

How do I use Sourcegraph with Ruby?

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Preface

Who is the booklet for?

This short booklet will show Ruby newbies how one can use Sourcegraph to better write one's Ruby programs. To try out the programs in this booklet, you should have a working copy of Ruby 2 on your computer.

Acknowledgements

I would like to thank [Sourcegraph](https://sourcegraph.com)¹ for permitting me to write this booklet.

Using Code Examples

All of the code in this booklet can be used pretty much anywhere and anyhow you please.

How to Contact Me

I can be reached via e-mail at satish.talim@gmail.com. Please contact me if you have any questions, comments, kudos or criticism on the booklet. Constructive criticism is definitely appreciated; I want this booklet to get better through your feedback.

Thanks

Thanks for downloading and checking out this booklet. As part of the lean publishing philosophy, you'll be able to interact with me as the booklet is completed. I'll be able to change things, reorganize parts, and generally make a better booklet. I hope you enjoy.

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¹<https://sourcegraph.com/>

²<http://creativecommons.org/licenses/by-sa/2.5/>

1 What's Sourcegraph?

Sourcegraph is a code search engine that shows you documentation and real-world usage examples for hundreds of thousands of libraries written in Go and Ruby.

1.1 Getting Started

[Sign up](#)¹ with your GitHub account (no private data is requested). Signing in is optional, but it helps Sourcegraph find all of your open-source code and attribute it to you.

1.2 How Do I Use It?

We shall build a small Ruby program and use Sourcegraph along the way. This simple application: given a subreddit like **ruby**, it fetches that subreddit's author of an article and the url of that article.

1.3 Assumptions

I am assuming that you have downloaded and installed Ruby.

1.4 Get Started

Open a command window, make a new folder and cd to it as follows:

```
$ mkdir sourcegraph
$ cd sourcegraph
```

1.5 sourcegraph.rb - Outline 1

I have a very basic outline of the code **sourcegraph.rb**.

Program **sourcegraph.rb**

```
if ARGV.length != 1
  abort("Usage: ruby sourcegraph.rb ruby")
end
```

We shall be accepting the subreddit name as a command-line argument to our program. If we want to see the subreddit **ruby**, we shall run our program by typing:

¹<https://sourcegraph.com/join>

```
ruby sourcegraph.rb ruby
```

`ARGV` contains the arguments passed to our script, one per element.

I want to make a Http request to the Reddit API. Next I would like to parse the JSON response and determine the subreddit's author of an article and the url of that article.

In your browser, open the site `http://reddit.com/r/ruby.json` the browser output is a huge blob of JSON that we receive from the Ruby Subreddit. This may be difficult to look at in the browser, unless you have the JSONView plugin installed. These extensions are available for [Firefox²](#) and [Chrome³](#). With the extension installed, here's a partial view of the JSON:



```
{
  kind: "Listing",
  - data: {
      modhash: "",
      - children: [
          - {
              kind: "t3",
              - data: {
                  domain: "masanjin.net",
                  banned_by: null,
                  media_embed: { },
                  subreddit: "ruby",
                  selftext_html: null,

```

JSON

In my program, I want to convert the string `http://reddit.com/r/ruby.json` to a properly formatted Uniform Resource Identifier using the `URI` module. However, I haven't used this module much and bad at remembering how to exactly use it. I would definitely like to know how. So, let us look it up on [sourcegraph⁴](#).

²<https://addons.mozilla.org/en-us/firefox/addon/jsonview/>

³<https://chrome.google.com/webstore/detail/jsonview/chklaanhfefbnpoihckbnefhakgolnmc>

⁴<https://sourcegraph.com/>

Let's type **URI ruby** as shown below:

RFC 3986, RFC 3987. Creates a new uri object from component parts. Parameters:'. A callout box on the right indicates the 'URI' result is used 9,415 times by other repositories and 549 times within its repository."/>

Found 6,358 results for URI ruby

repository **adhearsion/ruby_sip_uri**
A SIP URI parser in Ruby

module **URI**
- uri/common.rb Author Akira Yamada <akira@ruby-lang.org> Revision \$Id\$ License You can redistribute it and/or modify it under the same term as Ruby. See URI for general documentation
Decode URL-encoded form data from given str. This decodes applicat

class **Addressable::URI**
This is an implementation of a URI parser based on RFC 3986, RFC 3987. Creates a new uri object from component parts. Parameters:

Sourcegraph

If you see **module URI** there are over 9,000 examples of usage of **URI** on sourcegraph. That's good. Let's click on that. Next click on the "Components" link on the left.

In the image below, you can see the functions and other definitions in the module **URI**. On the right you can see how many times it has been used by other people.

Search for code, docs, i

Explore Blog Documentation Sign up Sign in

ruby / ruby

module **URI**

Definition Components 307 Examples 4.6k Authors 4 Users 1.2k Dependents 1.2k

class **RedURIError**
URI is valid, bad usage is not.

method **decode_www_form(str,enc)**
Decode URL-encoded form data from given str. This decodes application/x-www-form-urlencoded data and returns array of key-value array.

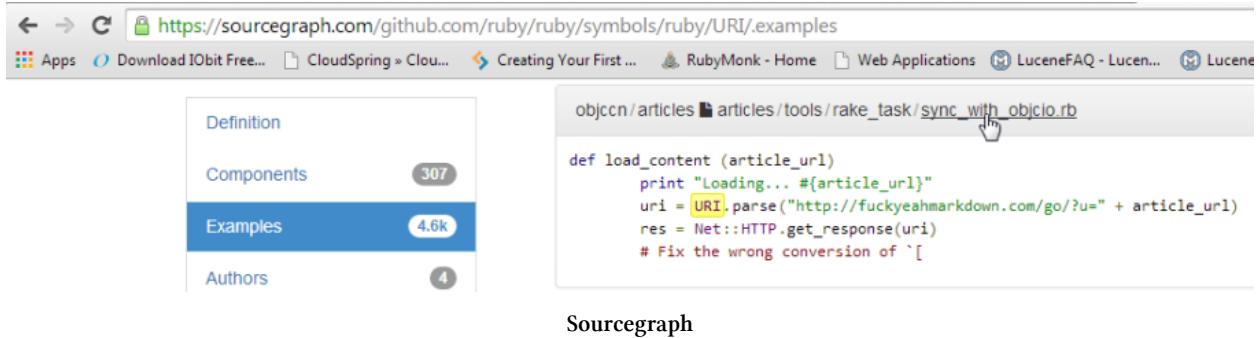
method **decode_www_form_component(str,enc)**
Decode given str of URL-encoded form data.

method **encode_www_form(enum)**
Generate URL-encoded form data from given enum. This generates application/x-www-form-urlencoded data defined in HTML5 from given an Enumerable object. This internally uses URI encode_www_form_component(str). This method doesn't convert the encoding of given items, so convert them before.

Sourcegraph

Click on the Examples link on the left and see some quick examples of how it is used.

Scroll down and see which example is similar to the one you want to write. I think **sync_with_objcio.rb** seems to be what I want.



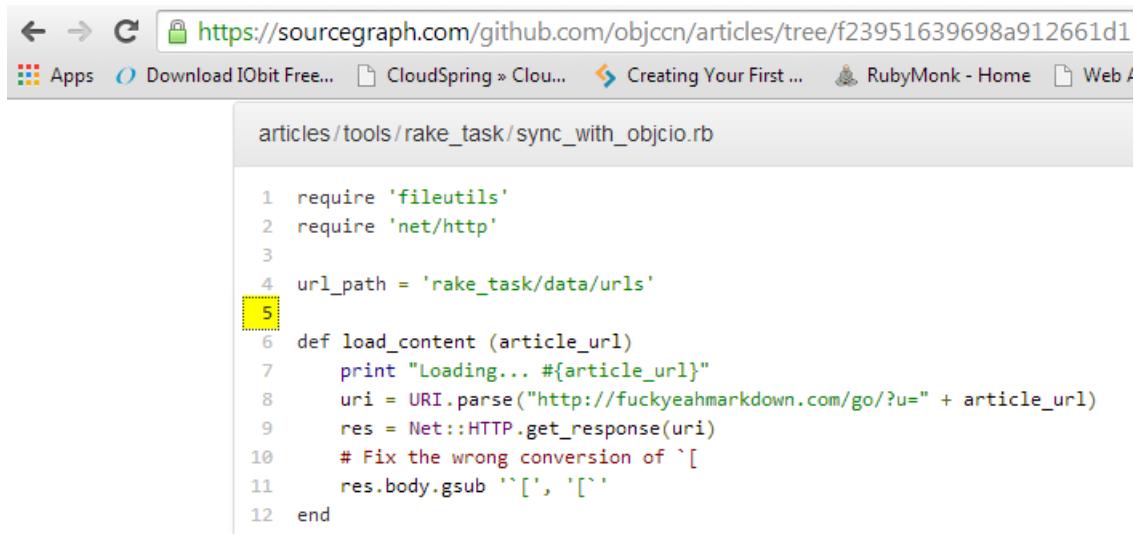
Definition
Components 307
Examples 4.6k
Authors 4

objccn/articles/articles/tools/rake_task/sync_with_objcio.rb

```
def load_content (article_url)
  print "Loading... #{article_url}"
  uri = URI.parse("http://fuckyeahmarkdown.com/go/?u=" + article_url)
  res = Net::HTTP.get_response(uri)
  # Fix the wrong conversion of `[
  res.body.gsub '^[', '['
```

Sourcegraph

Click on `sync_with_objcio.rb` to load the full example as seen in the image below.



articles/tools/rake_task/sync_with_objcio.rb

```
1 require 'fileutils'
2 require 'net/http'
3
4 url_path = 'rake_task/data/urls'
5
6 def load_content (article_url)
7   print "Loading... #{article_url}"
8   uri = URI.parse("http://fuckyeahmarkdown.com/go/?u=" + article_url)
9   res = Net::HTTP.get_response(uri)
10  # Fix the wrong conversion of `[
11  res.body.gsub '^[', '['
12 end
```

Sourcegraph

I think I will use `URI.parse` in my program `sourcegraph.rb`.

1.6 sourcegraph.rb - Outline 2

Let's type in the program as follows:

Program sourcegraph.rb

```
require 'net/http'

if ARGV.length != 1
  abort("Usage: ruby sourcegraph.rb ruby")
end

url = "http://www.reddit.com/r/#{ARGV[0]}.json"
uri = URI.parse(url)
puts uri
```

Note that in the program above, we are using the `net/http` package.

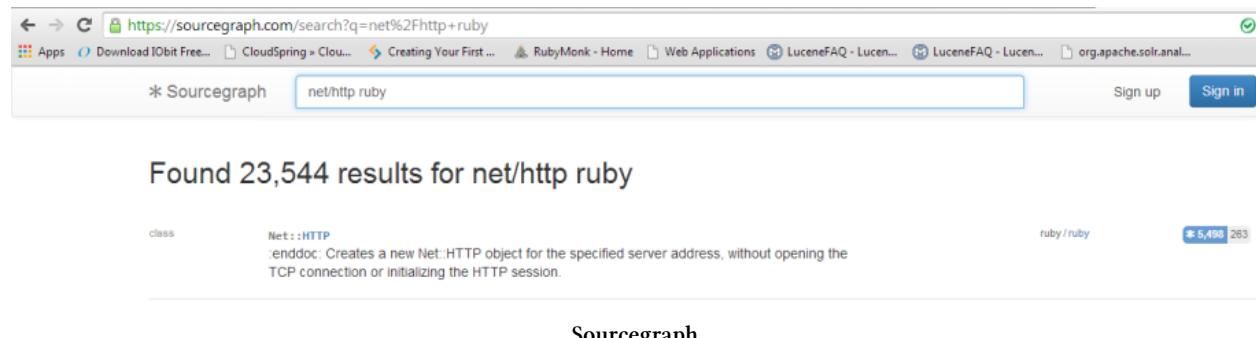
Next, in the same folder where the program is located, type:

```
$ ruby sourcegraph.rb ruby
```

We get a properly formatted URI:

```
http://www.reddit.com/r/ruby.json
```

Cool! It's working. Now, let us write the code that fetches from the Reddit API. Let's go back to Sourcegraph and see how we can do this.

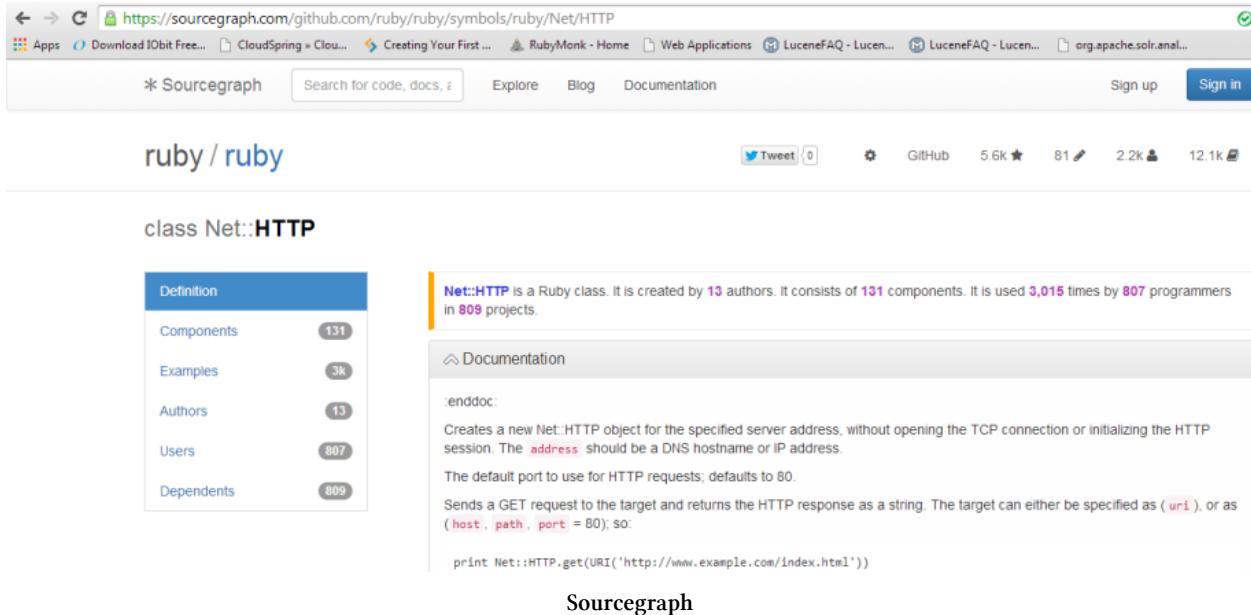


The screenshot shows a web browser window with the URL `https://sourcegraph.com/search?q=net%2Fhttp+ruby` in the address bar. The search query "net/http ruby" is entered in the search bar. The results page displays the message "Found 23,544 results for net/http ruby". Below this, a search result for the `Net::HTTP` class is shown. The class definition is as follows:

```
class Net::HTTP
  #enddoc: Creates a new Net::HTTP object for the specified server address, without opening the TCP connection or initializing the HTTP session.
end
```

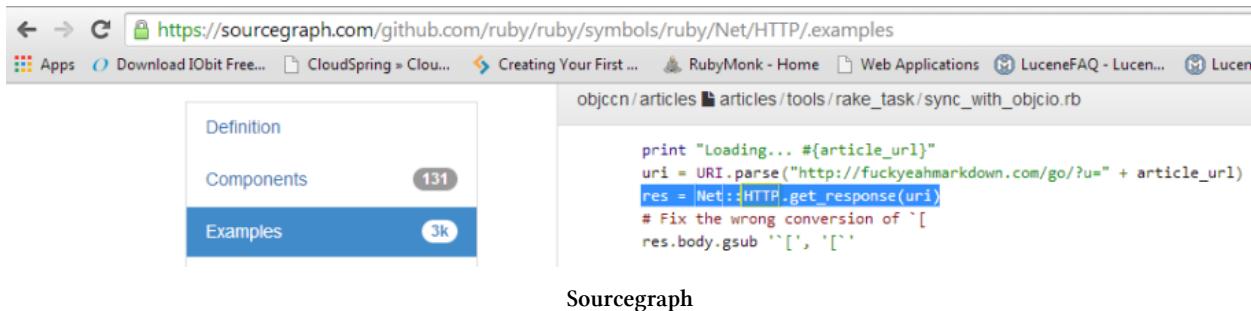
On the right side of the result, there are metrics: `ruby/ruby` and `* 5,498 263`. The Sourcegraph logo is at the bottom of the page.

Let's click on `net/http`. We should see as shown in the image below:



The screenshot shows the Sourcegraph interface for the `Net::HTTP` class in the `ruby/ruby` repository. The page has a header with navigation links and a search bar. Below the header, the class name `Net::HTTP` is displayed. On the left, a sidebar shows metrics for the class: Components (131), Examples (3k), Authors (13), Users (807), and Dependents (809). The main content area contains the class definition, documentation, and examples. The documentation section includes a brief description of the class and its methods. The examples section shows a code snippet for using `Net::HTTP` to get a URI. The entire page is branded with the Sourcegraph logo.

In the image, we can see the documentation, the `net/http` being used by 807 programmers and so on. Let's click on Examples on the left.



The screenshot shows the Sourcegraph interface for the `Net::HTTP` class examples. The page has a header with navigation links. On the left, a sidebar shows metrics for the examples: Components (131) and Examples (3k). The main content area displays a code snippet for `sync_with_objcio.rb`. The code prints the URL, parses it, and then uses `Net::HTTP` to get the response. A specific line of code, `res.body.gsub '^[' , '['`, is highlighted in green. The entire page is branded with the Sourcegraph logo.

Oh! Observe that the same example `sync_with_objcio.rb` contains the code that we need. I have highlighted the required code which I will copy/paste into my program.

1.7 sourcegraph.rb - Outline 3

Program sourcegraph.rb

```
require 'net/http'

if ARGV.length != 1
  abort("Usage: ruby sourcegraph.rb ruby")
end

url = "http://www.reddit.com/r/#{ARGV[0]}.json"
uri = URI.parse(url)

res = Net::HTTP.get_response(uri)
```

In this program we are able to get the response `res` but how do we get its contents?

We had copied/pasted the code from the `sync_with_objcio.rb` program. Let's go back to its full program listing and check if we find what to do with `res`. You will soon realize that there's nothing related to `res` there. Let us go back to the other examples listed where `sync_with_objcio.rb` is. Scroll down. Oh! Nothing here.

Let's search again on Sourcegraph for `get_response ruby`.

Found 77 results for `get_response ruby`

method `Net::HTTP.get_response`
Sends a GET request to the target and returns the HTTP response as a `Net::HTTPResponse` object.

ruby/ruby 2

Sourcegraph

Click on `get_response`.

ruby / ruby

method `Net::HTTP.get_response(uri_or_host,path,port,&block)`

Definition Examples 87 Authors 4 Users 66 Dependents 64

`Net::HTTP.get_response` is a Ruby method. It is created by 4 authors. It is used 87 times by 66 programmers in 64 projects.

Documentation

Sends a GET request to the target and returns the HTTP response as a `Net::HTTPResponse` object. The target can either be specified as (`uri`), or as (`host, path, port` = 80); so:

```
res = Net::HTTP.get_response(URI('http://www.example.com/index.html'))
print res.body
```

Sourcegraph

I observe that I can extract the `res.Body` out of `res`.

Let's add `print res.body` to our program and run it.

Program `sourcegraph.rb`

```
require 'net/http'

if ARGV.length != 1
  abort("Usage: ruby sourcegraph.rb ruby")
end

url = "http://www.reddit.com/r/#{ARGV[0]}.json"
uri = URI.parse(url)

res = Net::HTTP.get_response(uri)
print res.body
```

I see a huge blob of JSON in the `res` object. I need to parse this JSON and get what I want. How?

1.8 sourcegraph.rb - Outline 4

Going back to Sourcegraph, let me search for `json.parse ruby`.

Found 48 results for json.parse ruby

method	JSON.parse	brianmario/yajl-ruby	246 21
method	JSON.parse Parse the JSON document source into a Ruby data structure and return it. opts can have the following keys: max_nesting: The maximum depth of nesting allowed in the parsed data structures.	flori/json	* 2,284 106 Used 2,284 times by other repositories and 106 times within its repository

Sourcegraph

Click on the method `parse` and then on the screen that comes up, click on “Examples”. Scroll down and see which example is similar to the one you want to write. I think `users_controller_spec.rb` seems to be what I want.

https://sourcegraph.com/github.com/flori/json/symbols/ruby/gem/JSON/\$classmethods/parse/examples

Definition Examples 2.4k Authors 1

discourse / discourse discourse/spec/controllers/users_controller_spec.rb

```
user.use_uploaded_avatar.should == true
# returns the url, width and height of the uploaded image
json = JSON.parse(response.body)
json['url'].should == "/uploads/default/1/1234567890123456.jpg"
```

Sourcegraph

The highlighted code is returning us a JSON object.

Let us copy/paste the relevant code from `users_controller_spec.rb` into our program:

Program sourcegraph.rbo

```
require 'json'
require 'net/http'

if ARGV.length != 1
  abort("Usage: ruby sourcegraph.rb ruby")
end

url = "http://www.reddit.com/r/#{ARGV[0]}.json"
uri = URI.parse(url)

res = Net::HTTP.get_response(uri)
result = JSON.parse(res.body)
print result
```

Observe that we need the statement `require 'json'`.

Run the program and you can see the API response, but we want to show some specific pieces of information. We can see the `author` and `url` in that data.

1.9 sourcegraph.rb - Final program

In your browser, again open the site `http://reddit.com/r/ruby.json` the browser output is formatted JSON (because of the plugin that we had installed earlier).

Observe that `result['data']['children']` is an Array of Hash that contains many `['author']` and `['url']`.

We shall use a `for` loop to extract all the `['author']` and `['url']`, as shown in the program below:

Program `sourcegraph.rb`

```
require 'json'
require 'net/http'

if ARGV.length != 1
  abort("Usage: ruby sourcegraph.rb ruby")
end

url = "http://www.reddit.com/r/#{ARGV[0]}.json"
uri = URI.parse(url)

res = Net::HTTP.get_response(uri)
result = JSON.parse(res.body)

# result['data']['children'] is an Array of Hash
for x in 0..(result['data']['children'].length-1)
  puts "Author: " + result['data']['children'][x]['data']['author']
  puts "Article URL: " + result['data']['children'][x]['data']['url']
  puts ""
end
```

Re-run the program:

```
$ ruby sourcegraph.rb ruby
Author: daviddhh
Article URL: https://github.com/DavidHuie/quartz
```

```
Author: Categoria
Article URL: http://masanjin.net/blog/fibers
```

```
Author: egisatoshi
Article URL: http://www.egison.org/blog/ruby.html
```

That's my data and it's correct. Let us try another subreddit say **golang**:

```
$ ruby sourcegraph.rb golang
Author: mattetti
Article URL: http://www.golangbootcamp.com/?book
```

```
Author: natefinch
Article URL: https://github.com/natefinch/lumberjack
```

```
Author: IndianGuru
Article URL: https://leanpub.com/howdoiusesourcegraph
```

That's it! So searching on Sourcegraph you can quickly see how other programmers are doing similar work that we are doing. We thus save a lot of time by being able to look at code and see how things are actually used, instead of having to read thro' docs. Documentation is great and Sourcegraph is a great way to find docs quickly but sometimes an example is worth thousands of lines of documentation.

So try Sourcegraph out and if you have any feedback (questions, bugs etc.) for them, post them at <https://github.com/sourcegraph/sourcegraph.com/issues/new>⁵.

Sourcegraph is working really hard to make it the best tool for open source programmers.

⁵<https://github.com/sourcegraph/sourcegraph.com/issues/new>