GitHub APIs

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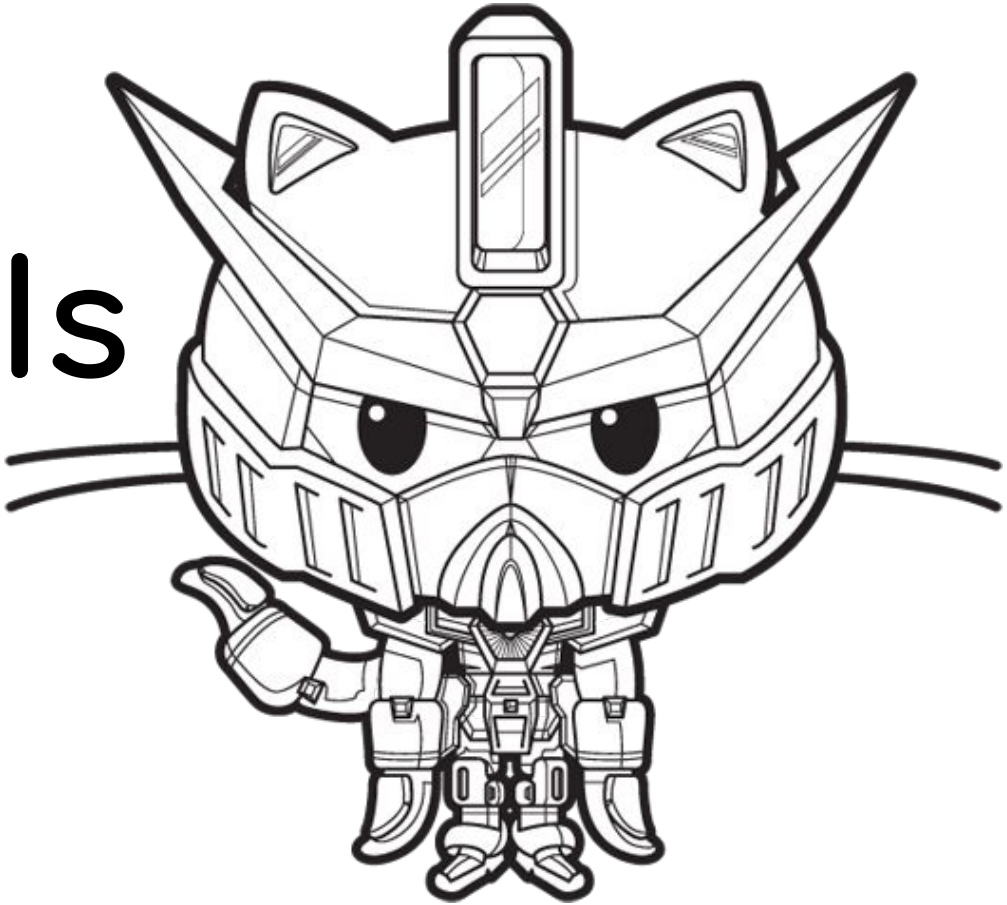
aSERG / UFMG

APPLIED SOFTWARE ENGINEERING
RESEARCH GROUP



GitHub

5,227,213
repositories

React

django

spring

RAILS

freeCodeCamp / **freeCodeCamp**

Watch 8,512 | Star 295,739 | Fork 18,489

Code | Issues 392 | Pull requests 5,000+ | Projects 0 | Insights

The https://freeCodeCamp.org open source codebase and curriculum. Learn to code for free together with millions of people.

learn-to-code nonprofits programming nodejs react d3 careers education teachers javascript certification curriculum math community

16,933 commits | **5** branches | **0** releases | **1,328** contributors | BSD-3-Clause

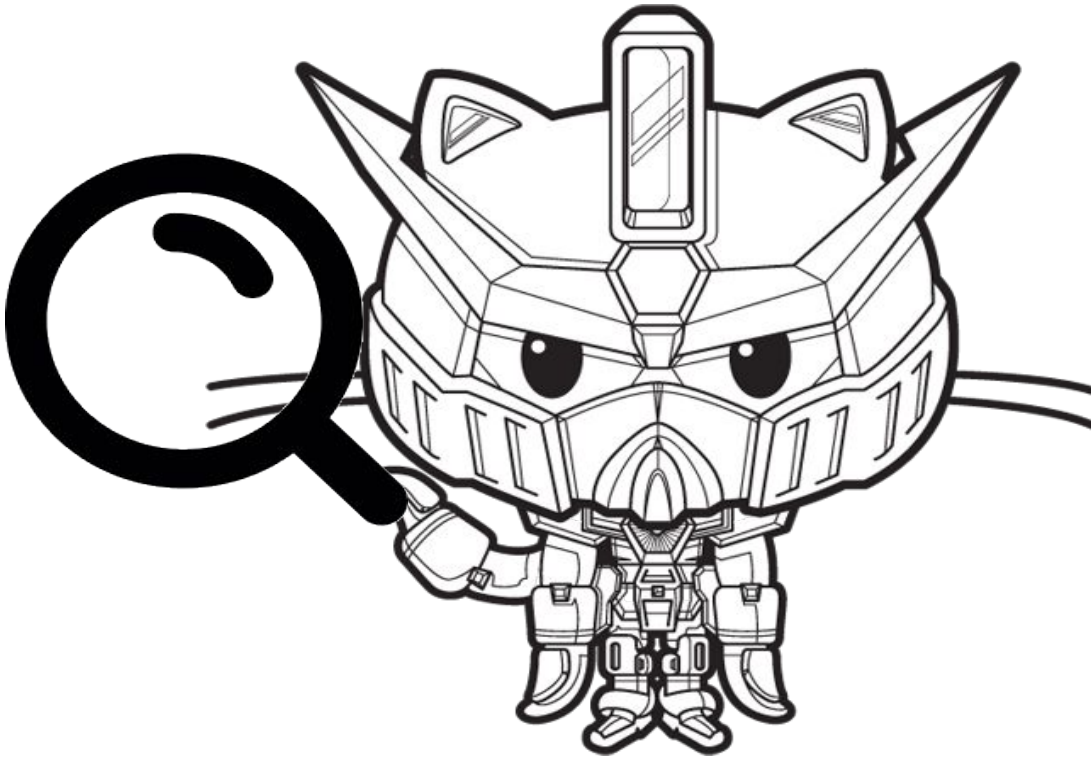
Branch: **master** | New pull request | Create new file | Upload files | Find file | Clone or download

diogoPT and **thefrontendwizard** Update some auto-translations, better read in Portuguese (#20285) Latest commit ccb6a8c an hour ago

GitHub Data

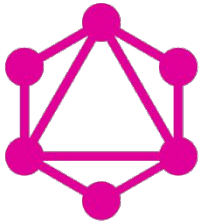
stars
commits
issues
forks
pull requests
contributors
...

Mining GitHub Data



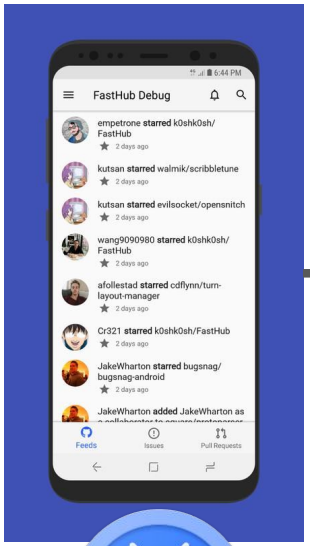
API v3

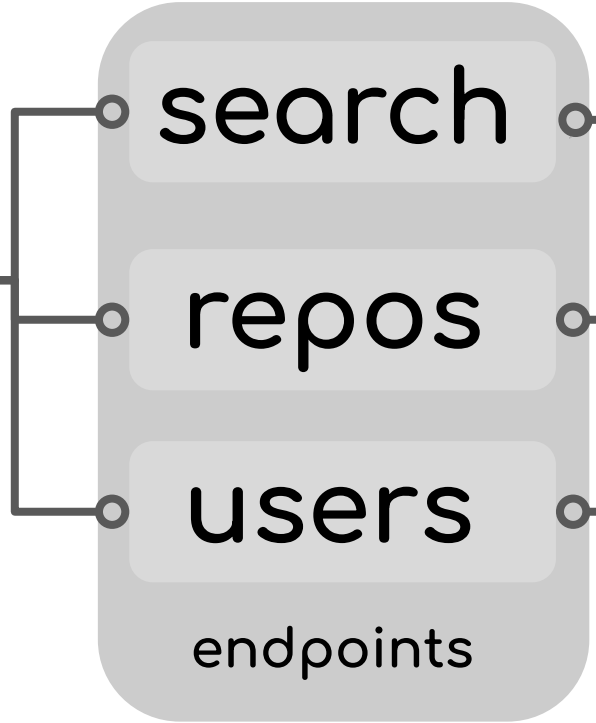
API v4



GraphQL

{ REST }


FastHub Debug
empetrone starred k0shk0sh/ FastHub
kutsan starred walmik/scribbletune
kutsan starred evilsocket/opensnitch
wang9090980 starred k0shk0sh/ FastHub
afollestad starred cdflynn/turn-layout-manager
Cr321 starred k0shk0sh/FastHub
JakeWharton starred bugsnag/ bugsnag-android
JakeWharton added JakeWharton as
Feeds
Issues
Pull Requests


search
repos
users
endpoints

search

GET /search/repositories

GET /search/users

GET /search/issues

```
GET /search/repositories
```

parameters

`q`	The search keywords, as well as any qualifiers.
`sort`	The sort field. One of **stars**, **forks**, or **updated**
`order`	The sort order if sort parameter is provided. One of **asc** or **desc**

```
GET /search/repositories
```

parameters

`q`	The search keywords, as well as any qualifiers.

`language` | `forks` | `stars`

```
GET /search/repositories
```

```
/search/repositories?q=language:java
+stars:>100&sort=stars&order=desc
```

{ REST }

pagination

```
&page=1&per_page=100
```

```
/search/repositories?q=language:java
+stars:>100&sort=stars&order=desc
&page=1&per_page=100
```

```
GET /search/users
```

parameters

`q`	The search terms.
`sort`	The sort field. Can be **followers** or **repositories**
`order`	The sort order if sort parameter is provided. One of **asc** or **desc**

```
GET /search/users
```

parameters

q	The search terms

```
repos| created | followers
```

```
GET /search/users
```

```
/search/users?q=repos:>20&
sort=repositories&order=desc&page=1
&per_page=5
```

```
GET /users/:username/repos
```

parameters

`type`	Can be one of **all**, **owner** or **member**
`sort`	Can be one of **created**, **updated**, **pushed** or **full_name**
`direction`	Can be one of **asc** or **desc**

{ REST }

```
GET /users/:username/repos
```

```
/users/django/repos?sort=updated
&direction=desc&page=1&per_page=6
```

```
GET /repos/:owner/:repo
```

```
/repos/django/django
```

{ REST }

```
GET /repos/:owner/:repo/issues
```

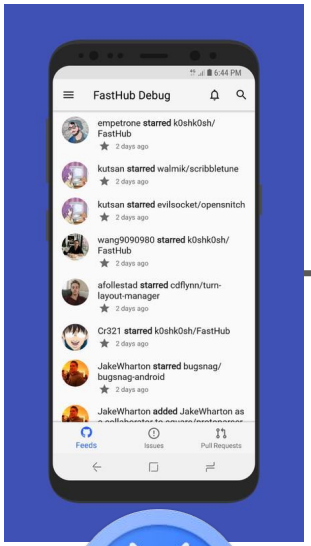
parameters

`state`	Indicates the state of the issues to return. Can be either **open**, **closed**, or **all**
`sort`	What to sort results by. Can be either **created**, **updated** or **comments**
`direction`	The direction of the sort. Can be either **asc** or **desc**

```
GET /repos/:owner/:repo/issues
```

```
repos/django/django/issues?
state=closed&sort=created&
direction=asc&page=1&per_page=3
```

GraphQL


6:44 PM
FastHub Debug
empetrone starred k0shk0sh/FastHub
2 days ago
kutsan starred walmik/scribbletune
2 days ago
kutsan starred evilsocket/opensnitch
2 days ago
wang9090980 starred k0shk0sh/FastHub
2 days ago
afollestad starred cdflynn/turn-layout-manager
2 days ago
Cr321 starred k0shk0sh/FastHub
2 days ago
JakeWharton starred bugsnag/bugsnag-android
2 days ago
JakeWharton added JakeWharton as
Feeds
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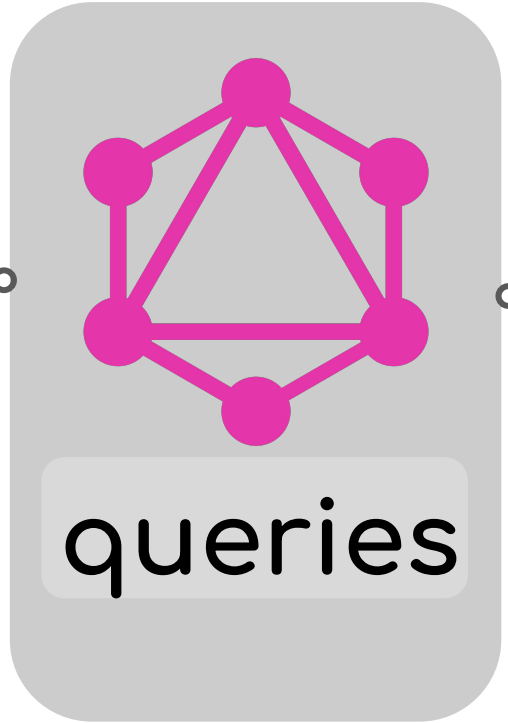
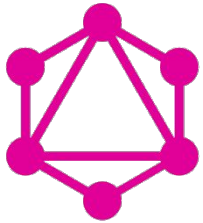

queries



GraphQL

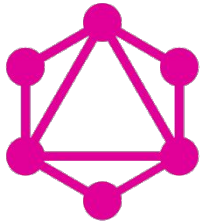
queries

search

user

organization

repository

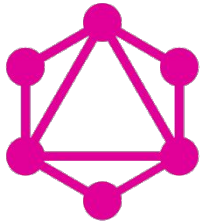


GraphQL

`search`

parameters

`query` |	The search keywords, as well as any qualifiers.
`type` |	The types of search items to search within (**ISSUE**, **USER** or **REPOSITORY**)
`last` |	Returns the last **n** elements from the list.



GraphQL

`search`

parameters

`query` | The search keywords, as well as any qualifiers.

repos

`language` | `forks` | `stars`

users

`repos` | `created` | `followers`

search repositories

```
query example {
   search(query:"stars:>100",
          type:REPOSITORY, first:10){
        nodes {
          ... on Repository {
           nameWithOwner
             diskUsage
           }
        }
   }
}
```

link:https://goo.gl/BWfEB3

search

repositories are ordered by number of stars

users are ordered by number of followers

search users

```
query example {
   search(query:"repos:>20", type:USER,
         first:10){
      nodes{
         ... on User{
            login
            email
         }
      }
   }
}
```

link:https://goo.gl/ao1FWe

user

```
query example {
    user(login:"donnemartin"){
       createdAt
     }
}
```

link:https://goo.gl/jj1V2k

repos of an user

```
query example {
    user(login:"donnemartin"){
       repositories(first:5){
          nodes{
             nameWithOwner
          }
       }
    }
}
```

link:https://goo.gl/pXu5cA

sorting list of repos

```
orderBy:{field:CREATED_AT,
  direction:DESC}
```

`field`	The sort field . One of **CREATED_AT**, **NAME**, **STARGAZERS**, etc
`direction`	The sort order if sort parameter is provided. One of **ASC** or **DESC**

repos of an user

```
query example {
  user(login:"donnemartin"){
    repositories(first:5,
     orderBy:{field:CREATED_AT,direction:DESC}){
       nodes{
         nameWithOwner
       }
    }
  }
}
```

link:https://goo.gl/srddQC

total count

```
repositories{
   totalCount
}
```

total count

```
query example {
  user(login:"donnemartin"){
    repositories{
      totalCount
    }
  }
}
```

link:https://goo.gl/1Fa3Z5

repos of an organization

```
query example{
  organization(login:"elastic"){
   repositories(first:5,
    orderBy:{field:CREATED_AT,direction:DESC}){
     nodes{
      nameWithOwner
     }
   }
  }
}
```

link:https://goo.gl/meZkSP

repository

```
query example{
    repository(owner:"django",
       name:"django"){
       description
    }
}
```

link:https://goo.gl/oZ6sz3

issues of an repo

```
query example {
 repository(owner:"pallets",name:"flask"){
  issues(first:3,
   orderBy:{field:CREATED_AT,direction:DESC}){
    nodes{
     title
    }
  }
 }
}
```

link:https://goo.gl/GA9Kfo

states

```
states:CLOSED
```

states	The possible states of an issue . One of **OPEN** or **CLOSED**

issues of an repo

```
query example {
 repository(owner:"pallets",name:"flask"){
  issues(first:3,states:CLOSED,
   orderBy:{field:CREATED_AT,direction:DESC}){
    nodes{
     title
    }
  }
 }
}
```

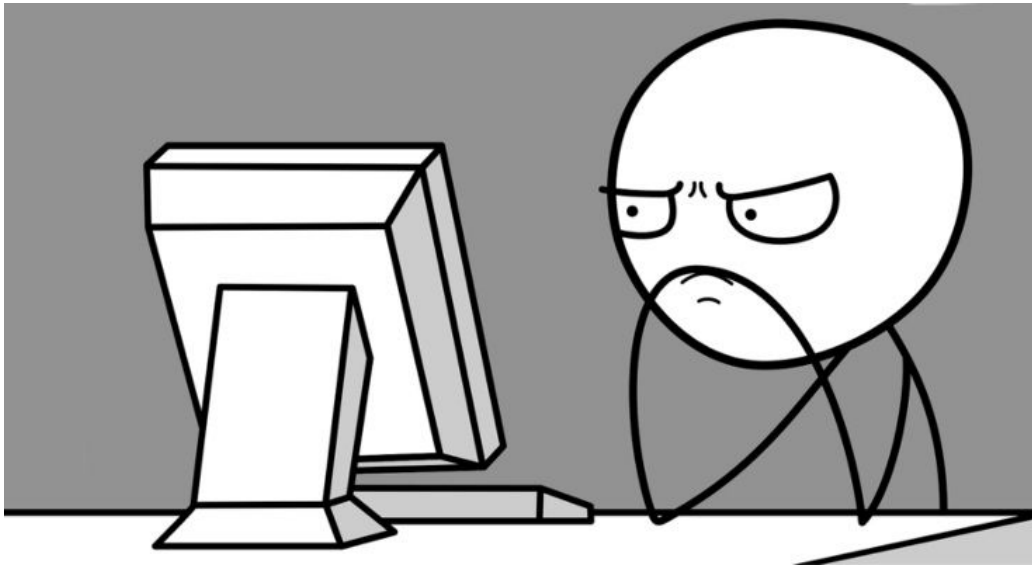
link:https://goo.gl/nX7UcJ

Documentation:

GraphQL:https://developer.github.com/v4/query/

REST:https://developer.github.com/v3/

{Practical coding}



Link:
https://github.com/gleisonbt/Controlled_Experiment

Questions?

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