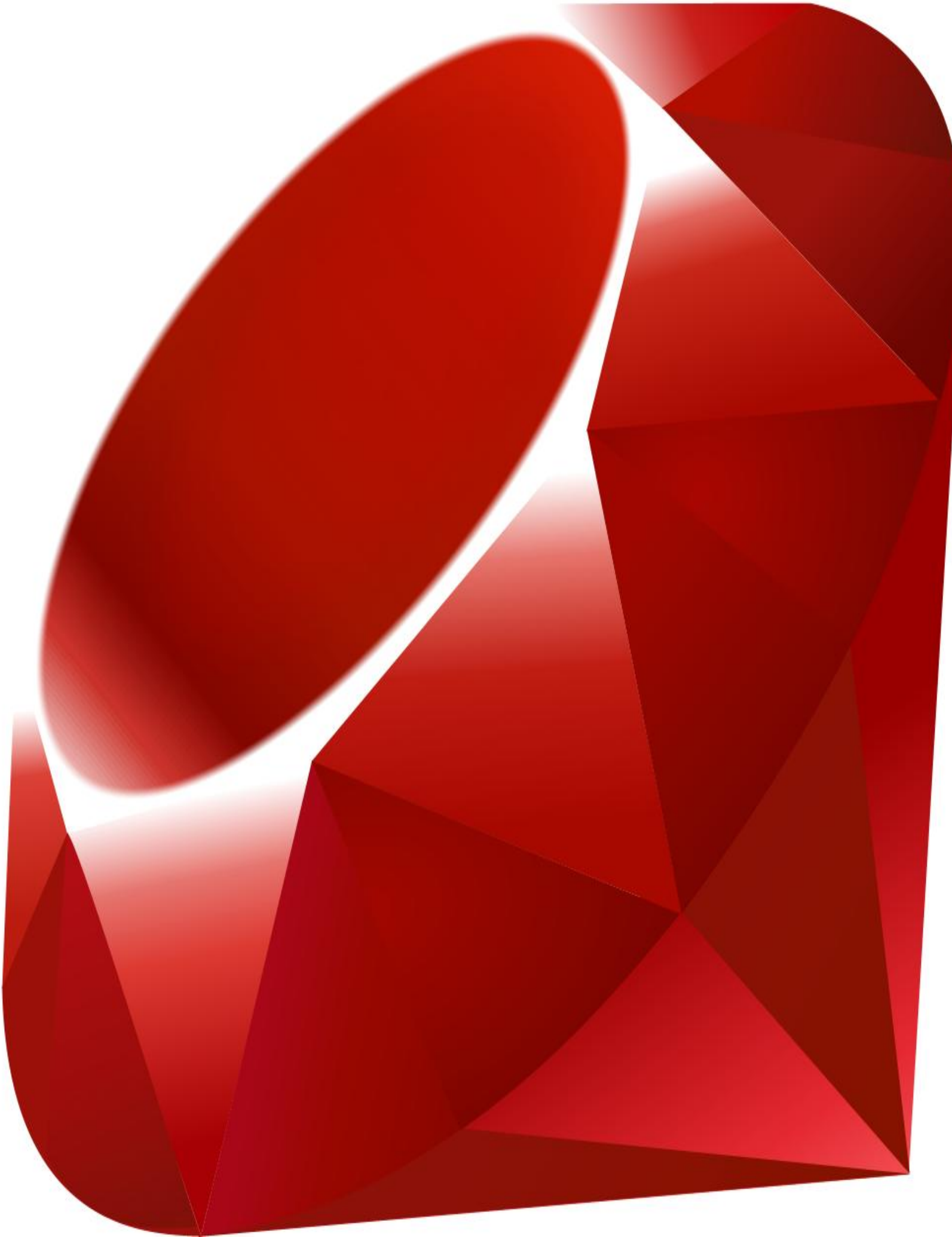

How do I use Sourcegraph with Ruby?

Satish Talim

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Also By Satish Talim

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Building a package in Go

How do I use Sourcegraph with Go?

Contents

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[1] for permiting 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.

[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

```ruby
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:

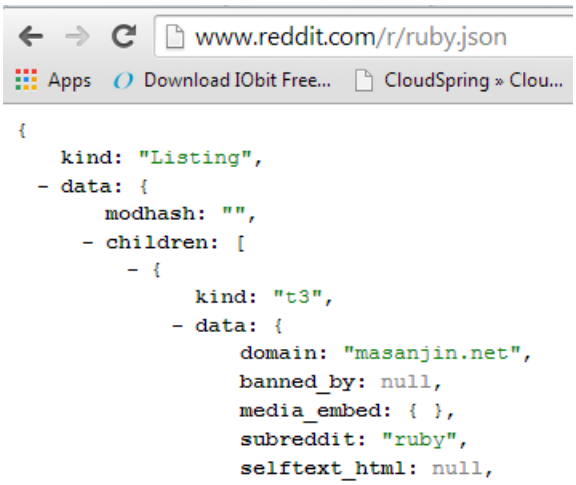
[1] https://sourcegraph.com/join

```
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 Firefox[2] and Chrome[3]. With the extension installed, here's a partial view of the JSON:



JSON

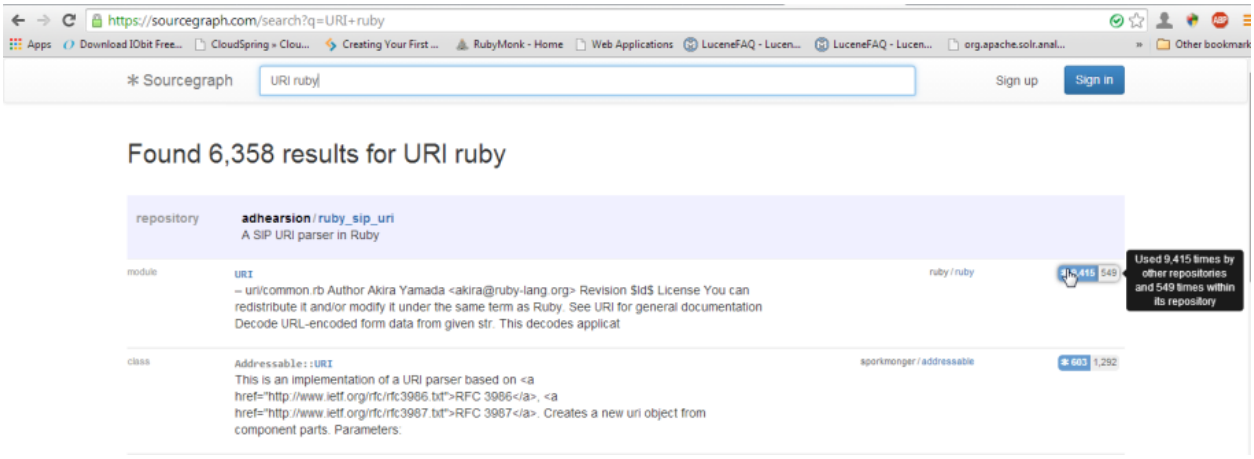
In my program, I want to convert the string **http://reddit.com/r/ruby.json** to a properly formatted Uniform Resource Identifier using the **URI** module. However, I haven't used this module much and bad at remembering how to exactly use it. I would definitely like to know how. So, let us look it up on sourcegraph[4].

[2] https://addons.mozilla.org/en-us/firefox/addon/jsonview/

[3] https://chrome.google.com/webstore/detail/jsonview/chklaanhfefbnpoihckbnefhakgolnmc

[4] https://sourcegraph.com/

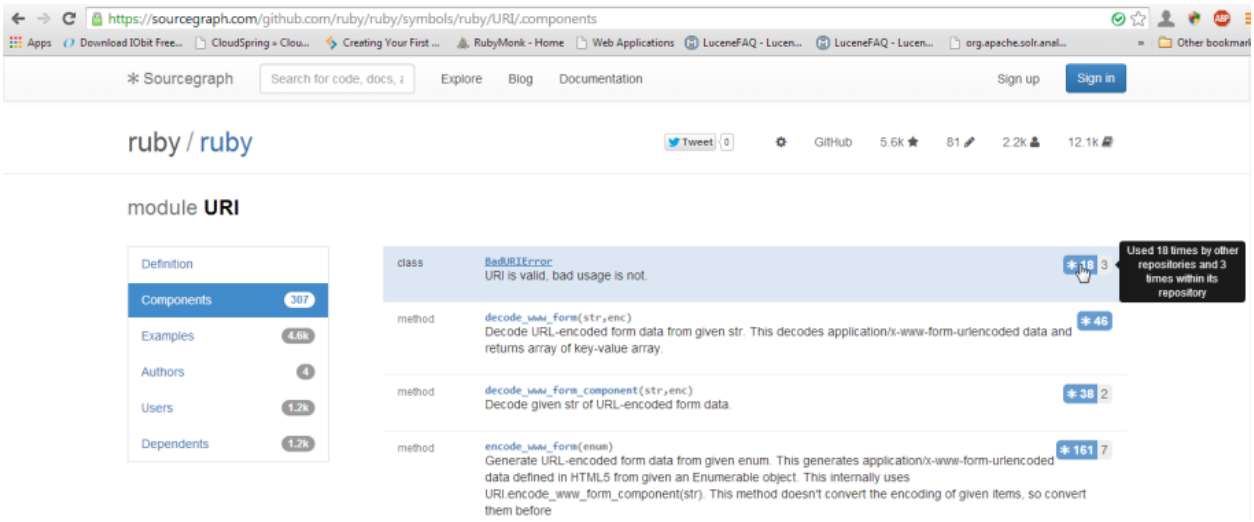
Let's type `URI ruby` as shown below:



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.



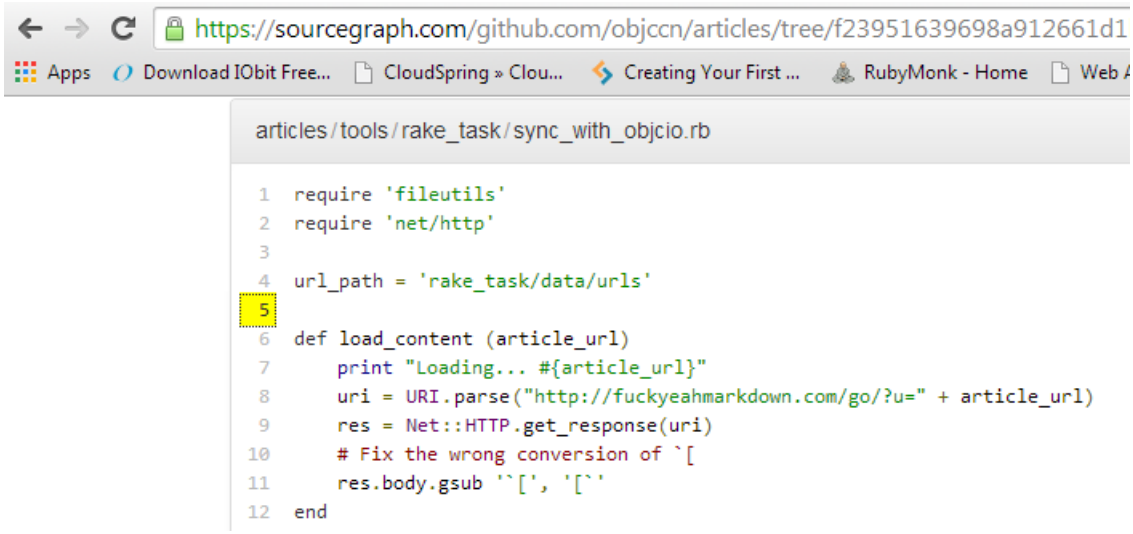
Sourcegraph

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.

Sourcegraph

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



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.

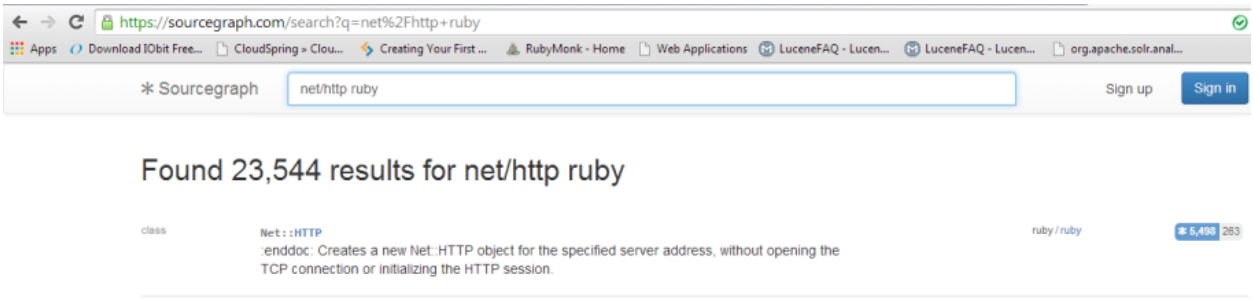
Next, in the same folder where the program is located, type:

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

We get a properly formatted URI:

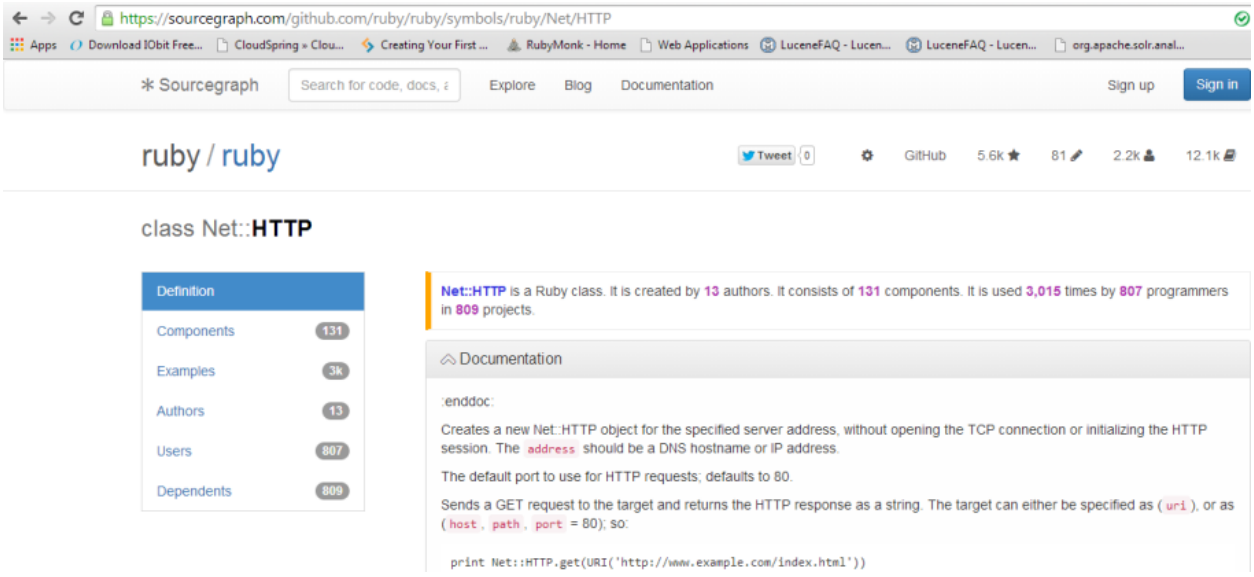
```
http://www.reddit.com/r/ruby.json
```

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.



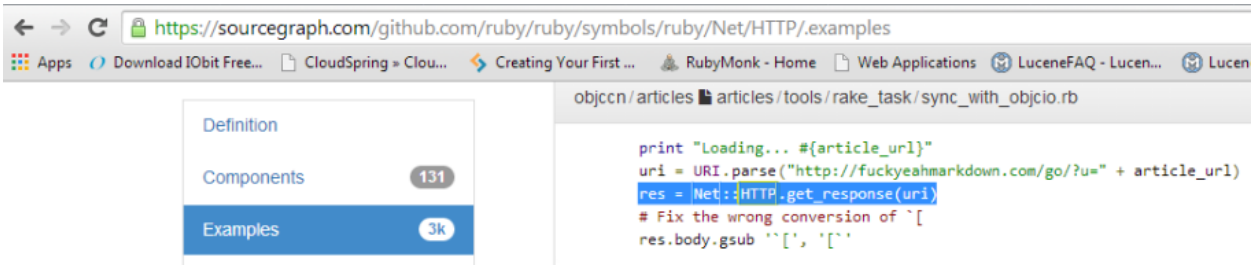
Sourcegraph

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



Sourcegraph

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.



Sourcegraph

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

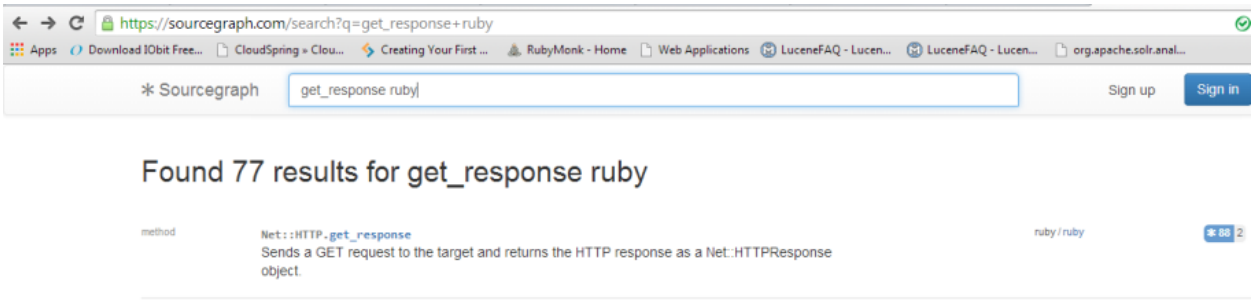
Program sourcegraph.rb

```
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 it's 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**.



Sourcegraph

Click on **get_response**.

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.

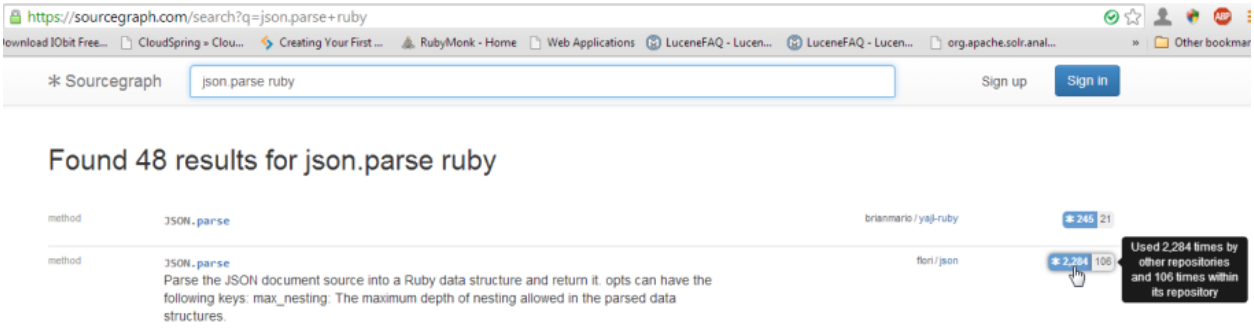
Program sourcegraph.rb

```
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?

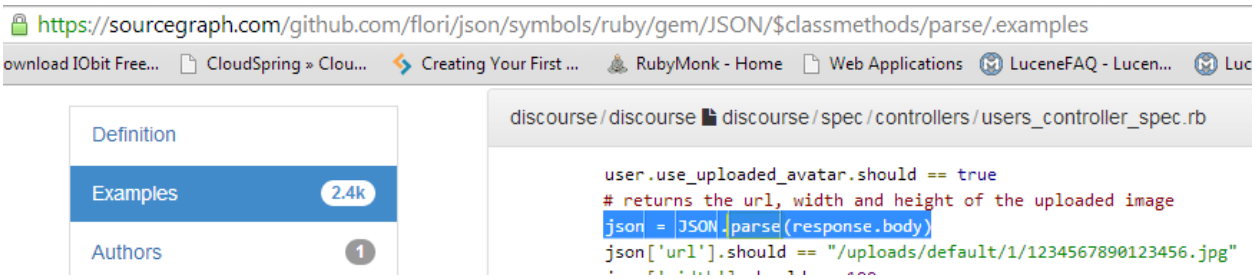
1.8 sourcegraph.rb - Outline 4

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



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.



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: davidddh
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