# OSEMN Assignment - Java v/s JavaScript

## Overview

**Github** is a web-based Git repository hosting service, which offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features. Unlike Git, which is strictly a command-line tool, GitHub provides a web-based graphical interface and desktop as well as mobile integration. It also provides access control and several collaboration features such as wikis, task management, and bug tracking and feature requests for every project.

GitHub offers both paid plans for private repositories and free accounts, which are usually used to host open-source software projects. As of 2015, GitHub reports having over 9 million users and over 21.1 million repositories, making it the largest code hoster in the world.

Projects on GitHub can be accessed and manipulated using the standard git command-line interface and all of the standard git commands work with it. GitHub also allows registered and non-registered users to browse public repositories on the site. Multiple desktop clients and git plugins have also been created by GitHub and other third parties which integrate with the platform.

The site provides social networking-like functions such as feeds, followers, wikis (using wiki software called Gollum) and a social network graph to display how developers work on their versions ("forks") of a repository and which fork (and branch within that fork) is newest. A user must create an account in order to contribute content to the site, but public repositories can be browsed and downloaded by anyone. With a registered user account, users are able to discuss, manage, create repositories, submit contributions to others' repositories, and review changes to code.

GitHub also operates other services: a pastebin-style site called Gist which is for hosting code snippets (GitHub proper is for hosting larger projects), and a slide hosting service called Speaker Deck. The software that runs GitHub was written using Ruby on Rails and Erlang by GitHub, Inc. developers Chris Wanstrath PJ Hyett, and Tom Preston-Werner.

GitHub launched a new program to give students free access to their tools on 7 October 2014. It is called the GitHub Student Developer Pack. GitHub will partner with Bitnami,Crowdflower, DigitalOcean, DNSimple, HackHands, Namecheap, Orchestrate, Screenhero, SendGrid, Stripe, Travis CI and Unreal Engine to launch the program.

GitHub's Terms of Service do not require public software projects hosted on GitHub to meet the Open Source Definition. Therefore (and in any case) it is advisable for users and developers intending to use a piece of software found on GitHub to read the software license in the repository (usually found in a top-level file called "LICENSE", "LICENSE.txt", or similar) to determine if it meets their needs.

## Scope

GitHub is mostly used for code.

In addition to source code, GitHub supports the following formats and features:

- Documentation, including automatically-rendered README files in a variety of Markdown-like file formats (see README files on GitHub)

- Issue tracking (including feature requests)

- Wikis

- Small websites can be hosted from public repositories on GitHub. The URL format is http://projectname.github.io.

- Small websites can be hosted from public repositories on GitHub. The URL format is http://projectname.github.io.

- Nested task-lists within files

- Visualization of geospatial data

- Gantt charts

- 3D render files which can be previewed using a new integrated STL file viewer which displays the files on a 3D canvas. The viewer is powered by WebGL and Three.js.

- Photoshop's native PSD format can be previewed and compared to previous versions of the same file.

[Source: http://en.wikipedia.org/wiki/GitHub]

## Data

To gather data from github, I used the Github API https://api.github.com. Parameters can be passed to this as queries. The following code describes how I derived my data:

```
library(jsonlite)

##
## Attaching package:  'jsonlite'
##
## The following object is masked from 'package:utils':
##
##     View
```

```r
library (plyr)
library (ggplot2)

url  <- 'https://api.github.com/'          # the GitHub API
path <- 'search/repositories'              # Repositories path
searchJava <- '?q=language:Java'           # And language = Java
searchJavaScript <- '?q=language:JavaScript'    # Language = JavaScript

URLjava<-paste0(url,path,searchJava)
URLjavascript<-paste0(url,path,searchJavaScript)

data_json_Java<-jsonlite::fromJSON(URLjava)
data_json_Javascript<-jsonlite::fromJSON(URLjavascript)

data_dataframe_Java<-as.data.frame(data_json_Java)
data_dataframe_Javascript<-as.data.frame(data_json_Javascript)

class(data_dataframe_Java)

## [1] "data.frame"

str(data_dataframe_Java)

## 'data.frame': 30 obs. of  70 variables:
##  $ total_count          : int  1038032 1038032 1038032 1038032 1038032 1038032 1038032
##  $ incomplete_results   : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
##  $ items.id             : int  507775 2404027 2862290 4839957 1451060 18347476 2349728
##  $ items.name           : chr  "elasticsearch" "storm" "Android-Universal-Image-Loader'
##  $ items.full_name      : chr  "elastic/elasticsearch" "nathanmarz/storm" "nostra13/And
##  $ items.owner          :'data.frame': 30 obs. of  17 variables:
##   ..$ login            : chr  "elastic" "nathanmarz" "nostra13" "jfeinstein10" ...
##   ..$ id               : int  6764390 131416 1223348 1269143 66577 1342004 11877067 509
##   ..$ avatar_url       : chr  "https://avatars.githubusercontent.com/u/6764390?v=3" "ht
##   ..$ gravatar_id      : chr  "" "" "" "" ...
##   ..$ url              : chr  "https://api.github.com/users/elastic" "https://api.githu
##   ..$ html_url         : chr  "https://github.com/elastic" "https://github.com/nathanma
##   ..$ followers_url    : chr  "https://api.github.com/users/elastic/followers" "https:/
##   ..$ following_url    : chr  "https://api.github.com/users/elastic/following{/other_us
##   ..$ gists_url        : chr  "https://api.github.com/users/elastic/gists{/gist_id}" "h
##   ..$ starred_url      : chr  "https://api.github.com/users/elastic/starred{/owner}{/re
##   ..$ subscriptions_url: chr  "https://api.github.com/users/elastic/subscriptions" "htt
##   ..$ organizations_url: chr  "https://api.github.com/users/elastic/orgs" "https://api.
##   ..$ repos_url        : chr  "https://api.github.com/users/elastic/repos" "https://api
##   ..$ events_url       : chr  "https://api.github.com/users/elastic/events{/privacy}" '
##   ..$ received_events_url: chr  "https://api.github.com/users/elastic/received_events" "h
##   ..$ type             : chr  "Organization" "User" "User" "User" ...
```

```
##   ..$ site_admin          : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
## $ items.private          : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
## $ items.html_url         : chr  "https://github.com/elastic/elasticsearch" "https://gith
## $ items.description      : chr  "Open Source, Distributed, RESTful Search Engine" "Distr
## $ items.fork             : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
## $ items.url              : chr  "https://api.github.com/repos/elastic/elasticsearch" "ht
## $ items.forks_url        : chr  "https://api.github.com/repos/elastic/elasticsearch/for
## $ items.keys_url         : chr  "https://api.github.com/repos/elastic/elasticsearch/keys
## $ items.collaborators_url: chr  "https://api.github.com/repos/elastic/elasticsearch/coll
## $ items.teams_url        : chr  "https://api.github.com/repos/elastic/elasticsearch/team
## $ items.hooks_url        : chr  "https://api.github.com/repos/elastic/elasticsearch/hool
## $ items.issue_events_url : chr  "https://api.github.com/repos/elastic/elasticsearch/issu
## $ items.events_url       : chr  "https://api.github.com/repos/elastic/elasticsearch/even
## $ items.assignees_url    : chr  "https://api.github.com/repos/elastic/elasticsearch/assi
## $ items.branches_url     : chr  "https://api.github.com/repos/elastic/elasticsearch/bran
## $ items.tags_url         : chr  "https://api.github.com/repos/elastic/elasticsearch/tags
## $ items.blobs_url        : chr  "https://api.github.com/repos/elastic/elasticsearch/git/
## $ items.git_tags_url     : chr  "https://api.github.com/repos/elastic/elasticsearch/git/
## $ items.git_refs_url     : chr  "https://api.github.com/repos/elastic/elasticsearch/git/
## $ items.trees_url        : chr  "https://api.github.com/repos/elastic/elasticsearch/git/
## $ items.statuses_url     : chr  "https://api.github.com/repos/elastic/elasticsearch/stat
## $ items.languages_url    : chr  "https://api.github.com/repos/elastic/elasticsearch/lang
## $ items.stargazers_url   : chr  "https://api.github.com/repos/elastic/elasticsearch/star
## $ items.contributors_url : chr  "https://api.github.com/repos/elastic/elasticsearch/cont
## $ items.subscribers_url  : chr  "https://api.github.com/repos/elastic/elasticsearch/subs
## $ items.subscription_url : chr  "https://api.github.com/repos/elastic/elasticsearch/subs
## $ items.commits_url      : chr  "https://api.github.com/repos/elastic/elasticsearch/comm
## $ items.git_commits_url  : chr  "https://api.github.com/repos/elastic/elasticsearch/git/
## $ items.comments_url     : chr  "https://api.github.com/repos/elastic/elasticsearch/comm
## $ items.issue_comment_url: chr  "https://api.github.com/repos/elastic/elasticsearch/issu
## $ items.contents_url     : chr  "https://api.github.com/repos/elastic/elasticsearch/cont
## $ items.compare_url      : chr  "https://api.github.com/repos/elastic/elasticsearch/comp
## $ items.merges_url       : chr  "https://api.github.com/repos/elastic/elasticsearch/merg
## $ items.archive_url      : chr  "https://api.github.com/repos/elastic/elasticsearch/{arc
## $ items.downloads_url    : chr  "https://api.github.com/repos/elastic/elasticsearch/down
## $ items.issues_url       : chr  "https://api.github.com/repos/elastic/elasticsearch/issu
## $ items.pulls_url        : chr  "https://api.github.com/repos/elastic/elasticsearch/pull
## $ items.milestones_url   : chr  "https://api.github.com/repos/elastic/elasticsearch/mile
## $ items.notifications_url: chr  "https://api.github.com/repos/elastic/elasticsearch/noti
## $ items.labels_url       : chr  "https://api.github.com/repos/elastic/elasticsearch/labe
## $ items.releases_url     : chr  "https://api.github.com/repos/elastic/elasticsearch/rele
## $ items.created_at       : chr  "2010-02-08T13:20:56Z" "2011-09-17T07:55:13Z" "2011-11-2
## $ items.updated_at       : chr  "2015-04-20T05:40:29Z" "2015-04-20T07:35:31Z" "2015-04-2
## $ items.pushed_at        : chr  "2015-04-20T01:51:34Z" "2014-02-10T03:05:12Z" "2015-03-2
## $ items.git_url          : chr  "git://github.com/elastic/elasticsearch.git" "git://gith
```

```
##  $ items.ssh_url           : chr  "git@github.com:elastic/elasticsearch.git" "git@github.c
##  $ items.clone_url         : chr  "https://github.com/elastic/elasticsearch.git" "https://
##  $ items.svn_url           : chr  "https://github.com/elastic/elasticsearch" "https://gith
##  $ items.homepage          : chr  "http://elasticsearch.org" "http://storm-project.net" ""
##  $ items.size              : int  332036 27015 25179 28459 18403 21445 15595 994629 5121 1
##  $ items.stargazers_count  : int  10844 8576 8267 7431 6759 6448 6157 6132 5919 5690 ...
##  $ items.watchers_count    : int  10844 8576 8267 7431 6759 6448 6157 6132 5919 5690 ...
##  $ items.language          : chr  "Java" "Java" "Java" "Java" ...
##  $ items.has_issues        : logi  TRUE FALSE TRUE TRUE TRUE TRUE ...
##  $ items.has_downloads     : logi  TRUE TRUE TRUE TRUE TRUE TRUE ...
##  $ items.has_wiki          : logi  FALSE TRUE TRUE TRUE FALSE FALSE ...
##  $ items.has_pages         : logi  FALSE TRUE FALSE TRUE TRUE FALSE ...
##  $ items.forks_count       : int  3400 1724 3868 4418 3906 2268 3034 3830 2876 1623 ...
##  $ items.mirror_url        : logi  NA NA NA NA NA NA ...
##  $ items.open_issues_count: int  1113 51 169 267 87 30 160 92 31 95 ...
##  $ items.forks             : int  3400 1724 3868 4418 3906 2268 3034 3830 2876 1623 ...
##  $ items.open_issues       : int  1113 51 169 267 87 30 160 92 31 95 ...
##  $ items.watchers          : int  10844 8576 8267 7431 6759 6448 6157 6132 5919 5690 ...
##  $ items.default_branch    : chr  "master" "moved-to-apache" "master" "master" ...
##  $ items.score             : num  1 1 1 1 1 1 1 1 1 1 ...

summary(data_dataframe_Java)

##   total_count      incomplete_results    items.id
## Min.   :1038032   Mode :logical      Min.   :  507775
## 1st Qu.:1038032   FALSE:30           1st Qu.: 2204277
## Median :1038032   NA's :0            Median : 3978354
## Mean   :1038032                      Mean   : 6928071
## 3rd Qu.:1038032                      3rd Qu.: 8308456
## Max.   :1038032                      Max.   :31533997
##   items.name        items.full_name
## Length:30          Length:30
## Class :character   Class :character
## Mode  :character   Mode  :character
##
##
##
## items.owner.login     items.owner.id     items.owner.avatar_url  items.owner.gravatar_id
## Length:30          Min.   :   66577    Length:30            Length:30            Length:3
## Class :character   1st Qu.:  110861    Class :character     Class :character     Class :c
## Mode  :character   Median :  546094    Mode  :character     Mode  :character     Mode  :c
## NA                 Mean   : 1972236    NA                   NA                   NA
## NA                 3rd Qu.: 2596865    NA                   NA                   NA
## NA                 Max.   :11877067    NA                   NA                   NA
## items.private   items.html_url    items.description  items.fork
## Mode :logical   Length:30         Length:30          Mode :logical
```

5

```
##   FALSE:30        Class :character   Class :character    FALSE:30
##   NA's :0         Mode  :character   Mode  :character    NA's :0
##
##
##
##    items.url         items.forks_url    items.keys_url
##   Length:30          Length:30          Length:30
##   Class :character   Class :character   Class :character
##   Mode  :character   Mode  :character   Mode  :character
##
##
##
##   items.collaborators_url items.teams_url    items.hooks_url
##   Length:30               Length:30          Length:30
##   Class :character        Class :character   Class :character
##   Mode  :character        Mode  :character   Mode  :character
##
##
##
##   items.issue_events_url items.events_url    items.assignees_url
##   Length:30              Length:30           Length:30
##   Class :character       Class :character    Class :character
##   Mode  :character       Mode  :character    Mode  :character
##
##
##
##   items.branches_url items.tags_url     items.blobs_url
##   Length:30          Length:30          Length:30
##   Class :character   Class :character   Class :character
##   Mode  :character   Mode  :character   Mode  :character
##
##
##
##   items.git_tags_url items.git_refs_url items.trees_url
##   Length:30          Length:30          Length:30
##   Class :character   Class :character   Class :character
##   Mode  :character   Mode  :character   Mode  :character
##
##
##
##   items.statuses_url items.languages_url items.stargazers_url
##   Length:30          Length:30           Length:30
##   Class :character   Class :character    Class :character
##   Mode  :character   Mode  :character    Mode  :character
##
```

```
##
##
##   items.contributors_url items.subscribers_url items.subscription_url
##   Length:30               Length:30              Length:30
##   Class :character        Class :character       Class :character
##   Mode  :character        Mode  :character       Mode  :character
##
##
##
##   items.commits_url  items.git_commits_url items.comments_url
##   Length:30          Length:30             Length:30
##   Class :character   Class :character      Class :character
##   Mode  :character   Mode  :character      Mode  :character
##
##
##
##   items.issue_comment_url items.contents_url items.compare_url
##   Length:30               Length:30          Length:30
##   Class :character        Class :character   Class :character
##   Mode  :character        Mode  :character   Mode  :character
##
##
##
##   items.merges_url   items.archive_url  items.downloads_url
##   Length:30          Length:30          Length:30
##   Class :character   Class :character   Class :character
##   Mode  :character   Mode  :character   Mode  :character
##
##
##
##   items.issues_url   items.pulls_url    items.milestones_url
##   Length:30          Length:30          Length:30
##   Class :character   Class :character   Class :character
##   Mode  :character   Mode  :character   Mode  :character
##
##
##
##   items.notifications_url items.labels_url   items.releases_url
##   Length:30               Length:30          Length:30
##   Class :character        Class :character   Class :character
##   Mode  :character        Mode  :character   Mode  :character
##
##
##
##   items.created_at   items.updated_at   items.pushed_at
```

```
##   Length:30          Length:30          Length:30
##   Class :character   Class :character   Class :character
##   Mode  :character   Mode  :character   Mode  :character
##
##
##
##   items.git_url      items.ssh_url      items.clone_url
##   Length:30          Length:30          Length:30
##   Class :character   Class :character   Class :character
##   Mode  :character   Mode  :character   Mode  :character
##
##
##
##   items.svn_url      items.homepage        items.size
##   Length:30          Length:30          Min.   :    782
##   Class :character   Class :character   1st Qu.:   6579
##   Mode  :character   Mode  :character   Median :  19924
##                                         Mean   :  94869
##                                         3rd Qu.:  55819
##                                         Max.   : 994629
##   items.stargazers_count items.watchers_count items.language
##   Min.   : 3470          Min.   : 3470         Length:30
##   1st Qu.: 4106          1st Qu.: 4106         Class :character
##   Median : 4959          Median : 4959          Mode  :character
##   Mean   : 5290          Mean   : 5290
##   3rd Qu.: 6079          3rd Qu.: 6079
##   Max.   :10844          Max.   :10844
##   items.has_issues items.has_downloads items.has_wiki  items.has_pages
##   Mode :logical    Mode:logical        Mode :logical   Mode :logical
##   FALSE:4          TRUE:30             FALSE:8         FALSE:13
##   TRUE :26         NA's:0              TRUE :22        TRUE :17
##   NA's :0                              NA's :0         NA's :0
##
##
##   items.forks_count items.mirror_url items.open_issues_count
##   Min.   : 194.0    Mode:logical     Min.   :    0.0
##   1st Qu.: 934.5    NA's:30          1st Qu.:   30.0
##   Median :1495.0                     Median :   78.0
##   Mean   :2034.7                     Mean   :  126.7
##   3rd Qu.:3049.8                     3rd Qu.:  134.2
##   Max.   :4556.0                     Max.   : 1113.0
##    items.forks      items.open_issues items.watchers  items.default_branch
##   Min.   : 194.0   Min.   :    0.0   Min.   : 3470   Length:30
##   1st Qu.: 934.5   1st Qu.:   30.0   1st Qu.: 4106   Class :character
##   Median :1495.0   Median :   78.0   Median : 4959   Mode  :character
```

8

```
##  Mean   :2034.7   Mean   : 126.7    Mean   : 5290
## 3rd Qu.:3049.8   3rd Qu.: 134.2    3rd Qu.: 6079
## Max.   :4556.0   Max.   :1113.0    Max.   :10844
##   items.score
## Min.   :1
## 1st Qu.:1
## Median :1
## Mean   :1
## 3rd Qu.:1
## Max.   :1
```

```r
class(data_dataframe_Javascript)
```

```
## [1] "data.frame"
```

```r
str(data_dataframe_Javascript)
```

```
## 'data.frame': 30 obs. of  70 variables:
##  $ total_count        : int  1291131 1291131 1291131 1291131 1291131 1291131 1291131
##  $ incomplete_results : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
##  $ items.id           : int  460078 943149 211666 167174 486550 3214406 3065454 29357
##  $ items.name         : chr  "angular.js" "d3" "node" "jquery" ...
##  $ items.full_name    : chr  "angular/angular.js" "mbostock/d3" "joyent/node" "jquery
##  $ items.owner        :'data.frame': 30 obs. of  17 variables:
##   ..$ login            : chr  "angular" "mbostock" "joyent" "jquery" ...
##   ..$ id               : int  139426 230541 10161 70142 1136800 789528 83575 476009 473
##   ..$ avatar_url       : chr  "https://avatars.githubusercontent.com/u/139426?v=3" "htt
##   ..$ gravatar_id      : chr  "" "" "" "" ...
##   ..$ url              : chr  "https://api.github.com/users/angular" "https://api.githu
##   ..$ html_url         : chr  "https://github.com/angular" "https://github.com/mbostock
##   ..$ followers_url    : chr  "https://api.github.com/users/angular/followers" "https:/
##   ..$ following_url    : chr  "https://api.github.com/users/angular/following{/other_us
##   ..$ gists_url        : chr  "https://api.github.com/users/angular/gists{/gist_id}" "h
##   ..$ starred_url      : chr  "https://api.github.com/users/angular/starred{/owner}{/re
##   ..$ subscriptions_url: chr  "https://api.github.com/users/angular/subscriptions" "htt
##   ..$ organizations_url: chr  "https://api.github.com/users/angular/orgs" "https://api.
##   ..$ repos_url        : chr  "https://api.github.com/users/angular/repos" "https://api
##   ..$ events_url       : chr  "https://api.github.com/users/angular/events{/privacy}" '
##   ..$ received_events_url: chr  "https://api.github.com/users/angular/received_events" "h
##   ..$ type             : chr  "Organization" "User" "Organization" "Organization" ...
##   ..$ site_admin       : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
##  $ items.private      : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
##  $ items.html_url     : chr  "https://github.com/angular/angular.js" "https://github.
##  $ items.description  : chr  "HTML enhanced for web apps" "A JavaScript visualization
##  $ items.fork         : logi  FALSE FALSE FALSE FALSE FALSE FALSE ...
##  $ items.url          : chr  "https://api.github.com/repos/angular/angular.js" "https
```

```
##  $ items.forks_url         : chr  "https://api.github.com/repos/angular/angular.js/forks"
##  $ items.keys_url          : chr  "https://api.github.com/repos/angular/angular.js/keys{/k
##  $ items.collaborators_url : chr  "https://api.github.com/repos/angular/angular.js/collabo
##  $ items.teams_url         : chr  "https://api.github.com/repos/angular/angular.js/teams"
##  $ items.hooks_url         : chr  "https://api.github.com/repos/angular/angular.js/hooks"
##  $ items.issue_events_url  : chr  "https://api.github.com/repos/angular/angular.js/issues/
##  $ items.events_url        : chr  "https://api.github.com/repos/angular/angular.js/events"
##  $ items.assignees_url     : chr  "https://api.github.com/repos/angular/angular.js/assigne
##  $ items.branches_url      : chr  "https://api.github.com/repos/angular/angular.js/branche
##  $ items.tags_url          : chr  "https://api.github.com/repos/angular/angular.js/tags" "
##  $ items.blobs_url         : chr  "https://api.github.com/repos/angular/angular.js/git/blo
##  $ items.git_tags_url      : chr  "https://api.github.com/repos/angular/angular.js/git/tag
##  $ items.git_refs_url      : chr  "https://api.github.com/repos/angular/angular.js/git/ref
##  $ items.trees_url         : chr  "https://api.github.com/repos/angular/angular.js/git/tre
##  $ items.statuses_url      : chr  "https://api.github.com/repos/angular/angular.js/statuse
##  $ items.languages_url     : chr  "https://api.github.com/repos/angular/angular.js/languag
##  $ items.stargazers_url    : chr  "https://api.github.com/repos/angular/angular.js/stargaz
##  $ items.contributors_url  : chr  "https://api.github.com/repos/angular/angular.js/contrib
##  $ items.subscribers_url   : chr  "https://api.github.com/repos/angular/angular.js/subscri
##  $ items.subscription_url  : chr  "https://api.github.com/repos/angular/angular.js/subscri
##  $ items.commits_url       : chr  "https://api.github.com/repos/angular/angular.js/commits
##  $ items.git_commits_url   : chr  "https://api.github.com/repos/angular/angular.js/git/com
##  $ items.comments_url      : chr  "https://api.github.com/repos/angular/angular.js/comment
##  $ items.issue_comment_url : chr  "https://api.github.com/repos/angular/angular.js/issues/
##  $ items.contents_url      : chr  "https://api.github.com/repos/angular/angular.js/content
##  $ items.compare_url       : chr  "https://api.github.com/repos/angular/angular.js/compare
##  $ items.merges_url        : chr  "https://api.github.com/repos/angular/angular.js/merges"
##  $ items.archive_url       : chr  "https://api.github.com/repos/angular/angular.js/{archiv
##  $ items.downloads_url     : chr  "https://api.github.com/repos/angular/angular.js/downloa
##  $ items.issues_url        : chr  "https://api.github.com/repos/angular/angular.js/issues{
##  $ items.pulls_url         : chr  "https://api.github.com/repos/angular/angular.js/pulls{/
##  $ items.milestones_url    : chr  "https://api.github.com/repos/angular/angular.js/milesto
##  $ items.notifications_url : chr  "https://api.github.com/repos/angular/angular.js/notific
##  $ items.labels_url        : chr  "https://api.github.com/repos/angular/angular.js/labels{
##  $ items.releases_url      : chr  "https://api.github.com/repos/angular/angular.js/release
##  $ items.created_at        : chr  "2010-01-06T00:34:37Z" "2010-09-27T17:22:42Z" "2009-05-2
##  $ items.updated_at        : chr  "2015-04-20T07:38:01Z" "2015-04-20T07:32:04Z" "2015-04-2
##  $ items.pushed_at         : chr  "2015-04-19T17:39:10Z" "2015-04-18T00:03:11Z" "2015-04-1
##  $ items.git_url           : chr  "git://github.com/angular/angular.js.git" "git://github.
##  $ items.ssh_url           : chr  "git@github.com:angular/angular.js.git" "git@github.com:
##  $ items.clone_url         : chr  "https://github.com/angular/angular.js.git" "https://git
##  $ items.svn_url           : chr  "https://github.com/angular/angular.js" "https://github.
##  $ items.homepage          : chr  "http://angularjs.org" "http://d3js.org" "http://nodejs.
##  $ items.size              : int  236576 73722 344103 40423 66334 172690 2276 326021 47145
##  $ items.stargazers_count  : int  37621 36846 35785 34147 29519 24313 23880 21811 21457 20
```

```
##  $ items.watchers_count   : int  37621 36846 35785 34147 29519 24313 23880 21811 21457 20
##  $ items.language         : chr  "JavaScript" "JavaScript" "JavaScript" "JavaScript" ...
##  $ items.has_issues       : logi  TRUE TRUE TRUE TRUE TRUE TRUE ...
##  $ items.has_downloads    : logi  TRUE TRUE FALSE FALSE TRUE TRUE ...
##  $ items.has_wiki         : logi  TRUE TRUE TRUE TRUE TRUE TRUE ...
##  $ items.has_pages        : logi  FALSE TRUE FALSE FALSE FALSE FALSE ...
##  $ items.forks_count      : int  15680 9352 7993 8266 7600 2752 5210 4511 4803 6265 ...
##  $ items.mirror_url       : logi  NA NA NA NA NA NA ...
##  $ items.open_issues_count: int  1197 244 1217 119 11 530 185 1241 32 124 ...
##  $ items.forks            : int  15680 9352 7993 8266 7600 2752 5210 4511 4803 6265 ...
##  $ items.open_issues      : int  1197 244 1217 119 11 530 185 1241 32 124 ...
##  $ items.watchers         : int  37621 36846 35785 34147 29519 24313 23880 21811 21457 20
##  $ items.default_branch   : chr  "master" "master" "master" "master" ...
##  $ items.score            : num  1 1 1 1 1 1 1 1 1 1 ...

summary(data_dataframe_Javascript)

##   total_count      incomplete_results    items.id
##  Min.   :1291131   Mode :logical      Min.    :  167174
##  1st Qu.:1291131   FALSE:30           1st Qu.:  562535
##  Median :1291131   NA's :0            Median : 1613150
##  Mean   :1291131                      Mean    : 4600390
##  3rd Qu.:1291131                      3rd Qu.: 8257385
##  Max.   :1291131                      Max.    :29028775
##   items.name         items.full_name
##  Length:30          Length:30
##  Class :character   Class :character
##  Mode  :character   Mode  :character
##
##
##
##   items.owner.login     items.owner.id    items.owner.avatar_url  items.owner.gravatar_id
##  Length:30           Min.    :    4732   Length:30               Length:30               Length:3
##  Class :character    1st Qu.:  86953     Class :character        Class :character        Class :c
##  Mode  :character    Median : 539310     Mode  :character        Mode  :character        Mode  :c
##  NA                  Mean    :1393905    NA                      NA                      NA
##  NA                  3rd Qu.:1406879     NA                      NA                      NA
##  NA                  Max.    :8077542    NA                      NA                      NA
##   items.private   items.html_url      items.description  items.fork
##  Mode :logical   Length:30           Length:30           Mode :logical
##  FALSE:30        Class :character    Class :character    FALSE:30
##  NA's :0         Mode  :character    Mode  :character    NA's :0
##
##
##
##   items.url         items.forks_url     items.keys_url
```

```
##   Length:30          Length:30          Length:30
##   Class :character    Class :character    Class :character
##   Mode  :character    Mode  :character    Mode  :character
##
##
##
##   items.collaborators_url items.teams_url    items.hooks_url
##   Length:30               Length:30          Length:30
##   Class :character        Class :character    Class :character
##   Mode  :character        Mode  :character    Mode  :character
##
##
##
##   items.issue_events_url items.events_url   items.assignees_url
##   Length:30               Length:30          Length:30
##   Class :character        Class :character    Class :character
##   Mode  :character        Mode  :character    Mode  :character
##
##
##
##   items.branches_url items.tags_url     items.blobs_url
##   Length:30          Length:30          Length:30
##   Class :character    Class :character    Class :character
##   Mode  :character    Mode  :character    Mode  :character
##
##
##
##   items.git_tags_url items.git_refs_url items.trees_url
##   Length:30          Length:30          Length:30
##   Class :character    Class :character    Class :character
##   Mode  :character    Mode  :character    Mode  :character
##
##
##
##   items.statuses_url items.languages_url items.stargazers_url
##   Length:30          Length:30           Length:30
##   Class :character    Class :character     Class :character
##   Mode  :character    Mode  :character     Mode  :character
##
##
##
##   items.contributors_url items.subscribers_url items.subscription_url
##   Length:30               Length:30             Length:30
##   Class :character        Class :character       Class :character
##   Mode  :character        Mode  :character       Mode  :character
```

```
##
##
##
##  items.commits_url   items.git_commits_url items.comments_url
##  Length:30           Length:30             Length:30
##  Class :character    Class :character      Class :character
##  Mode  :character    Mode  :character      Mode  :character
##
##
##
##  items.issue_comment_url items.contents_url items.compare_url
##  Length:30               Length:30          Length:30
##  Class :character        Class :character   Class :character
##  Mode  :character        Mode  :character   Mode  :character
##
##
##
##  items.merges_url   items.archive_url   items.downloads_url
##  Length:30          Length:30           Length:30
##  Class :character   Class :character    Class :character
##  Mode  :character   Mode  :character    Mode  :character
##
##
##
##  items.issues_url   items.pulls_url    items.milestones_url
##  Length:30          Length:30          Length:30
##  Class :character   Class :character   Class :character
##  Mode  :character   Mode  :character   Mode  :character
##
##
##
##  items.notifications_url items.labels_url   items.releases_url
##  Length:30               Length:30          Length:30
##  Class :character        Class :character   Class :character
##  Mode  :character        Mode  :character   Mode  :character
##
##
##
##  items.created_at   items.updated_at   items.pushed_at
##  Length:30          Length:30          Length:30
##  Class :character   Class :character   Class :character
##  Mode  :character   Mode  :character   Mode  :character
##
##
##
```

```
##   items.git_url       items.ssh_url       items.clone_url
##   Length:30           Length:30           Length:30
##   Class :character    Class :character    Class :character
##   Mode  :character    Mode  :character    Mode  :character
##
##
##
##   items.svn_url       items.homepage        items.size
##   Length:30           Length:30           Min.   :   781
##   Class :character    Class :character    1st Qu.: 10289
##   Mode  :character    Mode  :character    Median : 33549
##                                           Mean   : 79534
##                                           3rd Qu.: 80598
##                                           Max.   :370851
##   items.stargazers_count items.watchers_count items.language
##   Min.   :12649         Min.   :12649         Length:30
##   1st Qu.:14400         1st Qu.:14400         Class :character
##   Median :17890         Median :17890         Mode  :character
##   Mean   :20154         Mean   :20154
##   3rd Qu.:21722         3rd Qu.:21722
##   Max.   :37621         Max.   :37621
##   items.has_issues items.has_downloads items.has_wiki  items.has_pages
##   Mode :logical    Mode :logical       Mode :logical   Mode :logical
##   FALSE:1          FALSE:3             FALSE:6         FALSE:14
##   TRUE :29         TRUE :27            TRUE :24        TRUE :16
##   NA's :0          NA's :0             NA's :0         NA's :0
##
##
##   items.forks_count items.mirror_url items.open_issues_count
##   Min.   :   462    Mode:logical     Min.   :  11.00
##   1st Qu.: 2275     NA's:30          1st Qu.:  59.75
##   Median : 3231                      Median : 186.50
##   Mean   : 4212                      Mean   : 305.90
##   3rd Qu.: 5187                      3rd Qu.: 333.75
##   Max.   :15680                      Max.   :1241.00
##    items.forks     items.open_issues items.watchers  items.default_branch
##   Min.   :   462   Min.   :  11.00   Min.   :12649   Length:30
##   1st Qu.: 2275    1st Qu.:  59.75   1st Qu.:14400   Class :character
##   Median : 3231    Median : 186.50   Median :17890   Mode  :character
##   Mean   : 4212    Mean   : 305.90   Mean   :20154
##   3rd Qu.: 5187    3rd Qu.: 333.75   3rd Qu.:21722
##   Max.   :15680    Max.   :1241.00   Max.   :37621
##    items.score
##   Min.   :1
##   1st Qu.:1
```

14

```
##   Median :1
##   Mean   :1
##   3rd Qu.:1
##   Max.   :1
```

**Results**

So, we have tables for repositories created in Java and in JavaScript. Seeing
he values in the tables, we can verify the language in which the repository was
created.

The number of repositories for each, Java and JavaScript can be calculated
as follows:

```
njava<-data_dataframe_Java[1,1]
njavascript<-data_dataframe_Javascript[1,1]

#Creating a table with these values:

language<-c("Java","JavaScript")
repositories<-c(get("njava"),get("njavascript"))

graph<-cbind(language,repositories)
graph_data_frame<-as.data.frame(graph)

graph_data_frame

##     language repositories
## 1       Java      1038032
## 2 JavaScript      1291131
```
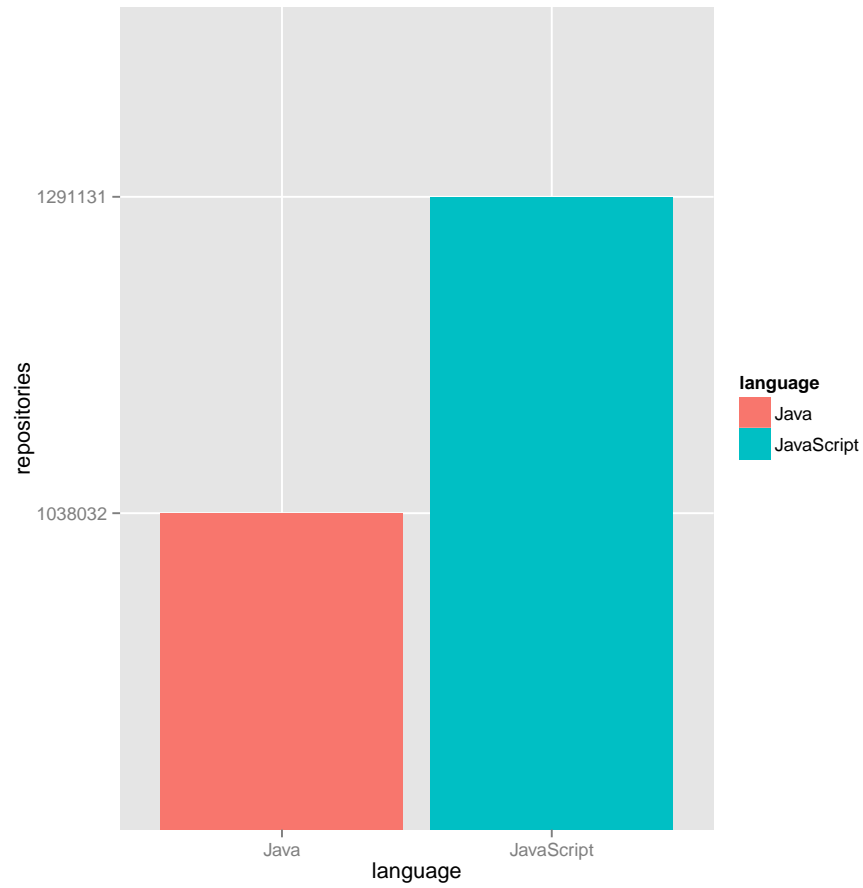
**Graphing**

Having a table with language on X-axis and number of repositories for each
language on Y-axis, we can easily plot a graph for that table. Once we have
that graph, we can easily analyze our results.

```
library(ggplot2)
ggplot2::ggplot(graph_data_frame,aes(x=language,y=repositories,fill=language))+
        geom_bar(stat="identity")
```

We can clearly see, that the number of repositories created in JavaScript is more than those created in Java.