

Ruby Variables

local variable	local_variable
instance variable	@instance_variable
class variable	@@class_variable
global variable	\$global_variable

Ruby Data Types

String "Sequence of characters." or 'Sequence of characters.'

Symbol :a_symbol, (identifier) :another_symbol, :name

Integer 42, 100, 1002, -256

Float 1.1, 3.1415926, 5.5, - (floating point) 128.6

Numeric +, -, *, /, %
Methods

Comparison Operators ==, !=, >, >=, <, <=

Return Value Last line of a ruby method/block/expression in IRB

Boolean true or false

nil counts as false in Ruby, everything counts as true

Array (0 indexed) letters = ["a", "b", "c"]

letters[2] #returns "c"

letters[1] ["a", "monkey", "c"]
] =
"monkey"

ERB

ERB Embedded Ruby for making dynamic HTML templates

erb Sinatra looks in "views" folder for :hello hello.erb file

Show @tweets <% if @tweets %> <% @tweets.each do |tweet| %> <p><%= tweet %></p> <% end %> <% end %>

Instance Variables Any instance variables you declare in your routes, will be accessible in these erb files

Ruby Expressions

seen_it = "seen Save string to variable
again"

num = 3 Save integer to variable

other_num = 5 Save another integer to another variable

answer = (num + Save result of
other_num) * 6 adding/multiplying.

String Interpolation

dog_speak = puts "Dogs say #
"woof!" {dog_speak} "

or puts "Dogs say " +
dog_speak

Conditionals

```
if/else if input == admin_password
  admin_logged_in = true
else
  puts "Sorry, wrong
  password."
end
```

Useful Ruby Methods

split Breaks a string into an array.

join Takes an array and joins into a string.

upcase Makes characters capital letters.

reverse Reverse characters in a string.

sample Randomly choose element.

map Do the same thing to every element.

Research

Cmd+Click (Mac) or Ctrl+Click Open links in new tabs.

ruby-doc.org ("The Ruby Docs") Ruby coding best practices.

Stack Overflow Oops. Research your error.

Guides and blog posts Has someone done this before?



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Published 25th February, 2016.

Last updated 25th February, 2016.

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Sinatra

Sinatra Framework for building a web server written in Ruby

Routing Action taken in response to request

Path text and slashes after domain

`http://localhost:4567/hello` Sinatra looks for `get '/hello'`

```
get '/hello' do
  #code to return a
  response to the browser
end
```

String Response `get '/hello'`

```
"Hello, friendly web
traveler!"

end
```

HTML File Response `get '/hello'`

```
erb :hello

end
```

Get tweets route `get '/'` do

```
@tweets =
$client.user_timeline.map
{ |tweet| tweet.text }

erb :index

end
```

Redirect Get server to run code in `get '/'` route

Array Methods

push Add to end of array: `letters << "elephant"` or `letters.push("elephant")`

<< Shovel operator. Push to end of array.

unshift Add element to beginning of array: `letters.unshift("zebra")`

pop Remove from end of array. `letters.pop`

shift Remove from start of array. `letters.shift`

.method Call a method with arguments. Some methods require no arguments.

letters Method without arguments. `.pop`

Hashes

Instantiate a Hash (hash rockets) `person = { :name => "Lauren", :age => 89, :sex => "female" }`

Instantiate a Hash (shortcut) `person = { name: "Lauren", age: 89, sex: "female" }`

Access value by key. `person[:name]` # returns "Lauren"

Update value by key. `person[:age] = 12`

Insert key, value pair. `person[:gender] = "cis female"`

Hashes (cont)

Remove value by key. `person.delete(:sex)` # returns "female"

Methods

Greeting Method `def create_greeting(name)`
`return "Welcome, #{name}"`
`end`

Call Greeting Method `create_greeting("Lauren")`

#returns 'Welcome, Lauren'

Upscase On Call To Greeting Method `create_greeting("Lauren").upcase`

Arguments Input given to methods.

Parameters Define what can be passed to a method.

Return value Output from a function

Implicit Return Returning last line of method without explicit "return"

Command Line

Ruby gems Download, install, and use ruby software packages on your system

`$` Get Ruby Version

`ruby -v`

`$` Load up interactive Ruby
`irb`



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Published 25th February, 2016.

Last updated 25th February, 2016.

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Command Line (cont)

\$ gem install sinatra
Install sinatra gem

\$ gem install twitter
Install twitter gem

\$ ruby server.rb
Tell Ruby interpreter to run code.

Ctrl+C
Stop server from running.

Web and HTTP

Server
has IP address, processes requests made by the (client) browser

HTTP
protocol enabling communication between clients and servers

HTTP Verbs
GET, POST, PUT, PATCH, DELETE

GET
Request Tweets(data) from Twitter API

POST
Submit Tweet(data) to Twitter API

https:
scheme

twitter.com
domain

lauren_n_roth/stat
us/6999964284295-61856
path

Params hash
params[:tweet]

Loops

```
times 10.times do
  puts "Hello!"
end
```

times 10.times do |counter|
loop with counter

```
puts "#{counter}"
end
```

```
each letters = ["a", "b", "c"]
  letters.each do |letter|
    puts "Letter #{letter}"
  end
```

```
map capital_letters =
  letters.map do |letter|
    letter.upcase
  end
```

```
block style letters.each { |letter|
  puts "Uppcase #{letter.upcase}!" }
```

```
elegant map method capitals = letters.map {
  |letter| letter.upcase }
```

Twitter API

Download files
bit.ly/dbc-twitter-sinatra

Sign Up
apps.twitter.com

To Use

Twitter

API

Create New App
1. Create new App 2. Create Access Tokens 3. Ensure permissions are read/write

Twitter API (cont)

Set up
require twitter

Twitter

\$client

global

variable

```
$client =
  Twitter::REST::Client.new
  do |config|
```

```
  config.consumer_key =
    "YOUR_CONSUMER_KEY"
  config.consumer_secret =
    "YOUR_CONSUMER_SECRET"
  config.access_token =
    "YOUR_ACCESS_TOKEN"
  config.access_token_secret =
    "YOUR_ACCESS_SECRET"
```

```
end
```

Get
\$client.user_timeline

user

timeline

Send tweet
\$client.update("omg I am tweeting from the command line. So cool!")



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