

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, -128.6 (floating point)

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.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 again" Save string to variable

num = 3 Save integer to variable

other_num = 5 Save another integer to another variable

answer = (num + other_num) * 6 Save result of 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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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 <code>get '/hello'</code>
	<code>get '/hello' do</code>
	<code>#code to return a response to the browser</code>
	<code>end</code>
String Response	<code>get '/hello'</code>
	<code>"Hello, friendly web traveler!"</code>
	<code>end</code>
HTML File Response	<code>get '/hello' do</code>
	<code>erb :hello</code>
	<code>end</code>
Get tweets route	<code>get '/' do</code>
	<code>@tweets =</code>
	<code>\$client.user_timeline.map</code>
	<code>{ tweet tweet.text }</code>
	<code>erb :index</code>
	<code>end</code>
Redirect	Get server to run code in <code>get '/'</code> route

Array Methods	
<code>push</code>	Add to end of array: <code>letters << "elephant"</code> or <code>letters.push("elephant")</code>
<code><<</code>	Shovel operator. Push to end of array.
<code>unshift</code>	Add element to beginning of array: <code>letters.unshift("zebra")</code>
<code>pop</code>	Remove from end of array. <code>letters.pop</code>
<code>shift</code>	Remove from start of array. <code>letters.shift</code>
<code>.method (arguments)</code>	Call a method with arguments. Some methods require no arguments.
<code>letters</code>	Method without arguments.
<code>.pop</code>	

Hashes	
Instantiate a Hash (hash rockets)	<code>person = { :name => "Lauren", :age => 89, :sex => "female" }</code>
Instantiate a Hash (shortcut)	<code>person = { name: "Lauren", age: 89, sex: "female" }</code>
Access value by key.	<code>person[:name]</code> # returns "Lauren"
Update value by key.	<code>person[:age] = 12</code>
Insert key, value pair.	<code>person[:gender] = "cis female"</code>

Hashes (cont)	
Remove value by key.	<code>person.delete(:sex)</code> # returns "female"

Methods	
Greeting Method Accepts Name	<code>def create_greeting(name)</code>
	<code>return "Welcome, #{name}"</code>
	<code>end</code>
Call Greeting Method	<code>create_greeting("Lauren")</code>
	<code>#returns 'Welcome, Lauren'</code>
Upscase On Call To Greeting Method	<code>create_greeting("Lauren").upcase</code>
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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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
path
us/6999964284295-61856

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

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

Twitter API

Download
files
bit.ly/dbc-twitter-sinatra

Sign Up
To Use
Twitter
API
apps.twitter.com

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

Twitter API (cont)

Set up
Twitter
\$client
global
variable
require twitter

```
$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
user
timeline
\$client.user_timeline

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



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