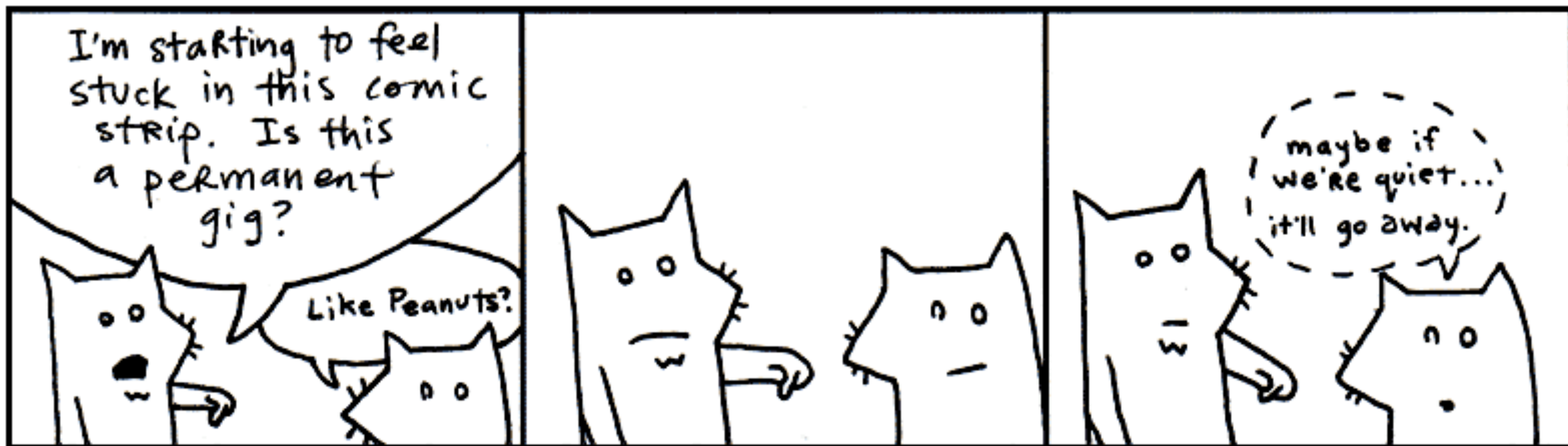
# Hashes

# Hash: curly braces outside, arrows inside

```
{'a' => 'aardvark', 'b' => 'badger'}
```

```
{:a => 'aardvark', :b => 'badger'}
```

```
{a: 'aardvark', b: 'badger'}
```



# Regular Expressions



# Regexp: surrounded by /slashes/

/ruby/

# "hey ruby boy!" => "ruby"

/[0-9]+/

# "during 1910" => "1910"

/^\d{3}-\d{3}-\d{4}/

# "123-456-7890 it's the number"

=> "123-456-7890"

# Operators

You know, addition, and subtraction, and so on

`** ! ~ * / % + - &`  
`<< >> | ^ > >= < <= <=>`  
`|| != =~ !~ && += -= == ===`  
`... not and or`



# Keywords

# You know, addition, and subtraction, and so on

alias	and	BEGIN	begin	break	case	class	def	defined
do	else	elsif	END	end	ensure	false	for	if
in	module	next	nil	not	or	redo	rescue	retry
return	self	super	then	true	undef	unless	until	when
while	yield							

So, yes. **You've kept up nicely.**  
But now I need to start seeing good  
marks from you.

# Read Aloud!

```
5.times { print "0delay!" }
```

```
exit unless "restaurant".include? "aura"
```

```
['toast', 'cheese', 'wine'].each { |food|  
  print food.capitalize  
}
```



An Example to Help You Grow Up  
and know the real world 😊

# Read Aloud!

```
require 'net/http'  
Net::HTTP.start('www.ruby-lang.org', 80) do |http|  
  print( http.get('/en/LICENSE.txt').body )  
end
```



thanks!