

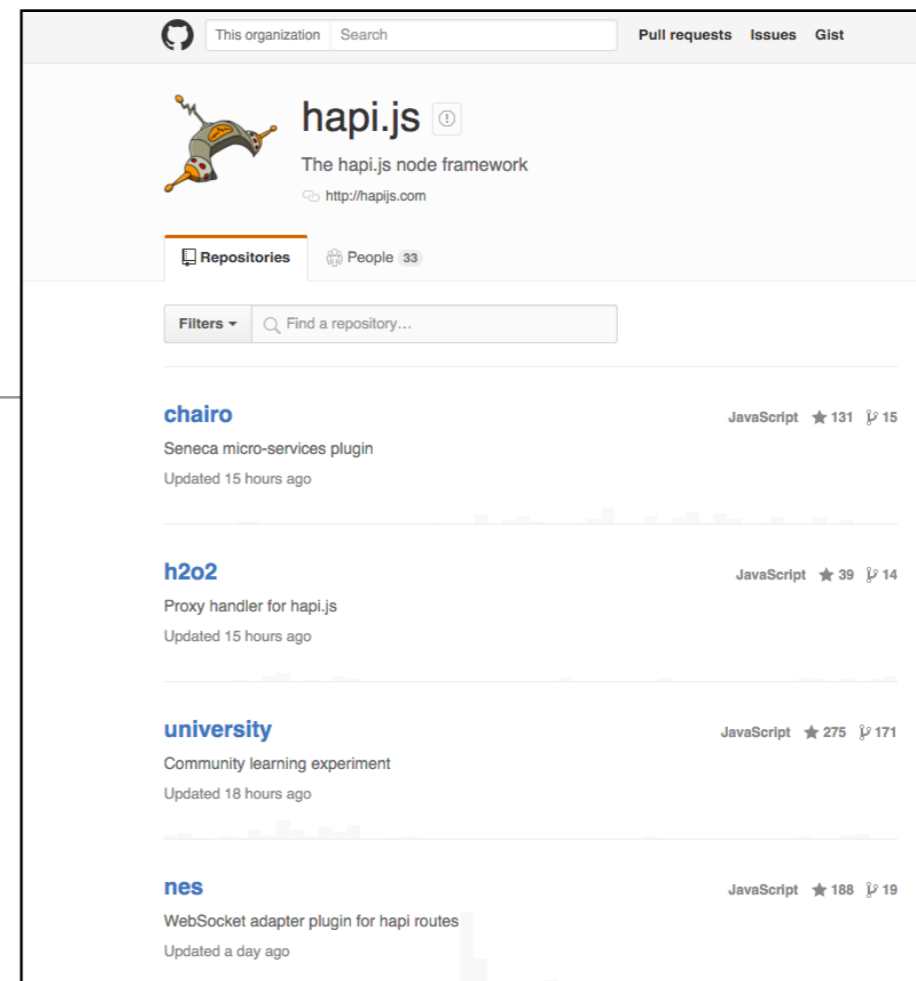
Ajax 1

Agenda

- Web vs APIs
- API data exchange Formats
- API Exploration Tools (Chrome, Curl)
- API Exploration in HTML + JS

Web vs API

- Web - HTML Response
- API - JSON Response
- Both use HTTP:
 - GET, PUT, POST, DELETE etc...
- Web
 - request formulated by browser
 - response rendered by browser
- API
 - request formulated by program,
 - response interpreted by program

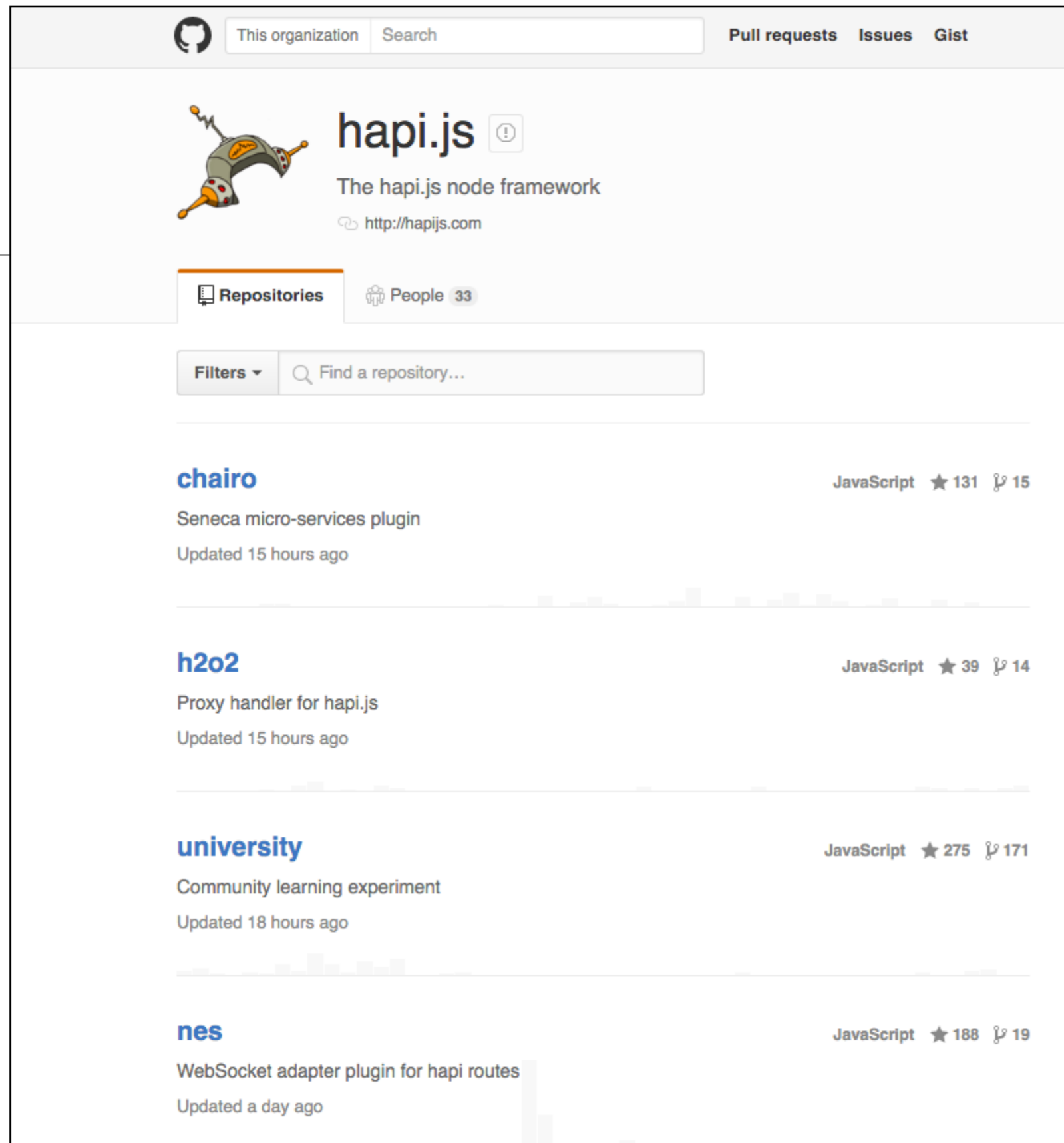


Web



API

Web



The screenshot shows the GitHub organization page for hapi.js. At the top, there is a navigation bar with the GitHub logo, a search bar containing "This organization", and links for "Pull requests", "Issues", and "Gist". Below this is the organization's profile, featuring the hapi.js logo (a stylized robot head), the name "hapi.js", a description "The hapi.js node framework", and the website "http://hapijs.com".

Under the profile, there are tabs for "Repositories" (selected) and "People 33". A search bar for repositories is present with the text "Find a repository...".

The main content area lists four repositories:

- chairo**: Seneca micro-services plugin, JavaScript, 131 stars, 15 forks, updated 15 hours ago.
- h2o2**: Proxy handler for hapi.js, JavaScript, 39 stars, 14 forks, updated 15 hours ago.
- university**: Community learning experiment, JavaScript, 275 stars, 171 forks, updated 18 hours ago.
- nes**: WebSocket adapter plugin for hapi routes, JavaScript, 188 stars, 19 forks, updated a day ago.

<https://github.com/hapijs>

- Single page but multiple http requests for various assets, images etc...

The screenshot shows a web browser window displaying the GitHub profile for hapi.js. The browser's address bar shows the URL `https://github.com/hapijs`. The page header includes the hapi.js logo, the name "hapi.js", the description "The hapi.js node framework", and the website URL `http://hapijs.com`. Below the header, there are tabs for "Repositories" and "People 33". A search bar with the placeholder "Find a repository..." is visible. The main content area lists two repositories:

- code**: JavaScript, 127 stars, 28 forks. Description: "Assertion library", updated 9 hours ago.
- hapi**: JavaScript, 6,584 stars, 689 forks. Description: "Server Framework for Node.js", updated 15 hours ago.

The browser's developer tools are open, showing the Network tab. The network activity is visualized as a waterfall chart with a time scale from 0 to 2500 ms. A summary bar at the bottom of the network tab indicates: "51 requests | 73.6 KB transferred | Finish: 1.98 s | DOMContentLoaded: 926 ms | Load: 1.36 s". Below the network tab, the Console tab is also visible, showing a "top" message.

API Data Interchanges Formats

- Comma Separated Values (CSV)
- Name/Value Pairs
- YAML
- XML
- JSON

CSV

http://en.wikipedia.org/wiki/Comma-separated_values

A **comma-separated values (CSV)** (also sometimes called *character-separated values*, because the separator character does not have to be a comma) file stores [tabular](#) data (numbers and text) in plain-text form. [Plain text](#) means that the file is a sequence of [characters](#), with no data that has to be interpreted instead, as binary numbers. A CSV file consists of any number of [records](#), separated by line breaks of some kind; each record consists of [fields](#), separated by some other character or string, most commonly a literal comma or [tab](#). Usually, all records have an identical sequence of fields.

```
"mocha", "costa", 2.0, 3.5, 0
"americano", "costa", 3.0, 4.5, 1
"cappuccino", "starbucks", 4.0, 1.5, 0
```

coffees.csv

Name/Value Pairs

http://en.wikipedia.org/wiki/Attribute-value_pair

A **name–value pair**, **key–value pair**, **field–value pair** or **attribute–value pair** is a fundamental [data representation](#) in computing systems and applications. Designers often desire an open-ended [data structure](#) that allows for future extension without modifying existing code or data. In such situations, all or part of the [data model](#) may be expressed as a collection of [tuples](#) *<attribute name, value>*; each element is an attribute–value pair. Depending on the particular application and the implementation chosen by programmers, attribute names may or may not be unique.

```
db.url=jdbc:cloudbees://pacemaker
db.driver=com.mysql.jdbc.Driver
db.user=pacemaker
db.pass=pacemaker
jpa.ddl=create
```

application.conf

```
name="mocha"
shop="costa"
rating=3.5
price=2.0
favourite=0
id=1
```

coffees.conf

YAML

<http://en.wikipedia.org/wiki/YAML>

YAML ([/ˈjæməl/](#), rhymes with *camel*) is a [human-readable data serialization](#) format that takes concepts from programming languages such as [C](#), [Perl](#), and [Python](#), and ideas from [XML](#) and the data format of electronic mail ([RFC 2822](#)). YAML was first proposed by Clark Evans in 2001,[\[1\]](#) who designed it together with Ingy döt Net[\[2\]](#) and Oren Ben-Kiki.[\[2\]](#) It is available for several programming languages. *YAML* is a [recursive acronym](#) for "YAML Ain't [Markup Language](#)". Early in its development, *YAML* was said to mean "[Yet Another](#) Markup Language",[\[3\]](#) but it was then reinterpreted ([backronyming](#) the original acronym) to distinguish its purpose as data-oriented, rather than document markup.

```
Coffee(c1):
  name      : mocha
  shop      : costa
  price     : 2.0
  rating    : 3.5
  favourite : 0

Coffee(c2):
  name      : americano
  shop      : costa
  price     : 3.0
  rating    : 4.5
  favourite : 1

Coffee(c3):
  name      : cappucino
  shop      : starbucks
  price     : 4.0
  rating    : 1.5
  favourite : 0
```

data.yaml

XML

<http://en.wikipedia.org/wiki/XML>

Extensible Markup Language (XML) is a [markup language](#) that defines a set of rules for encoding documents in a [format](#) that is both [human-readable](#) and [machine-readable](#). It is defined in the XML 1.0 Specification [\[3\]](#) produced by the [W3C](#), and several other related specifications, [\[4\]](#) all free [open standards](#). [\[5\]](#)

The design goals of XML emphasize simplicity, generality, and usability over the [Internet](#). [\[6\]](#) It is a textual data format with strong support via [Unicode](#) for the languages of the world. Although the design of XML focuses on documents, it is widely used for the representation of arbitrary [data structures](#), for example in [web services](#).

Many [application programming interfaces](#) (APIs) have been developed to aid software developers with processing XML data, and several [schema systems](#) exist to aid in the definition of XML-based languages.

```
<?xml version="1.0"
encoding="UTF-8"?>

<coffee objname="c1">
  <name> mocha </name>
  <shop> costa </shop>
  <price> 2.0 </price>
  <rating> 3.5</rating>
  <favourite> 0 </favourite>
</coffee>

<coffee objname="c1">
  <name> americano </name>
  <shop> costa </shop>
  <price> 3.0 </price>
  <rating> 4.5 </rating>
  <favourite> 1 </favourite>
</coffee>

<coffee objname="c1">
  <name> cappuccino </name>
  <shop> starbucks </shop>
  <price> 4.0 </price>
  <rating> 1.5 </rating>
  <favourite> 0 </favourite>
</coffee>
```

JSON

<http://en.wikipedia.org/wiki/JSON>

JSON ([/ˈdʒeɪsɪn/](#) *[jay-sawn](#)*, [/ˈdʒeɪsən/](#) *[jay-sun](#)*), or **JavaScript Object Notation**, is a text-based [open standard](#) designed for [human-readable](#) data interchange. Derived from the [JavaScript](#) scripting language, JSON is a language for representing simple [data structures](#) and [associative arrays](#), called objects. Despite its relationship to JavaScript, JSON is [language-independent](#), with parsers available for many languages.

The JSON format was originally specified by [Douglas Crockford](#), and is described in [RFC 4627](#). The official [Internet media type](#) for JSON is `application/json`. The JSON filename extension is `.json`.

The JSON format is often used for [serializing](#) and transmitting structured data over a network connection. It is used primarily to transmit data between a server and web application, serving as an alternative to [XML](#).

```
{
  "name": "mocha",
  "shop": "costa",
  "rating": 3.5,
  "price": 2.0,
  "favourite": 0,
  "id": 1
},
{
  "name": "americano",
  "shop": "costa",
  "rating": 4.5,
  "price": 3.0,
  "favourite": 1,
  "id": 2
},
{
  "name": "cappuccino lite",
  "shop": "starbucks",
  "rating": 1.5,
  "price": 4.0,
  "favourite": 1,
  "id": 3
}
```

Exploring APIs

```
[
  {
    "id": 24743682,
    "name": "accept",
    "full_name": "hapijs/accept",
    "owner": {
      "login": "hapijs",
      "id": 3774533,
      "avatar_url": "https://avatars.githubusercontent.com/u/3774533?v=3",
      "gravatar_id": "",
      "url": "https://api.github.com/users/hapijs",
      "html_url": "https://github.com/hapijs",
      "followers_url": "https://api.github.com/users/hapijs/followers",
      "following_url": "https://api.github.com/users/hapijs/following{/other_user}",
      "gists_url": "https://api.github.com/users/hapijs/gists{/gist_id}",
      "starred_url": "https://api.github.com/users/hapijs/starred{/owner}/{/repo}",
      "subscriptions_url": "https://api.github.com/users/hapijs/subscriptions",
      "organizations_url": "https://api.github.com/users/hapijs/orgs",
      "repos_url": "https://api.github.com/users/hapijs/repos",
      "events_url": "https://api.github.com/users/hapijs/events{/privacy}",
      "received_events_url": "https://api.github.com/users/hapijs/received_events",
      "type": "Organization",
      "site_admin": false
    },
    "private": false,
    "html_url": "https://github.com/hapijs/accept",
    "description": "HTTP Accept-* headers parsing",
    "fork": false,
    "url": "https://api.github.com/repos/hapijs/accept",
    "forks_url": "https://api.github.com/repos/hapijs/accept/forks",
    "keys_url": "https://api.github.com/repos/hapijs/accept/keys{/key_id}",
    "collaborators_url": "https://api.github.com/repos/hapijs/accept/collaborators{/collaborator}",
    "teams_url": "https://api.github.com/repos/hapijs/accept/teams",
    "hooks_url": "https://api.github.com/repos/hapijs/accept/hooks",
    "issue_events_url": "https://api.github.com/repos/hapijs/accept/issues/events{/number}",
    "events_url": "https://api.github.com/repos/hapijs/accept/events",
    "assignees_url": "https://api.github.com/repos/hapijs/accept/assignees{/user}",
    "branches_url": "https://api.github.com/repos/hapijs/accept/branches{/branch}",
    "tags_url": "https://api.github.com/repos/hapijs/accept/tags",
    "blobs_url": "https://api.github.com/repos/hapijs/accept/git/blobs{/sha}",
    "git_tags_url": "https://api.github.com/repos/hapijs/accept/git/tags{/sha}",
    "git_refs_url": "https://api.github.com/repos/hapijs/accept/git/refs{/sha}",
    "trees_url": "https://api.github.com/repos/hapijs/accept/git/trees{/sha}",
    "statuses_url": "https://api.github.com/repos/hapijs/accept/statuses{/sha}",
    "languages_url": "https://api.github.com/repos/hapijs/accept/languages",
    "stargazers_url": "https://api.github.com/repos/hapijs/accept/stargazers",
    "contributors_url": "https://api.github.com/repos/hapijs/accept/contributors",
    "subscribers_url": "https://api.github.com/repos/hapijs/accept/subscribers",
    "subscription_url": "https://api.github.com/repos/hapijs/accept/subscription",
    "commits_url": "https://api.github.com/repos/hapijs/accept/commits{/sha}",
    "git_commits_url": "https://api.github.com/repos/hapijs/accept/git/commits{/sha}",
    "comments_url": "https://api.github.com/repos/hapijs/accept/comments{/number}",
    "issue_comment_url": "https://api.github.com/repos/hapijs/accept/issues/comments{/number}",
    "contents_url": "https://api.github.com/repos/hapijs/accept/contents/{+path}",
    "compare_url": "https://api.github.com/repos/hapijs/accept/compare/{base}...{head}",
    "merges_url": "https://api.github.com/repos/hapijs/accept/merges",
    "archive_url": "https://api.github.com/repos/hapijs/accept/{archive_format}/{ref}",
    "downloads_url": "https://api.github.com/repos/hapijs/accept/downloads",
    "issues_url": "https://api.github.com/repos/hapijs/accept/issues{/number}",
    "pulls_url": "https://api.github.com/repos/hapijs/accept/pulls{/number}",
    "milestones_url": "https://api.github.com/repos/hapijs/accept/milestones{/number}",
    "notifications_url": "https://api.github.com/repos/hapijs/accept/notifications?{since,all,participating}",
    "labels_url": "https://api.github.com/repos/hapijs/accept/labels{/name}"
  }
]
```

<https://api.github.com/users/hapijs/repos>

Curl: <https://curl.haxx.se/>



command line tool and library
for transferring data with URLs

Supports...

DICT, FILE, FTP, FTPS, Gopher, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTSP, SCP, SFTP, SMB, SMTP, SMTPS, Telnet and TFTP. curl supports SSL certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, HTTP/2, cookies, user+password authentication (Basic, Plain, Digest, CRAM-MD5, NTLM, Negotiate and Kerberos), file transfer resume, proxy tunneling and more.

What's curl used for?

curl is used in command lines or scripts to transfer data. It is also used in cars, television sets, routers, printers, audio equipment, mobile phones, tablets, settop boxes, media players and is the internet transfer backbone for thousands of software applications affecting *billions of humans* daily.

Who makes curl?

curl is free and [open source](#) software and exists thanks to [thousands of contributors](#). The curl project [follows well established open source best practises](#).

What's the latest curl?

The most recent stable version is **7.50.2**, released on 7th of September 2016. Currently, 87 of the listed [downloads](#) are of the latest version.

Where's the code?

Check out the latest [source code from github](#).

```
$ curl https://api.github.com/users/hapijs/repos
```

Rendering JSON in Chrome

The screenshot shows the Chrome Web Store page for the JSONView extension. At the top, the extension is identified as 'JSONView' by 'gildas', with a 5-star rating from 1861 reviews and 968,093 users. A green 'ADDED TO CHROME' button is visible in the top right. Below the header, there are tabs for 'OVERVIEW', 'REVIEWS', 'SUPPORT', and 'RELATED'. The main content area displays a JSON snippet with syntax highlighting and a 'View source' link. The JSON includes fields like 'indices', 'expanded_url', 'display_url', 'url', and 'user_mentions'. A tooltip shows the path '[0].retweeted_status.entities.urls[0].url'. On the right, there's a 'Compatible with your device' checkmark, a 'Validate and view JSON documents' section with a description and notes, and links for 'Website' and 'Report Abuse'. Below this, 'Additional Information' lists the version (0.0.32.2), update date (October 31, 2013), size (94.03KiB), and language (English). At the bottom, a carousel shows other extensions: Page Ruler (1039 users), Stylist (638 users), Window Resizer (1874 users), and User-Agent Switcher for Google Chrome (773 users).

JSONView
offered by [gildas](#)
★★★★★ (1861) | [Developer Tools](#) | 968,093 users

ADDED TO CHROME

OVERVIEW | REVIEWS | SUPPORT | RELATED | [G+](#) 1.5k

```
- indices: [
  119,
  139
],
expanded_url: "https://dev.twitter.com/form/seattle-dev-te",
display_url: "dev.twitter.com/form/seattle-d...",
url: "http://t.co/afOxBauf"
},
],
- user_mentions: [
  - {
    name: "Twitter API",
    screen_name: "twitterapi",
    id_str: "6253282",
    - indices: [
      80,
      91
    ],
    id: 6253282
  }
]
```

[+ - View source](#)

Compatible with your device

Validate and view JSON documents
JSONView port for Chrome.
Original firefox extension is here:
<http://benhollis.net/software/jsonview/>

Notes:
- JSON is validated using a client-side javascript implementation of JSONLint (<http://github.com/zaach/jsonlint>)
- this extension displays JSON text compliant with rfc 4627 (<http://www.ietf.org/rfc/rfc4627.txt>).
- JSONP (<http://en.wikipedia.org/wiki/JSON#JSONP>) is

[Website](#)
[Report Abuse](#)

Additional Information
Version: 0.0.32.2
Updated: October 31, 2013
Size: 94.03KiB
Language: English

USERS OF THIS EXTENSION HAVE ALSO USED

Page Ruler ★★★★★ (1039) | Stylist ★★★★★ (638) | **ADDED** Window Resizer ★★★★★ (1874) | User-Agent Switcher for Google Chrome ★★★★★ (773)

API Endpoints

- Foldable sections
- Links for further api 'Endpoint' exploration

```
[
+ {...},
+ {...},
+ {...},
+ {...},
- {
  id: 20395079,
  name: "bell",
  full_name: "hapijs/bell",
+ owner: {...},
  private: false,
  html_url: "https://github.com/hapijs/bell",
  description: "Third-party login plugin for hapi",
  fork: false,
  url: "https://api.github.com/repos/hapijs/bell",
  forks_url: "https://api.github.com/repos/hapijs/bell/forks",
  keys_url: "https://api.github.com/repos/hapijs/bell/keys{/key_id}",
  collaborators_url: "https://api.github.com/repos/hapijs/bell/collaborators{/collaborator}",
  teams_url: "https://api.github.com/repos/hapijs/bell/teams",
  hooks_url: "https://api.github.com/repos/hapijs/bell/hooks",
  issue_events_url: "https://api.github.com/repos/hapijs/bell/issues/events{/number}",
  events_url: "https://api.github.com/repos/hapijs/bell/events",
  assignees_url: "https://api.github.com/repos/hapijs/bell/assignees{/user}",
  branches_url: "https://api.github.com/repos/hapijs/bell/branches{/branch}",
  tags_url: "https://api.github.com/repos/hapijs/bell/tags",
  blobs_url: "https://api.github.com/repos/hapijs/bell/git/blobs{/sha}",
  git_tags_url: "https://api.github.com/repos/hapijs/bell/git/tags{/sha}",
  git_refs_url: "https://api.github.com/repos/hapijs/bell/git/refs{/sha}",
  trees_url: "https://api.github.com/repos/hapijs/bell/git/trees{/sha}",
  statuses_url: "https://api.github.com/repos/hapijs/bell/statuses/{sha}",
  languages_url: "https://api.github.com/repos/hapijs/bell/languages",
  stargazers_url: "https://api.github.com/repos/hapijs/bell/stargazers",
  contributors_url: "https://api.github.com/repos/hapijs/bell/contributors",
  subscribers_url: "https://api.github.com/repos/hapijs/bell/subscribers",
  subscription_url: "https://api.github.com/repos/hapijs/bell/subscription",
  commits_url: "https://api.github.com/repos/hapijs/bell/commits{/sha}",
```

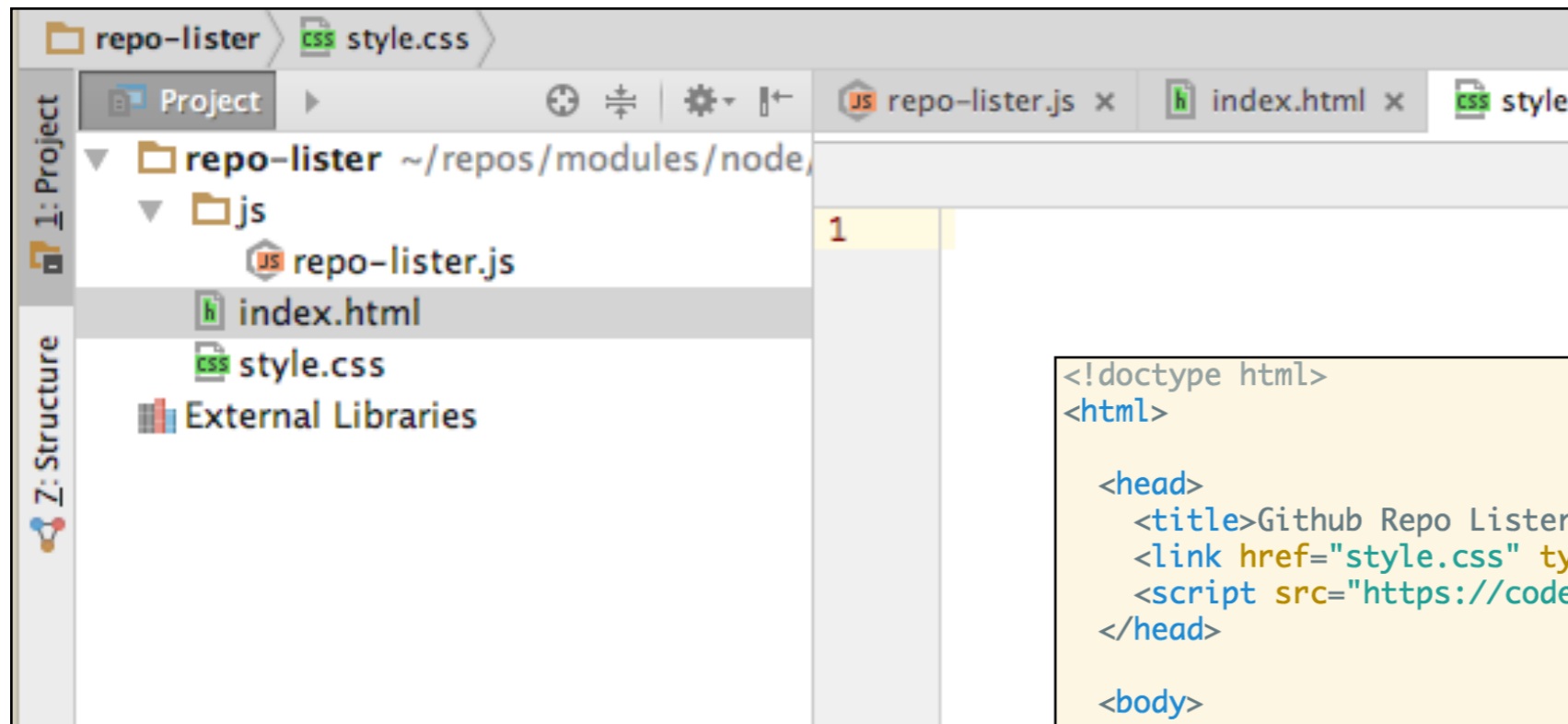
Web Page API Explorer

The screenshot shows a web browser window with the title "Github Repo Lister" and the user name "Eamonn". The address bar contains the URL "localhost:63342/js-ajax-1/index.html?_ijt=28ufn0cttpn2o4e439kbcbj0d0". The search bar contains the text "hapijs" and a "Search" button. To the right of the search bar, it says "30 repos". Below the search bar, a list of repository names is displayed under the heading "Repo Name".

Repo Name

- accept
- ammo
- b64
- bassmaster
- bell
- boom
- bossy
- call
- catbox
- catbox-memcached
- catbox-memory
- catbox-mongodb
- catbox-redis
- chairo
- code
- confidence
- content
- contrib
- crumb
- cryptiles
- discuss
- faketoe
- flod
- furball
- glue
- good
- good-broadcast
- good-console
- good-file
- good-http

Web Page API Explorer



Simple
WebStorm
project

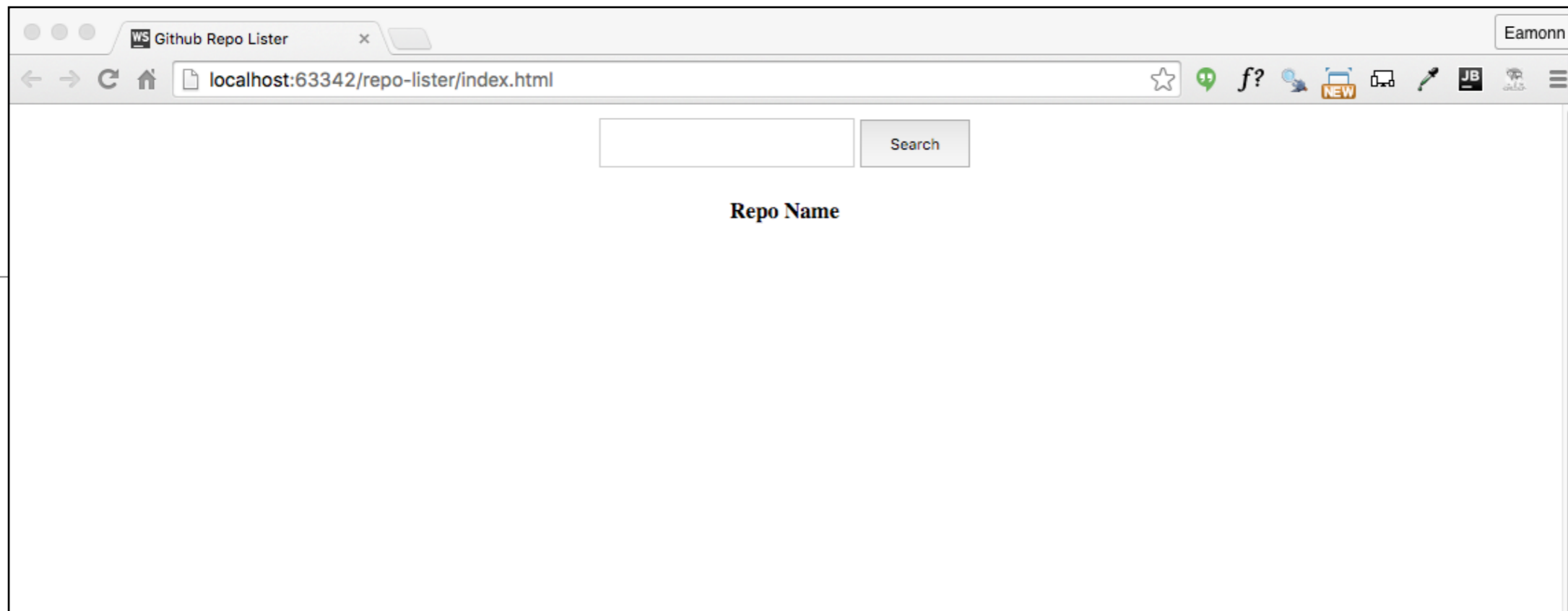
index.html

```
html {  
  height: 100%;  
}  
  
body {  
  height: 100%;  
  margin: 0;  
  padding: 0;  
}
```

style.css

```
.search {  
  margin-top: 10px;  
  text-align: center;  
}  
  
.search-input {  
  width: 180px;  
  height: 30px;  
}  
  
.search-btn {
```

```
<!doctype html>  
<html>  
  
  <head>  
    <title>Github Repo Lister</title>  
    <link href="style.css" type="text/css" rel="stylesheet"/>  
    <script src="https://code.jquery.com/jquery-2.2.3.min.js"></script>  
  </head>  
  
  <body>  
    <div class="search">  
      <input type="text" name="username" id="username" class="search-input">  
      <button id="search_btn" class="search-btn">Search</button>  
      <span id="result-msg" class="result"> </span>  
    </div>  
    <table class="repo_table" id="repo_table">  
      <thead>  
        <tr>  
          <th>Repo Name</th>  
        </tr>  
      </thead>  
      <tbody>  
      </tbody>  
    </table>  
    <script src="js/repo-lister.js" type="text/javascript"></script>  
  </body>  
</html>
```

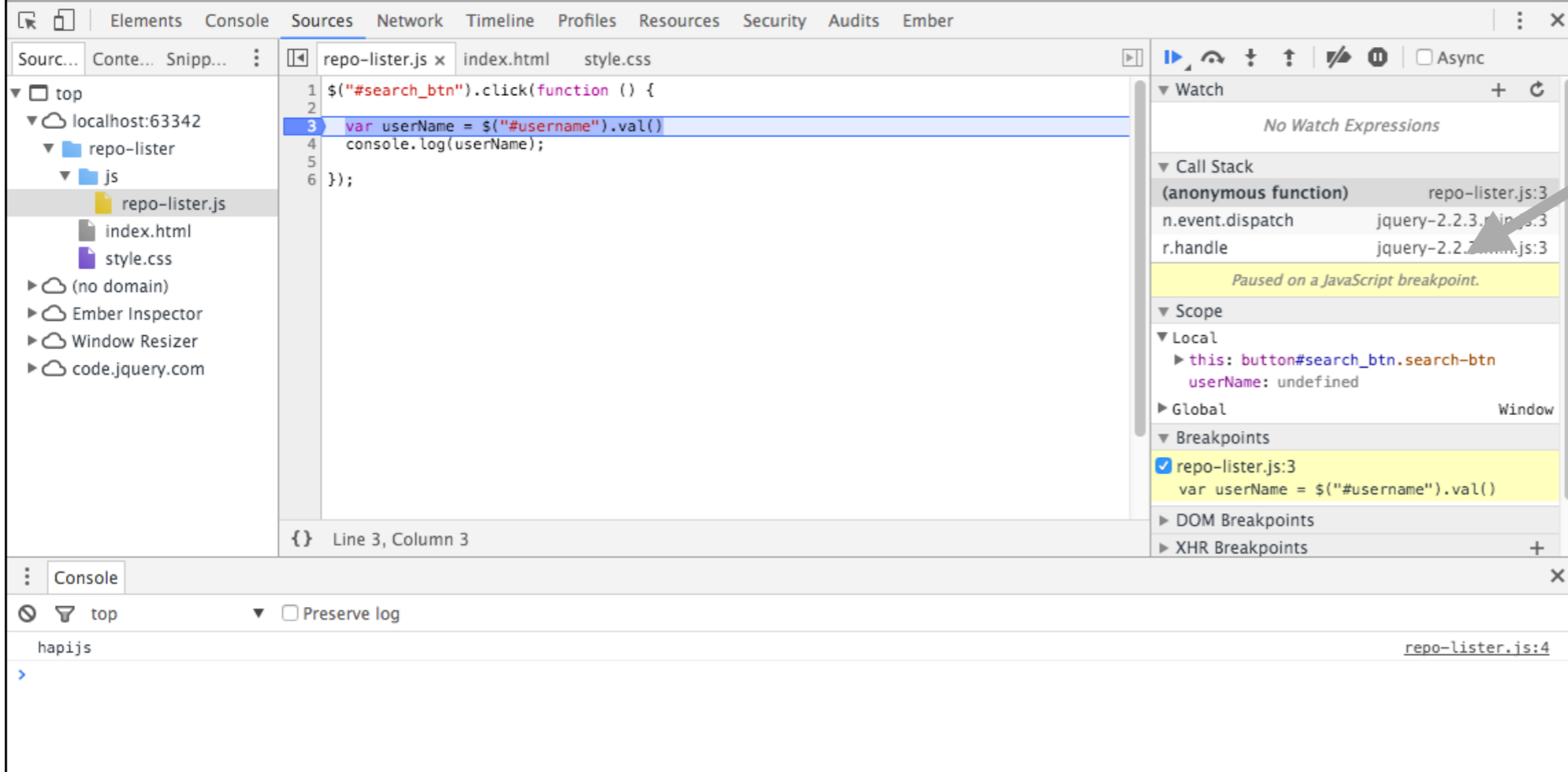
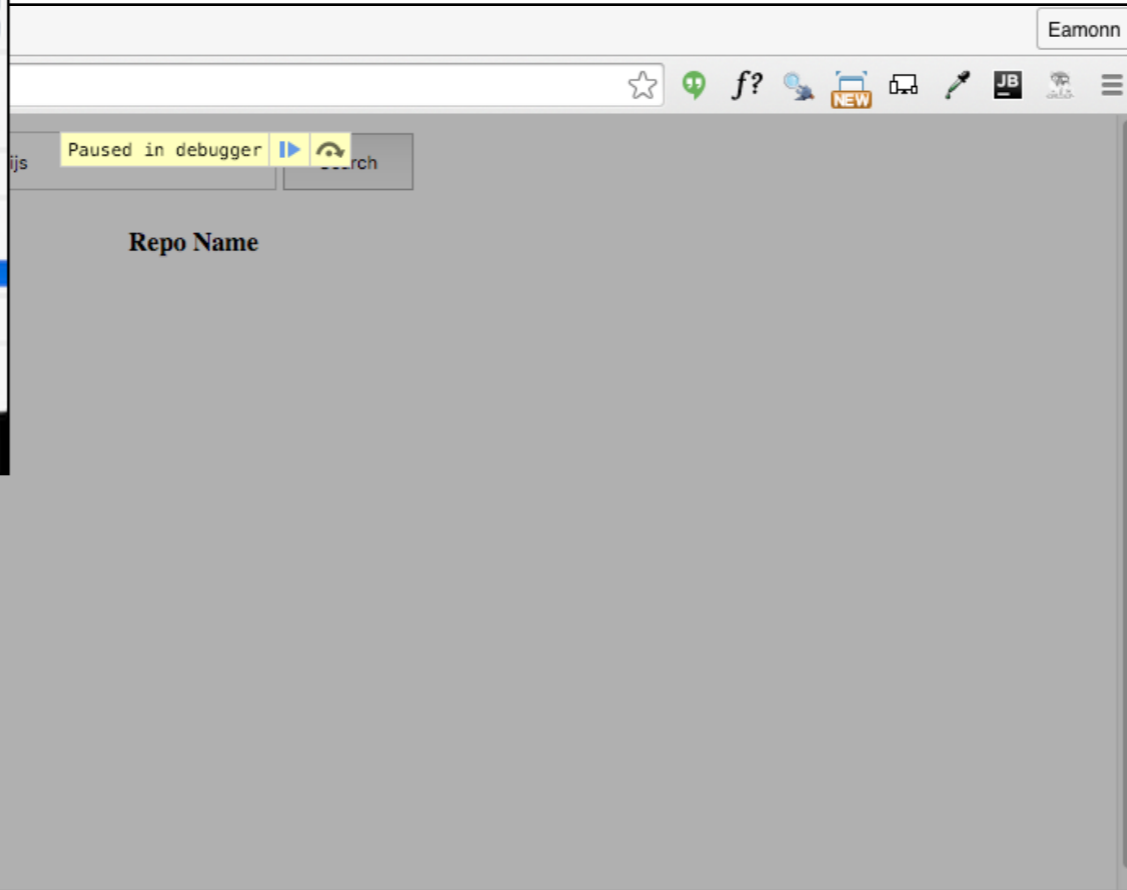
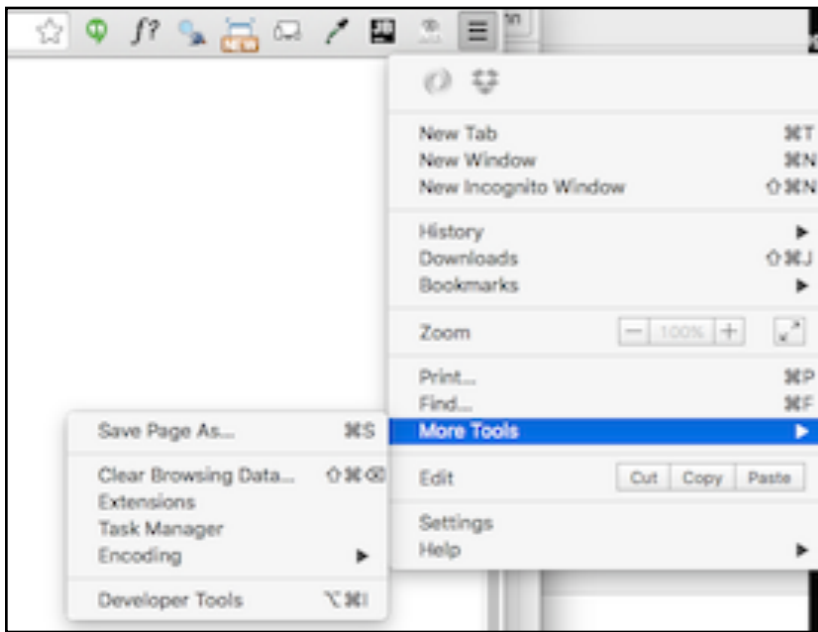


```
$('#search_btn').click(function () {  
  var userName = $('#username').val();  
  console.log(userName);  
});
```

repo-lister.js

- JQuery event handler, triggered when 'search' button pressed.
- Retrieve text and log to browser console

Debugging in Chrome



- Breakpoints facilitate exploration of JS data structures in 'Sources' panel

jQuery ajax call

```
$('#search_btn').click(function () {  
  
    var userName = $('#username').val();  
    console.log(userName);  
  
    $.ajax({  
        dataType: 'json',  
        url: 'https://api.github.com/users/' + userName + '/repos',  
        success: function (data) {  
            console.log('success');  
        },  
  
        error: function (err) {  
            console.log('fail');  
            console.log(err.statusText);  
        },  
  
    });  
});
```

The screenshot displays the Chrome DevTools interface with a JavaScript breakpoint set in the file `repo-list.js`. The code is paused at line 11, which is `console.log('success');`. The console shows a 'success' log message. The right-hand side of the interface shows the Watch, Call Stack, Scope, and Breakpoints panels.

```
1 $("#search_btn").click(function () {
2
3   var userName = $("#username").val()
4   console.log(userName);
5
6   $.ajax({
7     dataType: 'json',
8     url: 'https://api.github.com/users/' + userName + '/repos',
9     //data: {},
10    success: function (data) { data = Array[30]
11    console.log('success');
12  },
13  error: function (err) {
14    console.log('fail');
15    console.log(err.statusText);
16  }
17 });
18
19 });
```

Line 11, Column 7

Watch

- userName: <not available>

Call Stack

- \$.ajax.success repo-list.js:11
- i jquery-2.2.3.min.js:2
- j.fireWith jquery-2.2.3.min.js:2
- z jquery-2.2.3.min.js:4
- (anonymous function) jquery-2.2.3.min.js:4

Paused on a JavaScript breakpoint.

Scope

- Local
 - data: Array[30]
 - this: Object
- Global Window

Breakpoints

- repo-list.js:11 console.log('success');
- repo-list.js:14

Console

- hapijs repo-list.js:4
- success repo-list.js:11
- hapijs repo-list.js:4
- success repo-list.js:11
- hapijs repo-list.js:4

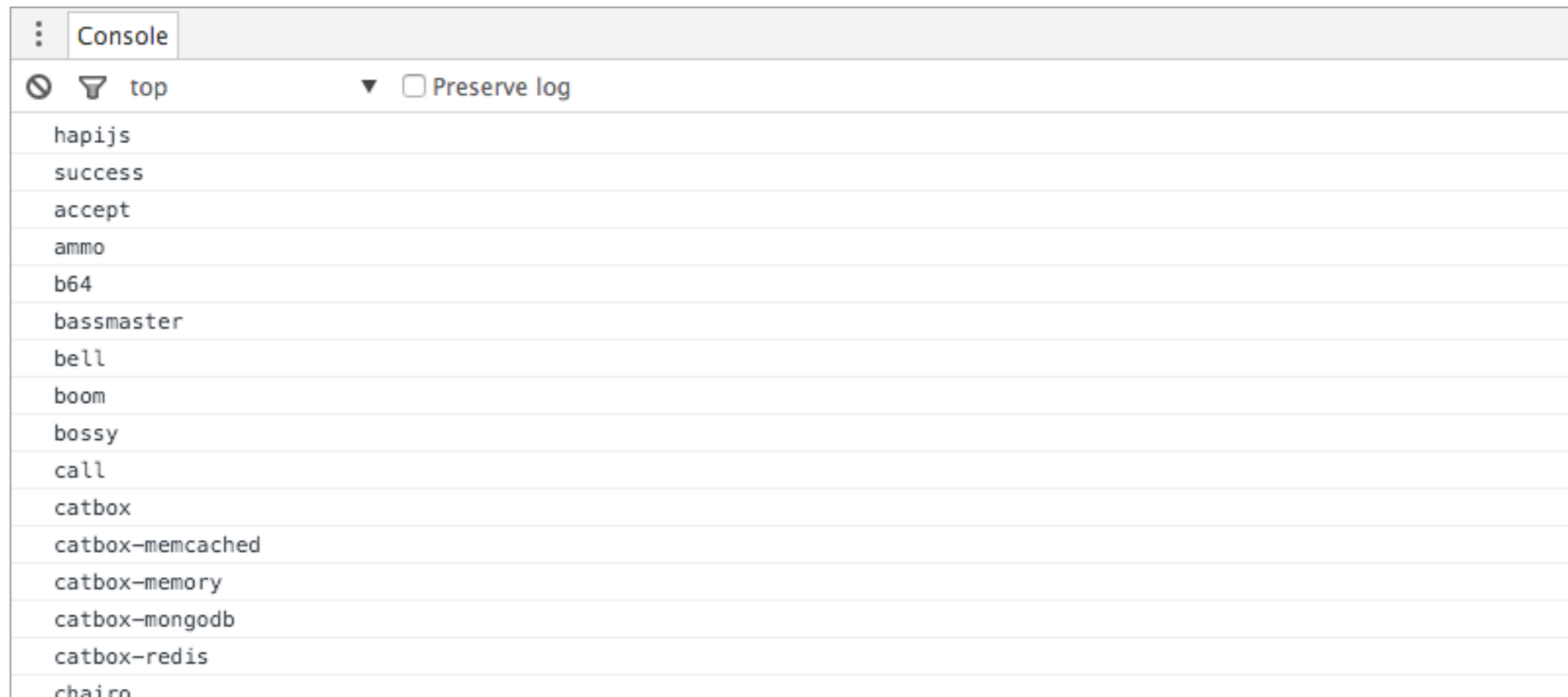
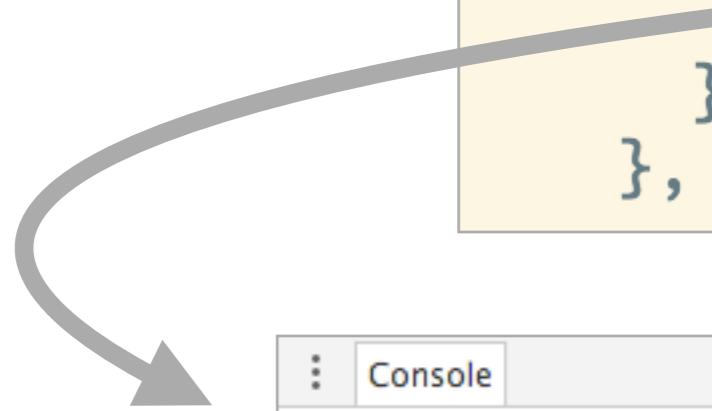
- Chrome breakpoint

- Scope -> Locals to explore parameter returned by ajax call

```
index.html style.css repo-list.js x
1 $("#search_btn").click(function () {
2
3   var userName = $("#username").val()
4   console.log(userName);
5
6   $.ajax({
7     dataType: 'json',
8     url: 'https://api.github.com/users/' + userName + '/repos',
9     //data: {},
10    success: function (data) { data = Array[30]
11      console.log('success');
12    },
13    error: function (err) {
14      console.log('fail');
15      console.log(err.statusText);
16    }
17  });
18
19 });
{} Line 11, Column 7
```

```
▼ Scope
▼ Local
  ▼ data: Array[30]
    ▼ 0: Object
      archive_url: "https://api.github.com/repos/hapijs/accept"
      assignees_url: "https://api.github.com/repos/hapijs/accept/assignees"
      blobs_url: "https://api.github.com/repos/hapijs/accept/git/blobs"
      branches_url: "https://api.github.com/repos/hapijs/accept/branches"
      clone_url: "https://github.com/hapijs/accept"
      collaborators_url: "https://api.github.com/repos/hapijs/accept/collaborators"
      comments_url: "https://api.github.com/repos/hapijs/accept/comments"
      commits_url: "https://api.github.com/repos/hapijs/accept/commits"
      compare_url: "https://api.github.com/repos/hapijs/accept/compare"
      contents_url: "https://api.github.com/repos/hapijs/accept/contents"
      contributors_url: "https://api.github.com/repos/hapijs/accept/contributors"
      created_at: "2014-10-03T01:53:04Z"
      default_branch: "master"
      deployments_url: "https://api.github.com/repos/hapijs/accept/deployments"
      description: "HTTP Accept-* headers parser"
      downloads_url: "https://api.github.com/repos/hapijs/accept/downloads"
      events_url: "https://api.github.com/repos/hapijs/accept/events"
      fork: false
      forks: 2
      forks_count: 2
      forks_url: "https://api.github.com/repos/hapijs/accept/forks"
      full_name: "hapijs/accept"
      git_commits_url: "https://api.github.com/repos/hapijs/accept/git/commits"
      git_refs_url: "https://api.github.com/repos/hapijs/accept/git/refs"
      git_tags_url: "https://api.github.com/repos/hapijs/accept/git/tags"
      git_url: "git://github.com:hapijs/accept"
      has_downloads: true
```

```
success: function (data) {  
  console.log('success');  
  for (let i = 0; i < data.length; i++) {  
    console.log(data[i].name);  
  }  
},
```



- Browser console

```

$('#search_btn').click(function () {

    var userName = $('#username').val();
    console.log(userName);

    $.ajax({
        dataType: 'json',
        url: 'https://api.github.com/users/' + userName + '/repos',

        error: function (err) {
            updateResult(userName + ' ' + err.statusText);
        },

        success: function (data) {
            updateResult(data.length + ' repos');
            populateTable(data);
        },
    });
});

```


Repo Name

accept
 ammo
 b64
 bassmaster
 bell
 boom
 bossy
 call
 catbox
 catbox-memcached
 catbox-memory
 catbox-mongodb
 catbox-redis
 chairo
 code

```

function updateResult(result) {
    $('#result-msg').text('');
    $('#result-msg').text(result);
}

```

```

function populateTable(repoList) {
    for (var i = 0; i < repoList.length; i++) {
        $('#repo_table tbody').append('<tr><td>' + repoList[i].name + '</td></tr>');
    }
}

```