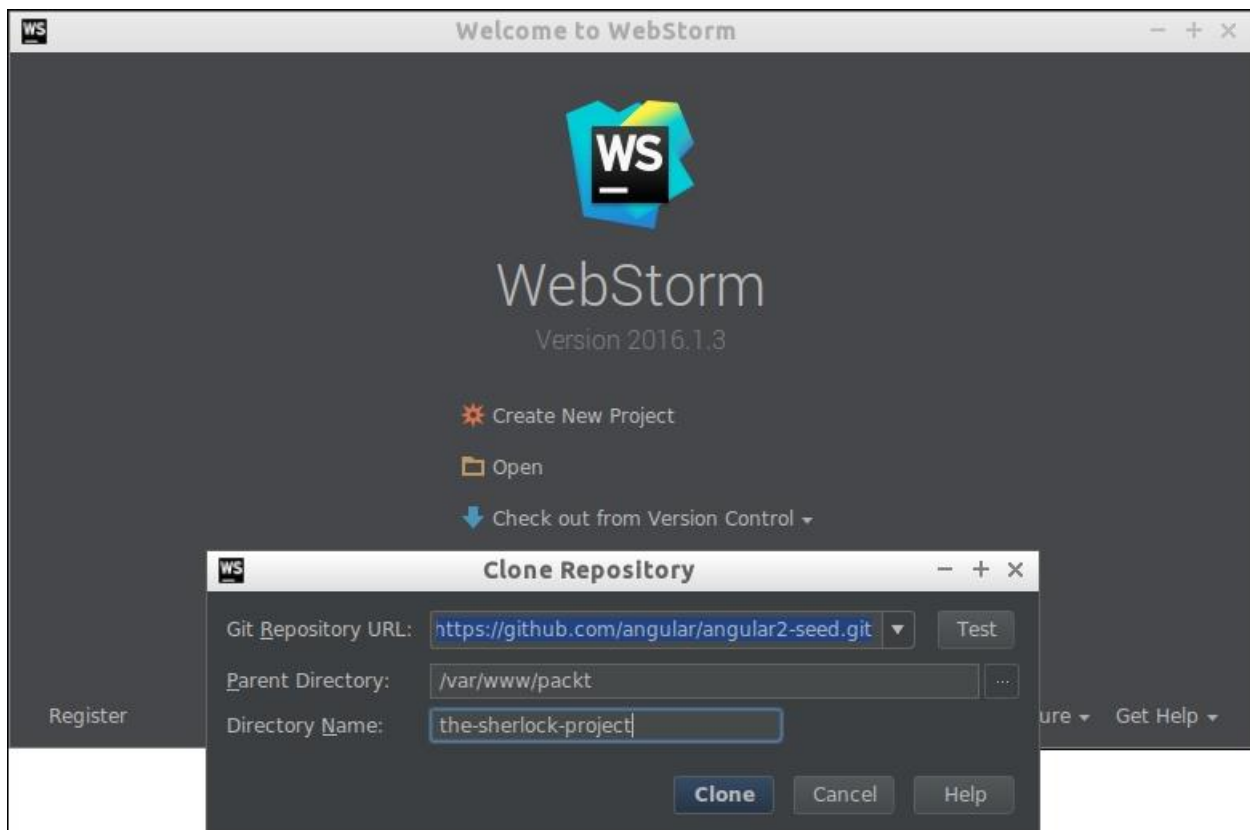


Chapter 1: Setting Up the Environment



The screenshot shows the VS Code editor with the 'package.json' file open. The file contains the following dependencies:

```
30 "dependencies": {
31   "@angular/http": "2.0.0-rc.1",
32   "@angular/common": "2.0.0-rc.1",
33   "@angular/compiler": "2.0.0-rc.1",
34   "@angular/core": "2.0.0-rc.1",
35   "@angular/platform-browser": "2.0.0-rc.1",
36   "@angular/platform-browser-dynamic": "2.0.0-rc.1",
37   "@angular/platform-server": "2.0.0-rc.1",
38   "@angular/router": "2.0.0-rc.1",
39   "core-js": "^2.2.0",
40   "rxjs": "5.0.0-beta.6",
41   "zone.js": "~0.6.12"
42 }
```

The screenshot shows the VS Code editor with the 'package.json' file open. The 'dependencies' section is highlighted, showing the following dependencies:

```
14 "Rob Wormald <robwormald@gmail.com>",
15 "PatrickJS <github@gdi2290.com>"
16 ],
17 "license": "MIT",
18 "devDependencies": {
19   "awesome-typescript-loader": "~0.16.2",
20   "es6-promise": "3.0.2",
21   "es6-shim": "0.35.0",
22   "reflect-metadata": "0.1.2",
23   "source-map-loader": "^0.1.5",
24   "typescript": "~1.8.9",
25   "typings": "~1.0.3",
26   "webpack": "1.12.9",
27   "webpack-dev-server": "1.14.0",
28   "webpack-merge": "0.8.4"
29 },
30 "dependencies": {
31   "@angular/http": "2.0.0-rc.1",
32   "@angular/common": "2.0.0-rc.1",
```

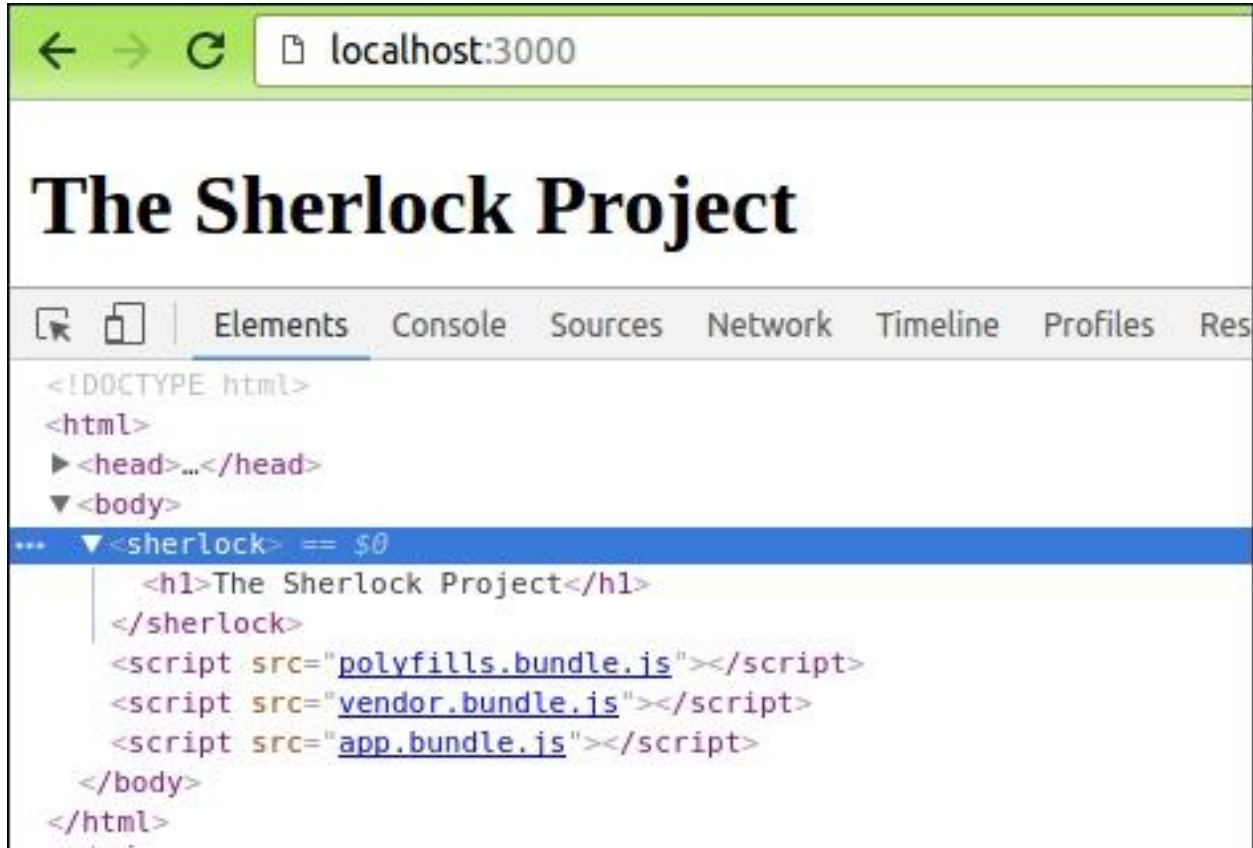
The terminal output shows the following commands and their results:

```
Run start
[391] ./~/@angular/router/src/router_url_serializer.js 0.0 KB {2} [built]
[392] ./~/@angular/router/src/router_providers.js 862 bytes {2} [built]
[393] ./~/@angular/router/src/router_providers_common.js 1.5 KB {2} [built]
[394] ./~/@angular/router/src/directives/router_outlet.js 1.98 KB {2} [built]
[395] ./~/@angular/router/src/directives/router_link.js 2.71 KB {2} [built]
[715] ./src/vendor.ts 416 bytes {2} [built]
webpack: bundle is now VALID.
```



```
package.json × app.ts ×  
Compile TypeScript to JavaScript? OK No Configure  
1 import {LocationStrategy, HashLocationStrategy} from '@angular/common';  
2 import {bootstrap} from '@angular/platform-browser-dynamic';  
3 import {provide, enableProdMode} from '@angular/core';  
4 import {HTTP_PROVIDERS} from '@angular/http';  
5 import {ROUTER_PROVIDERS} from '@angular/router';
```

Chapter 2: Introducing Wire-Frames



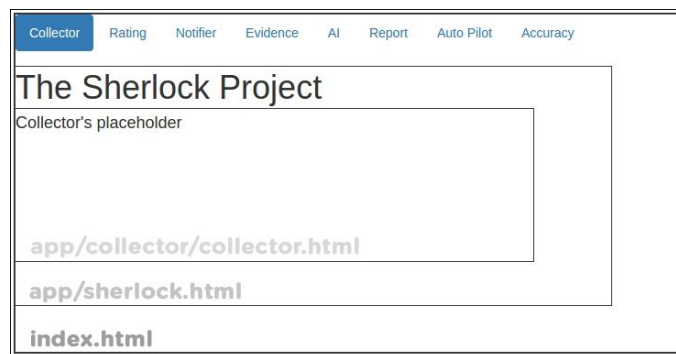
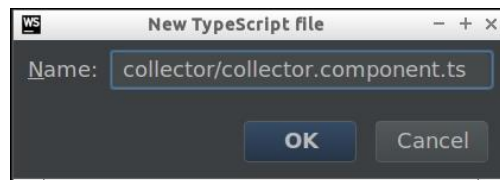
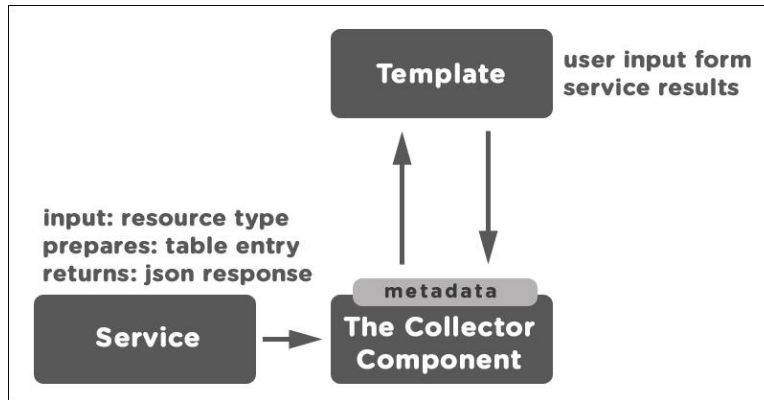
Bootstrap CDN

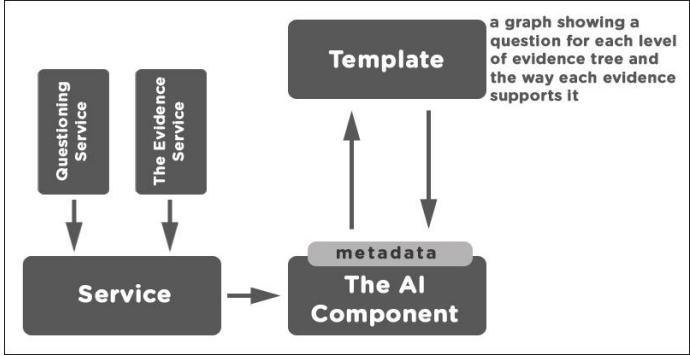
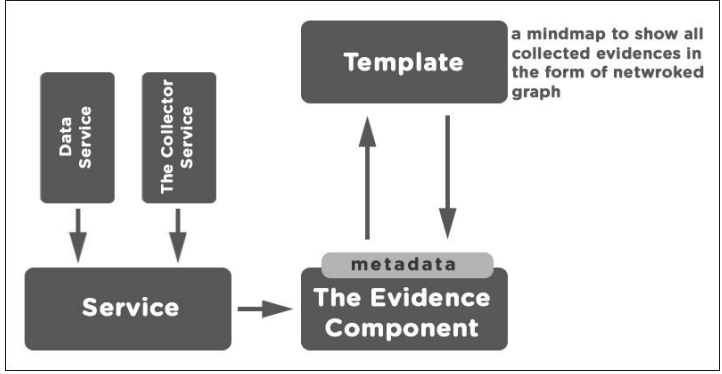
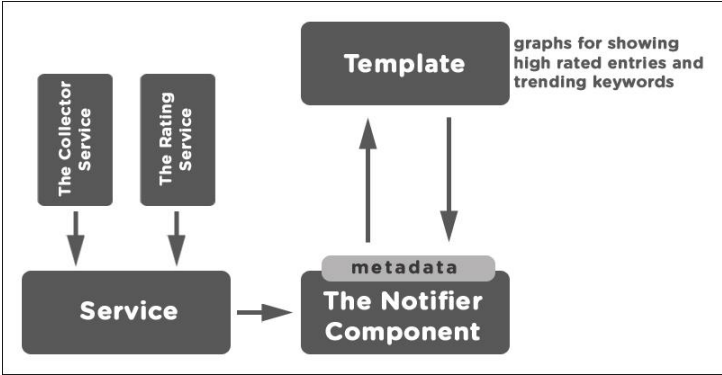
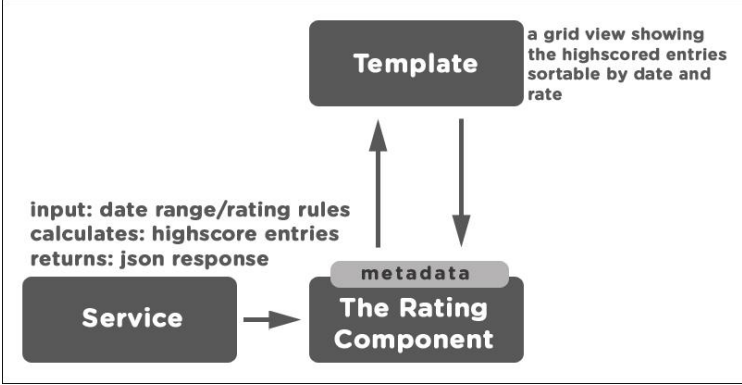
The folks over at MaxCDN graciously provide CDN support for Bootstrap's CSS and JavaScript. Just use these Bootstrap CDN links.

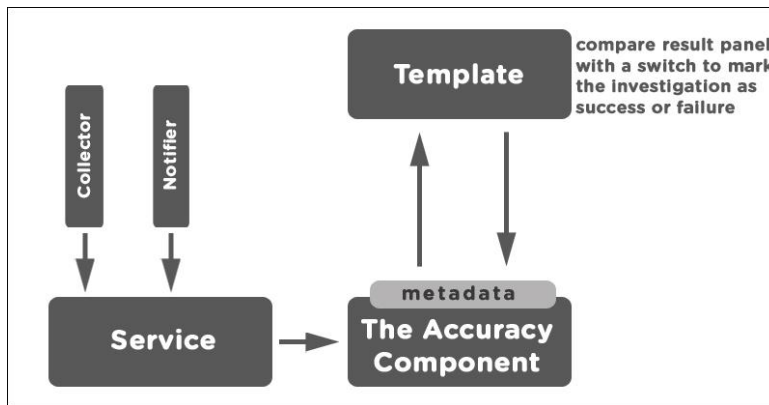
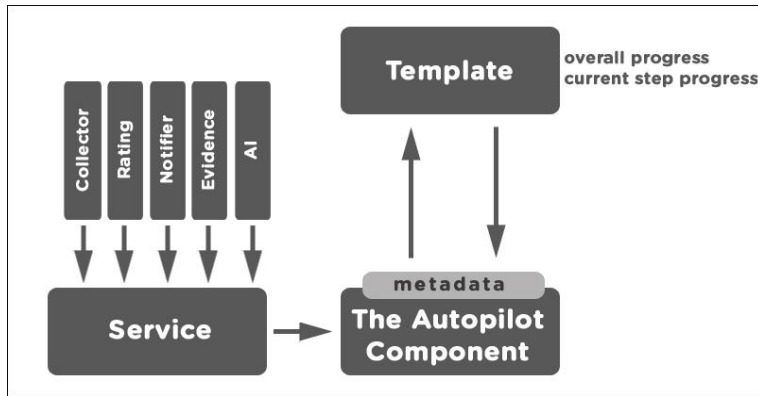
```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css"
integrity="sha384-1q8mTJOASx8j1Au+a5WDVnPi2lkFfwwEAa8hDDdjZlpLegxhjVME1fgjWPGmkzs7" crossorigin="anonymous">

<!-- Optional theme -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap-theme.min.css"
integrity="sha384-fLW2N01lMqjakBkx31/M9EahuwP5feNvV63J5ezn3uZzapT0u7EYsXhJQV+0En5r" crossorigin="anonymous">

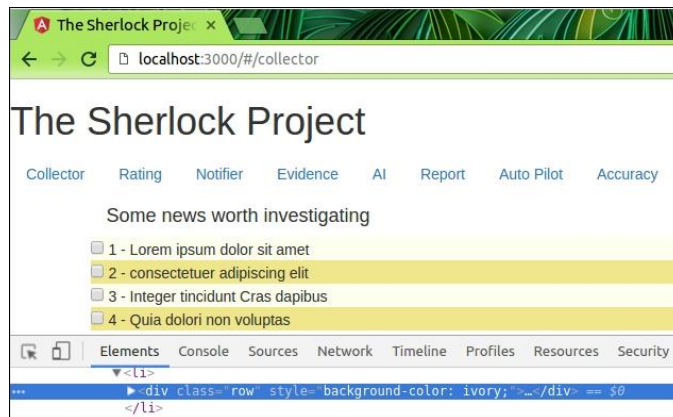
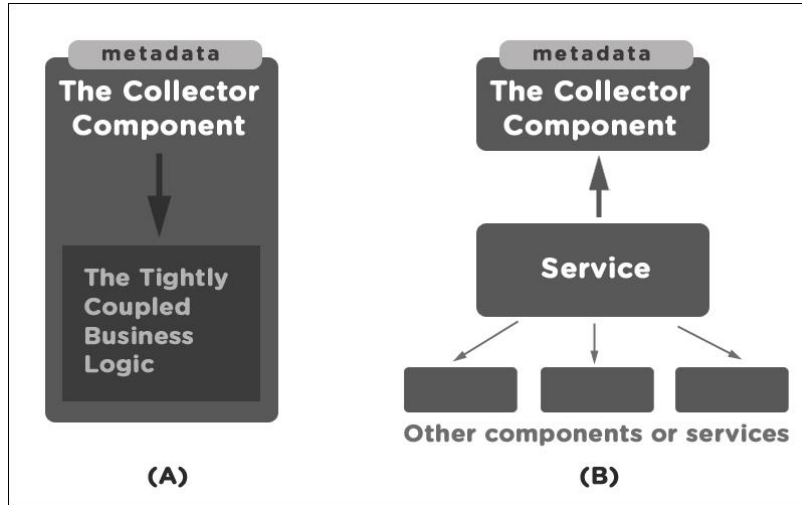
<!-- Latest compiled and minified JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/js/bootstrap.min.js" integrity="sha384-
0mSbJDEHialfmuBBQP6A4Qrprq5OVfW37PRR3j5ELQxss1yVq0tnepnHVP9aJ7xS" crossorigin="anonymous"></script>
```

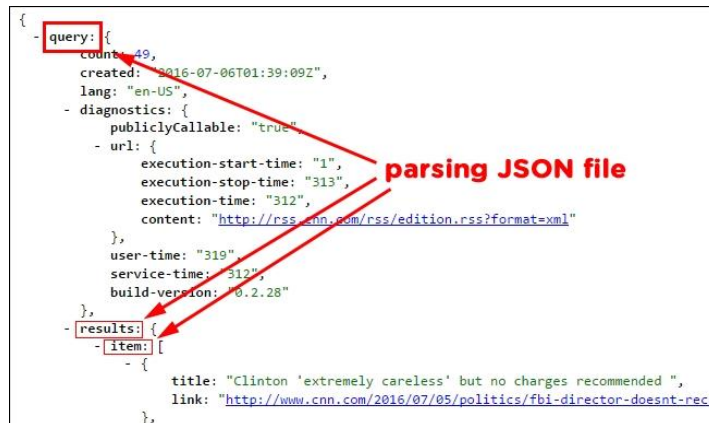
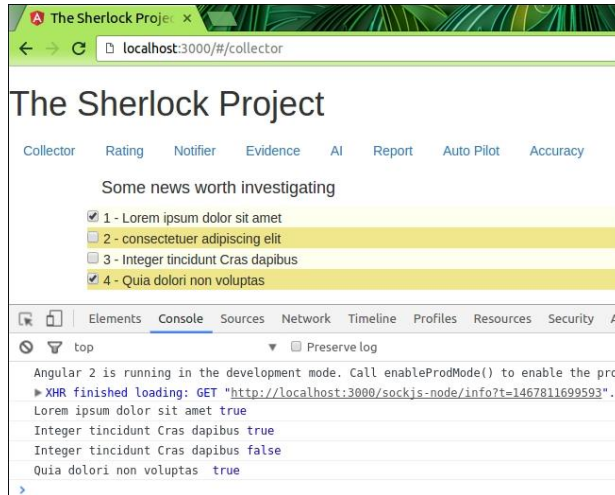






Chapter 3: The Collector Service - Using Controllers to Collect Data

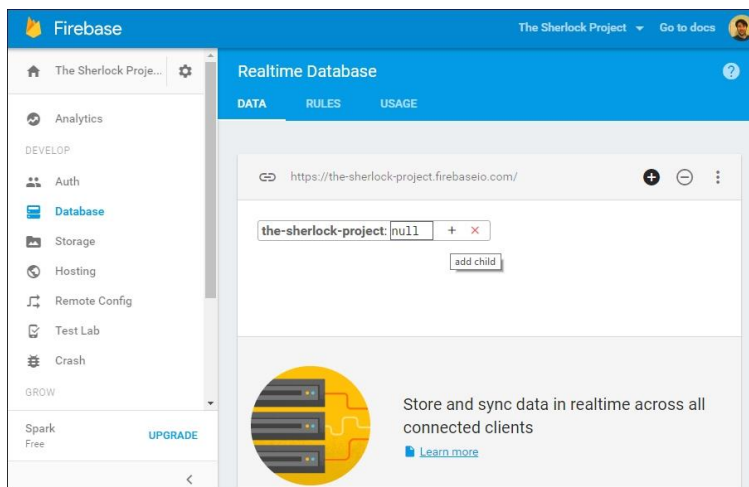
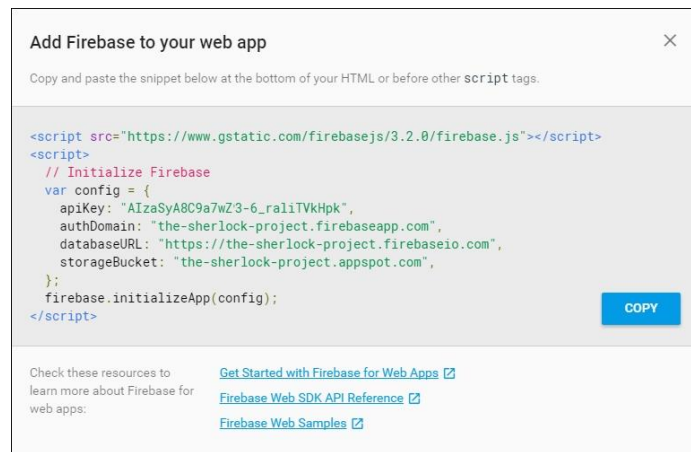
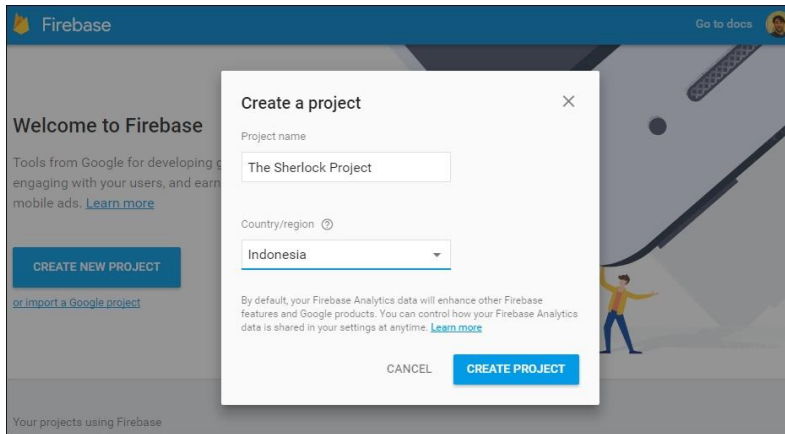


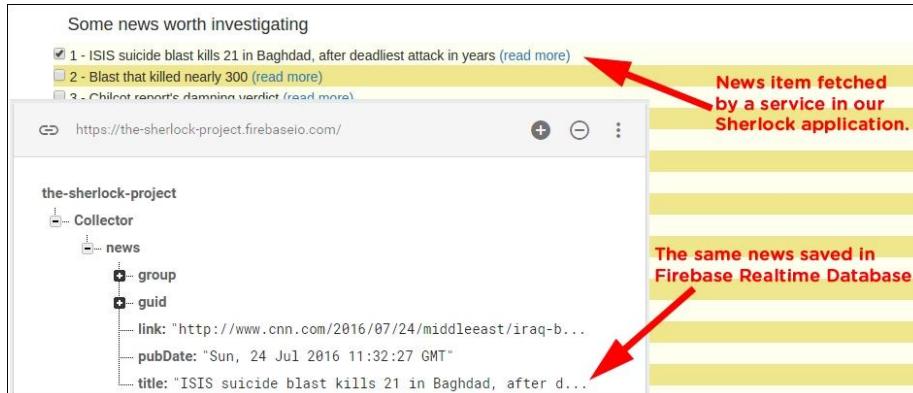


```

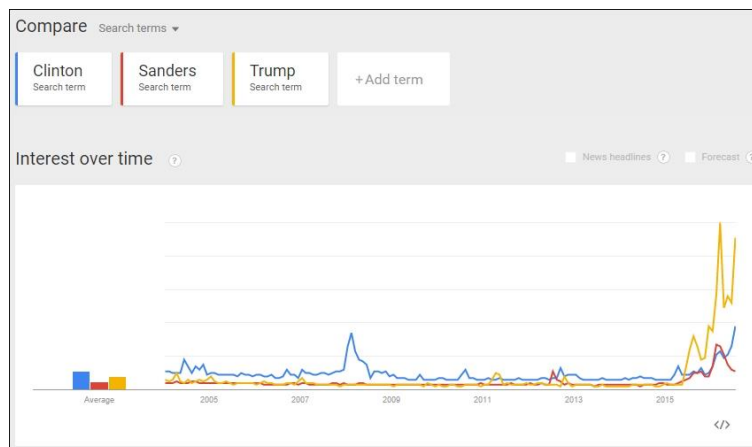
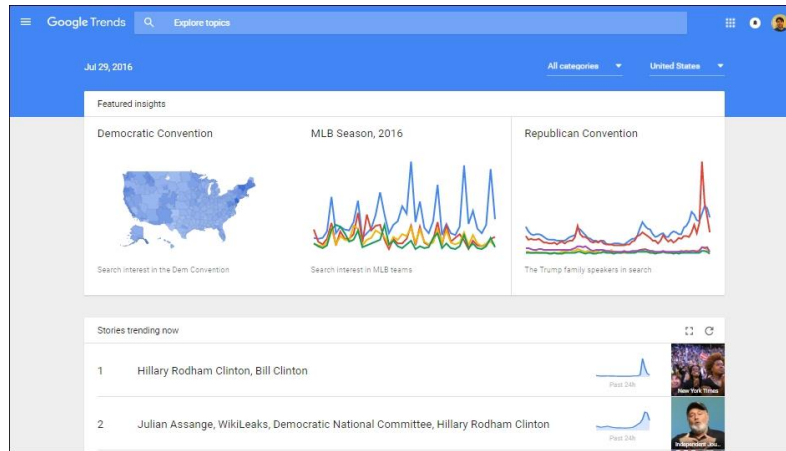
✖ XMLHttpRequest cannot load https://ajax.googleapis.com/ajax/services/feed/load?v=1.0&q=http://rss.cnn.com/rss/edition.rss. No 'Access-Control-Allow-Origin' header is present on the requested resource. Origin 'http://localhost:3000' is therefore not allowed access.
:3000/#/collector:1

```





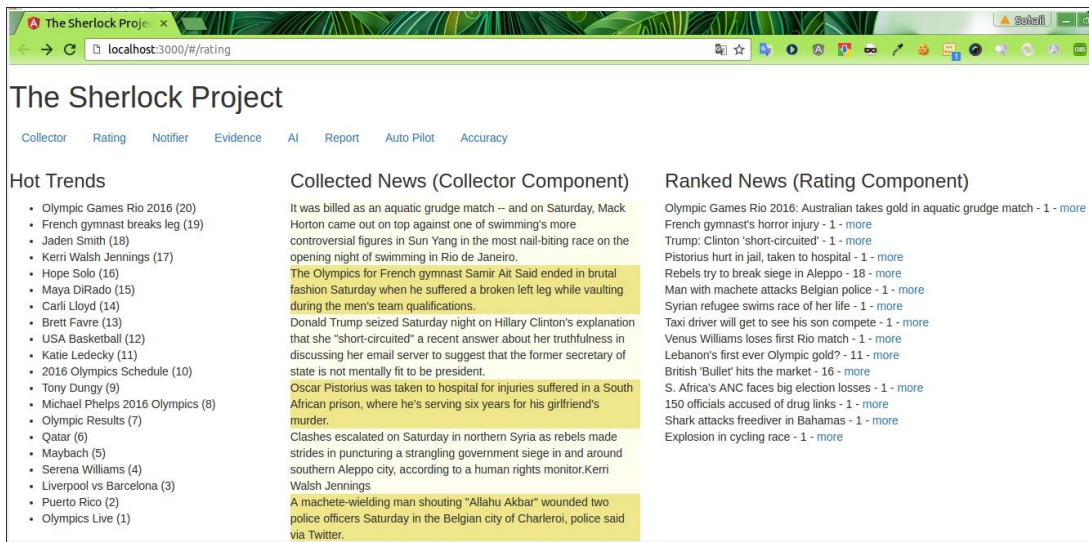
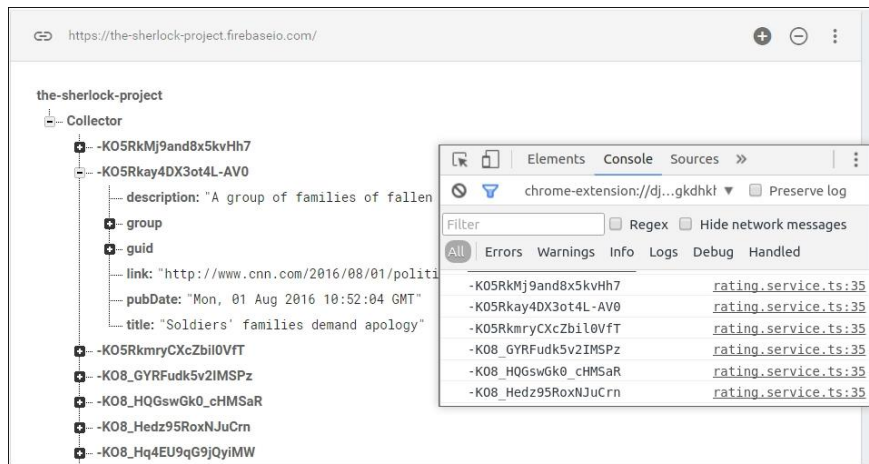
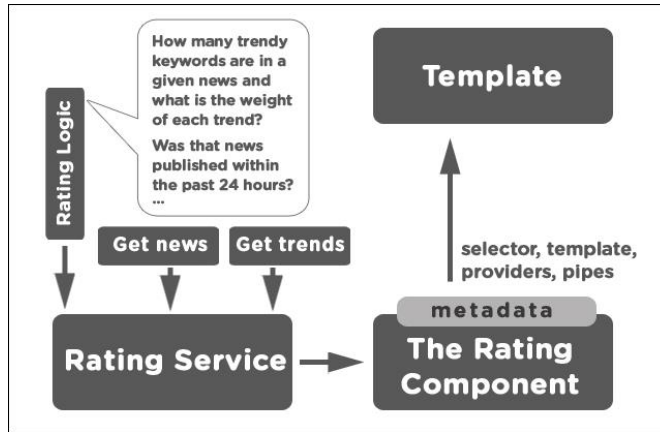
Chapter 4: The Rating Service - Data Management



What are people searching for on Google today? <http://www.google.com/trends/hottrends/atom/hourly;2007-08-2016-07-30T00:00:00Z-2016-07-30T00:00:00Z>

- [Buffalo Wild Wings](#)
- [San Diego](#)
- [Zika virus](#)
- [DJ Khaled](#)
- [Captain Fantastic](#)
- [Cheesecake Factory](#)
- [Café Society](#)
- [Antonio Armstrong](#)
- [Alligator gar](#)
- [Bill Clinton Balloons](#)
- [Tyler Posey](#)
- [Ichiro](#)
- [Mikaela Kellner](#)
- [Gigi Hadid](#)
- [Jimmy Buffett](#)
- [Hillary Clinton](#)
- [North Korea](#)
- [Jason Bourne](#)
- [PGA Championship](#)
- [Katy Perry](#)

]]>



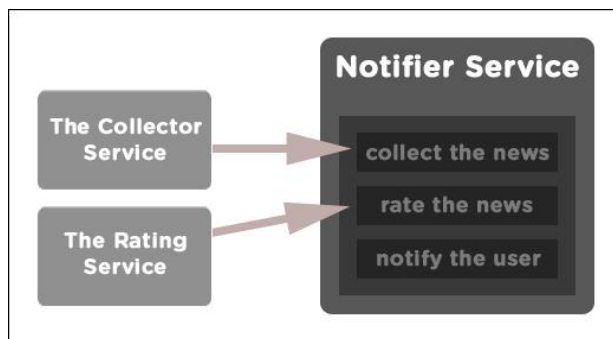
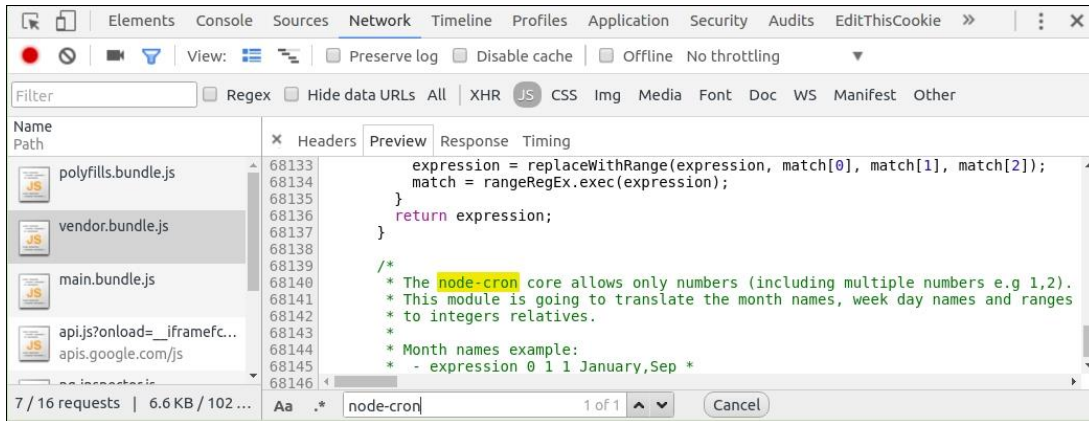
Ranked News (Rating Component)

Olympic Games Rio 2016: Australian takes gold in aquatic grudge match - 1 - [more](#)
French gymnast's horror injury - 1 - [more](#)
Trump: Clinton 'short-circuited' - 1 - [more](#)
Pistorius hurt in jail, taken to hospital - 1 - [more](#)
Rebels try to break siege in Aleppo - 18 - [more](#)
Man with machete attacks Belgian police - 1 - [more](#)
Syrian refugee swims race of her life - 1 - [more](#)
Taxi driver will get to see his son compete - 1 - [more](#)
Venus Williams loses first Rio match - 1 - [more](#)
Lebanon's first ever Olympic gold? - 11 - [more](#)
British 'Bullet' hits the market - 16 - [more](#)
S. Africa's ANC faces big election losses - 1 - [more](#)
150 officials accused of drug links - 1 - [more](#)
Shark attacks freediver in Bahamas - 1 - [more](#)
Explosion in cycling race - 1 - [more](#)

Ranked News (Rating Component)

Rebels try to break siege in Aleppo - 18 - [more](#)
British 'Bullet' hits the market - 18 - [more](#)
Lebanon's first ever Olympic gold? - 14 - [more](#)
Venus Williams loses first Rio match - 1 - [more](#)
Olympic Games Rio 2016: Australian takes gold in aquatic grudge match - 1 - [more](#)
Man with machete attacks Belgian police - 1 - [more](#)
Syrian refugee swims race of her life - 1 - [more](#)
Taxi driver will get to see his son compete - 1 - [more](#)
French gymnast's horror injury - 1 - [more](#)
Trump: Clinton 'short-circuited' - 1 - [more](#)
Pistorius hurt in jail, taken to hospital - 1 - [more](#)
S. Africa's ANC faces big election losses - 1 - [more](#)
150 officials accused of drug links - 1 - [more](#)
Shark attacks freediver in Bahamas - 1 - [more](#)
Explosion in cycling race - 1 - [more](#)
Meet the high-tech cops fighting terror - 0 - [more](#)
Who holds the greatest Olympic record? - 0 - [more](#)

Chapter 5: The Notifier Service - Creating Cron Jobs in Angular



The Sherlock Project

Collector Rating Notifier Evidence AI Report Auto Pilot Accuracy

Notifier

Current Settings	Suggested News
<input checked="" type="checkbox"/> Find, Rate & Save News	
notify me via: email	
news threshold: high rated	

localhost:3000/notifier

The Sherlock Project

Collector Rating Notifier Evidence AI

Notifier

Current Settings

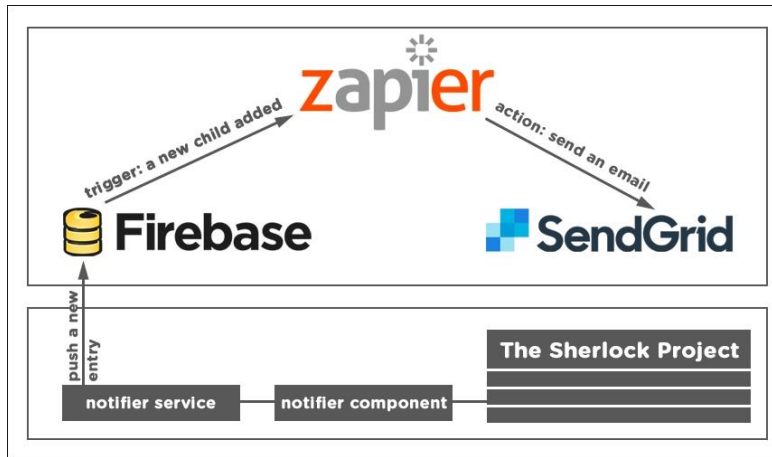
Find, Rate & Save News

notify me via: app

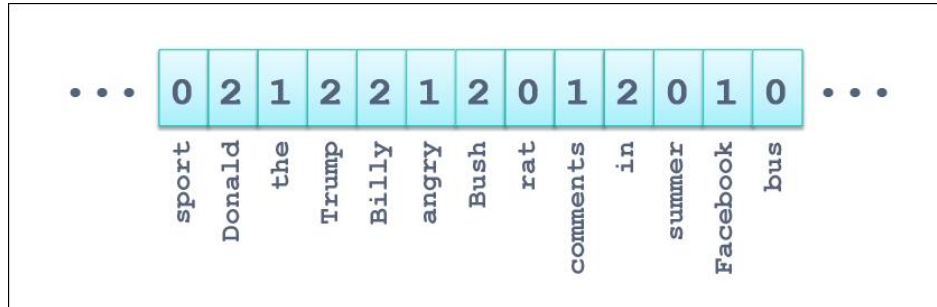
news threshold: high rated

the-sherlock-project

- Collector
- Notifier
 - config
 - notifier: "app"
 - notify: false
 - threshold: "high rated"



Chapter 6: The Evidence Tree Builder Service - Implementing the Business Logic



```
- results: {
  - body: {
    class: "pg pg-vertical pg-politics pg-leaf pg-article international t-light",
    data-eq-pts: "xsmall: 0, medium: 460, large: 780, full16x9: 1100",
    - div: [
      - {
        class: "user-msg",
        - div: {
          class: "user-msg--container",
          - div: [
            - {
              ...
            }
          ]
        }
      }
    ]
  }
}
```

localhost:3000/#/evidence

The Sherlock Project

Collector Rating Notifier **Evidence** AI Report Auto Pilot Accuracy

Processing words

#	Words	Raw Value
1	w1	1
2	w2	2

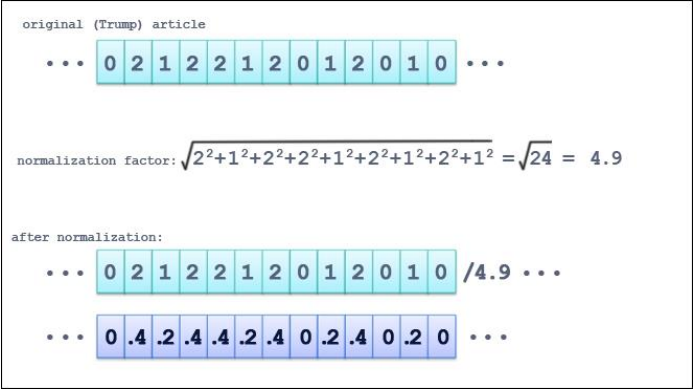
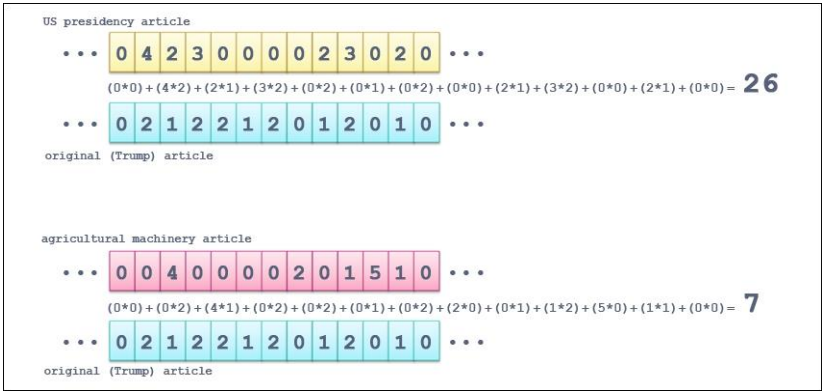
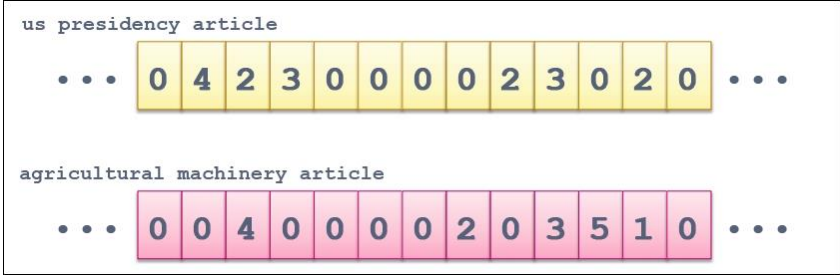
localhost:3000/#/evidence

The Sherlock Project

Collector Rating Notifier **Evidence** AI Report Auto Pilot Accuracy

Processing words

#	Words	Raw Value
1	the	27
2	of	19
3	to	18
4	and	14
5	Trump	14
6	in	14
7	a	13
8	that	12
9	he	11
10	about	11



localhost:3000/#/evidence

The Sherlock Project

Collector Rating Notifier Evidence AI Report Auto Pilot Accuracy

Processing words

#	Words	Raw Value	Normalized Value
1	the	27	0.4138690541523519
2	of	19	0.2912411862553588
3	to	18	0.27591270276823465
4	and	14	0.21459876881973805
5	Trump	14	0.21459876881973805
6	in	14	0.21459876881973805
7	a	13	0.1992702853326139
8	that	12	0.18394180184548975
9	he	11	0.1686133183583656
10	about	11	0.1686133183583656

localhost:3000/#/evidence

The Sherlock Project

Collector Rating Notifier Evidence AI Report Auto Pilot Accuracy

Processed words

#	Words	Counts	Normalized	IDF factor	TFIDF(C)	TFIDF(N)
1	the	27	0.41387	0.59946	16.18548	0.24810
2	of	19	0.29124	0.59946	11.38978	0.17459
3	to	18	0.27591	0.59946	10.79032	0.16540

localhost:3000/#/evidence

The Sherlock Project

Collector Rating Notifier Evidence AI Report Auto Pilot Accuracy

Available News Items

Trump on sex assault allegation: I'm a victim (read more)

other news/article url...

Nominated keywords for corpus

Comma separated support keywords

Keyword of interest

Extracted Contents

Processed words

#	Words	Counts	Normalized	IDF factor	TFIDF(C)	TFIDF(N)
---	-------	--------	------------	------------	----------	----------

https://console.developers.google.com/apis/api/customsearch/overview?project=the-sherlock-project

Google APIs The Sherlock Project

API Manager

Dashboard Library Credentials

Custom Search API ENABLE



About this API [Documentation](#) [Try this API in APIs Explorer](#)

Google Custom Search enables you to search over a slice of the web, such as your own website, or a collection of websites. You can harness the power of Google to create a search engine tailored to your needs and interests, and you can present the results in your website.

Using credentials with this API

Using an API key

To use this API you need an API key. An API key identifies your project to check quotas and access. Go to the Credentials page to get an API key. You'll need a key for each platform, such as Web, Android, and iOS. [Learn more](#)

Your application  API key 

https://cse.google.com/cse/

Google Custom Search Engine

Try Custom Search Engine

Make searching your site easy

With Google Custom Search, add a search box to your homepage to help people find what they need on your website.

← → ↻ 🏠 <https://cse.google.com/cse/create/new>

Google Search in CSE home 🔍

Custom Search

New search engine Enter the site name and click "Create" to create a search engine for your site. [Learn more](#)

- ▶ Edit search engine
- ▼ Help
 - Help Center
 - Help forum
 - Support
 - Blog
 - Documentation
 - Terms of Service
- Send Feedback

Sites to search

If you want to search pages over entire web containing specific schema.org markups, click on "advanced" below.

Language

English ▾

Name of the search engine


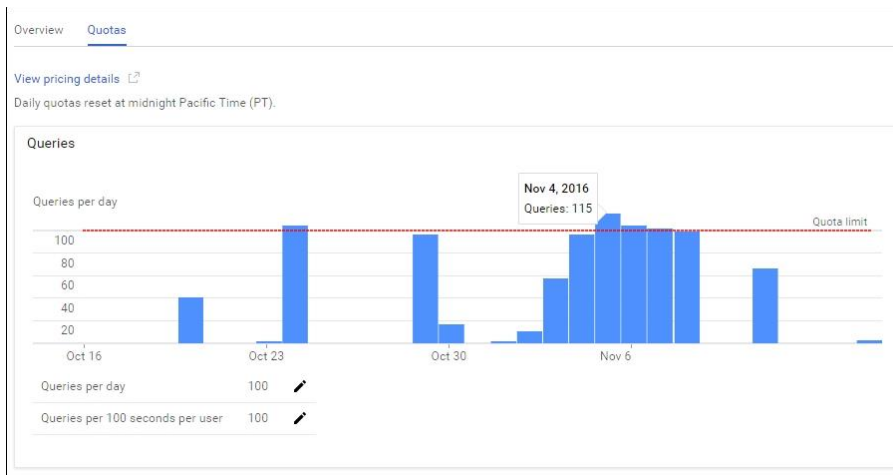
← → ↻ 🏠 ⓘ <https://cse.google.com/cse/create/congrats> cx=001410267427995255168%3Anfviboevhr

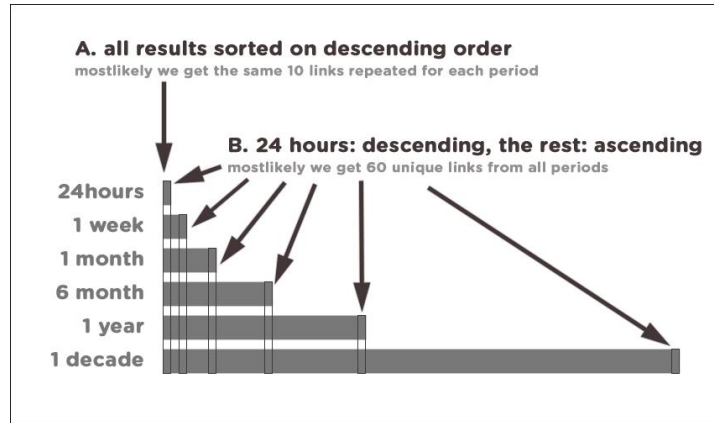
Google Search in CSE home 🔍

Custom Search

New search engine Congratulations!

- ▶ Edit search engine You've successfully created your Custom search engine.
- ▼ Help



```
469 FIREBASE WARNING: Exception was thrown by firebase.js:276
user callback. RangeError: Maximum call stack size exceeded
at va (http://localhost:3000/main.bundle.js:7999:41)
at wa (http://localhost:3000/main.bundle.js:7999:90)
at Yg (http://localhost:3000/main.bundle.js:8163:94)
```

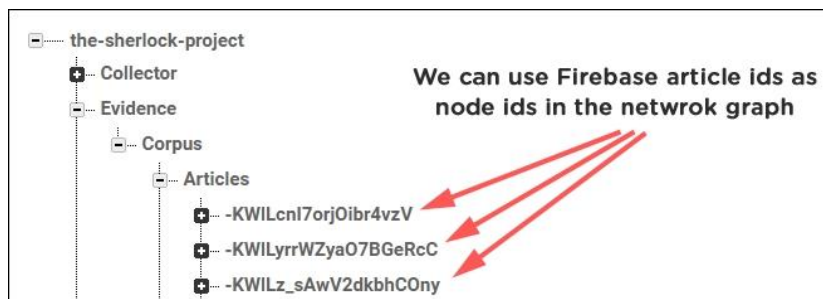
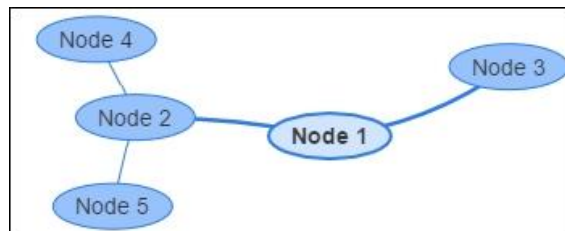
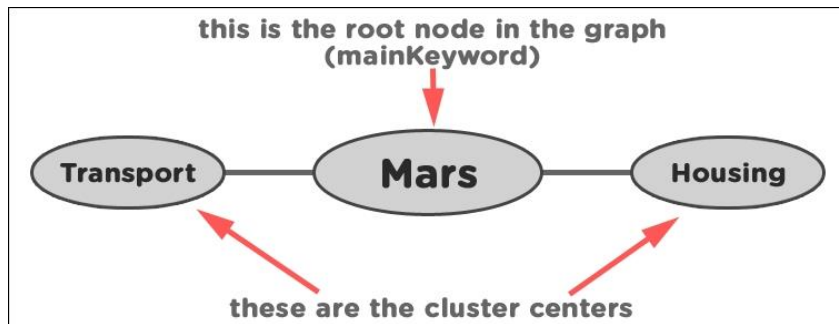
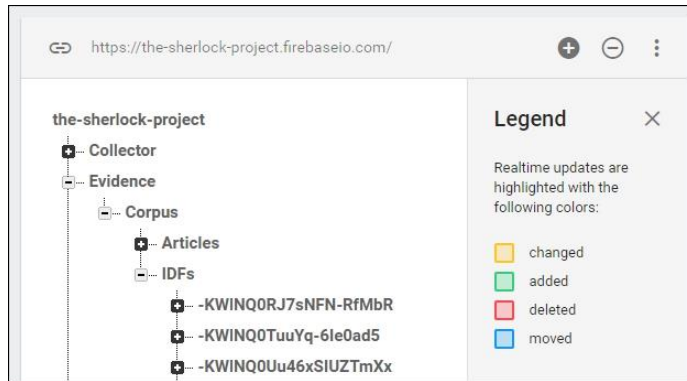
Processed words (corpus: items - vocabulary: words) Calculate IDFs

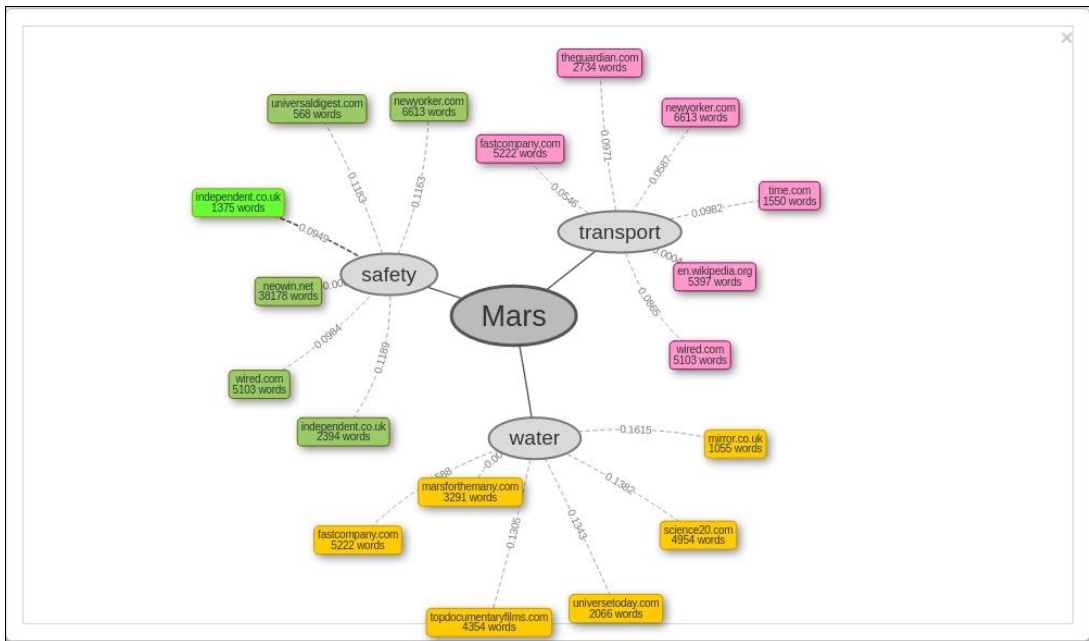
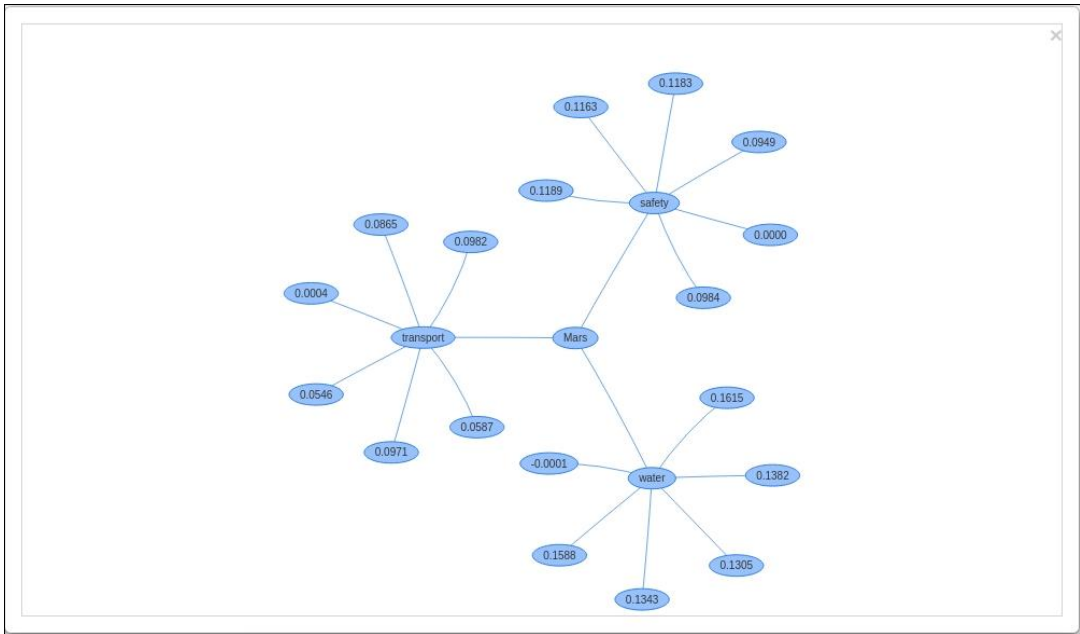
#	Words	Counts	Normalized	IDF	TF-IDF(C)	TF-IDF(N)
---	-------	--------	------------	-----	-----------	-----------

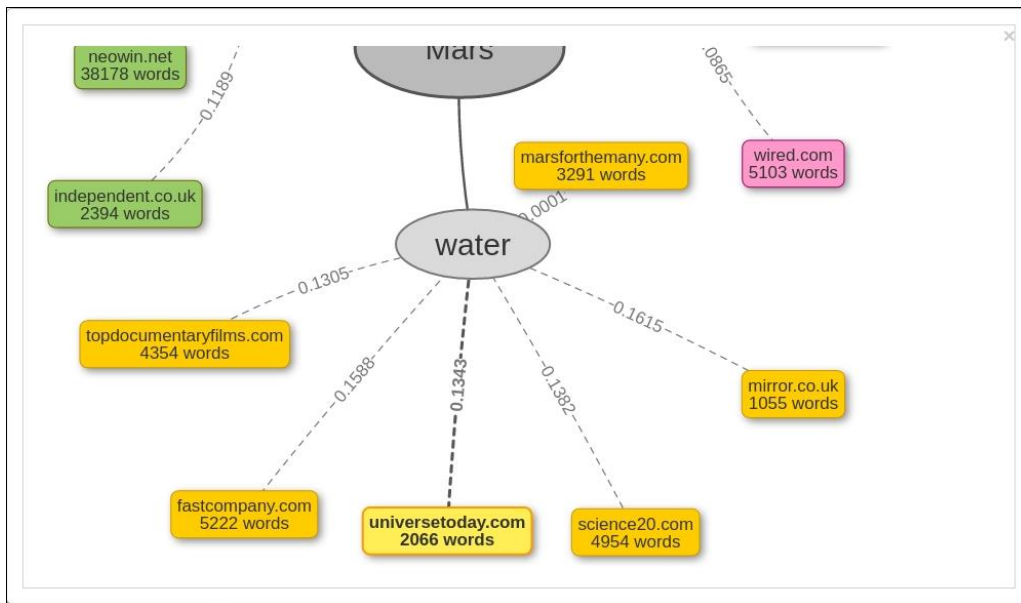
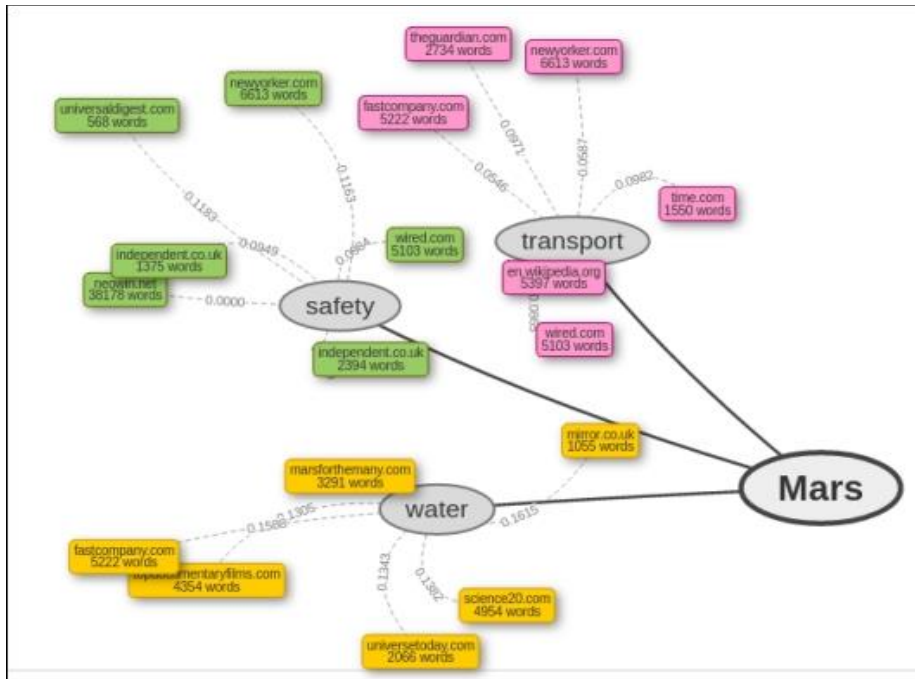


Processed words (corpus: 342 items - vocabulary: 37247 words) Calculate IDFs

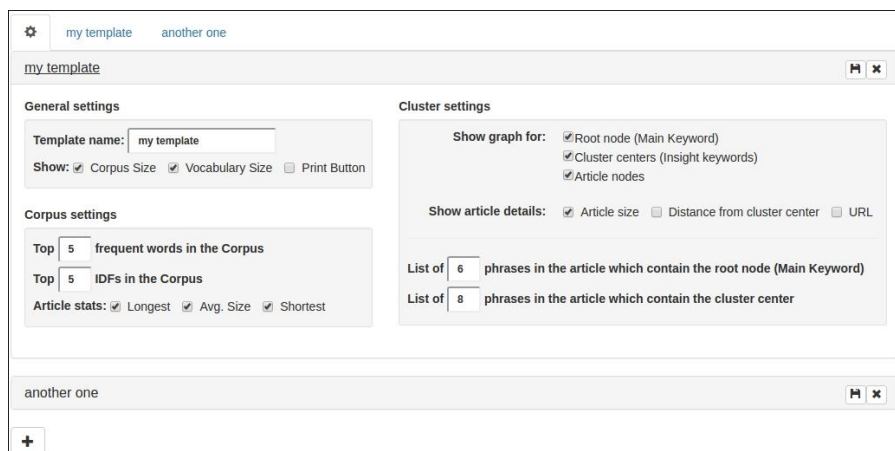
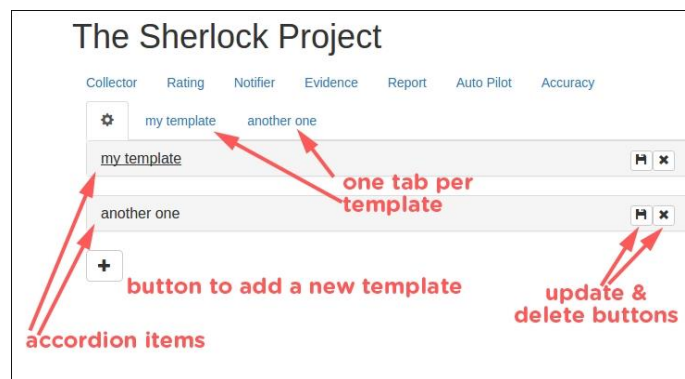
#	Words	Counts	Normalized	IDF	TF-IDF(C)	TF-IDF(N)
1	the	59	0.5811	0.2580	15.2209	0.1499
2	of	40	0.3940	0.2630	10.5214	0.1036
3	and	28	0.2758	0.2630	7.3650	0.0725
4	a	23	0.2265	0.3146	7.2350	0.0712
5	in	20	0.1970	0.3198	6.3964	0.0630
6	water	17	0.1674	2.3093	39.2586	0.3866
7	to	17	0.1674	0.2783	4.7311	0.0466
8	on	17	0.1674	0.4521	7.6852	0.0757
9	Mars	15	0.1477	1.2681	19.0216	0.1873
10	is	13	0.1280	0.3572	4.6430	0.0457







Chapter 7: The Report Generator Service - Creating Controllers to Set Report Template

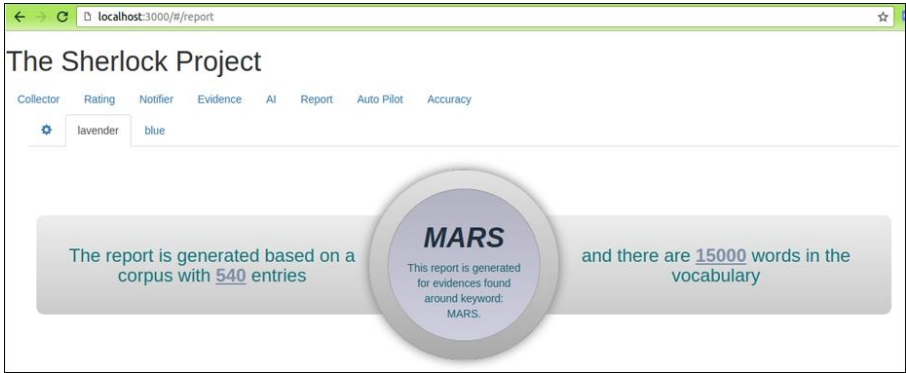


```

report.component.ts:44
Object {articleNode: Object, avgArticle: true,
  avgArticleSize: false, clusterNode: true, corpusSize:
  true...}
  ▶ $exists: function ()
    $key: "-KXtwqfDkwPJScB-1DQ"
  ▶ articleNode: Object
    avgArticle: true
    avgArticleSize: false
    clusterNode: true
    corpusSize: true
    longestArticle: true
    maxCenterPhrases: "2"
    maxFreqWords: "8"
    maxIDFs: "7"
    maxRootPhrases: "9"
    printButton: true
    rootNode: true
    shortestArticle: true
    templateName: "lavender"
    vocabularySize: true

```

The disturbing properties



Top 2 Frequent Words			Top 2 IDFs		
#	Words	Counts	#	Words	IDFs
1	w1	10	1	w1	0.4
2	w2	9	2	w2	0.3

The longest article in this corpus with 4765 words is located here:
<http://www.test.com>

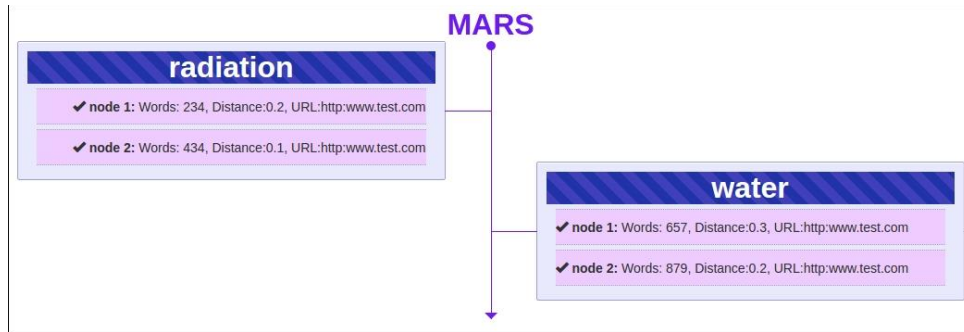
4765

The average article size in the corpus contains 759 words

759

The Shortest article in this corpus with 58 words can be found here:
<http://www.test.com>

58



radiation

✓ node 1: Article length:234 | Distance:0.2 | URL:http://www.test.com ✓ node 2: Article length:434 | Distance:0.1 | URL:http://www.test.com

These are some phrases in that article which contain the word MARS	These are some phrases in that article which contain the word radiation	These are some phrases in that article which contain the word MARS	These are some phrases in that article which contain the word radiation
mph1	kph1	mph1	kph1
mph2	kph2	mph2	kph2
mph3	kph3	mph3	kph3
mph4	kph4	mph4	kph4

water

✓ node 1: Article length:657 | Distance:0.3 | URL:http://www.test.com ✓ node 2: Article length:879 | Distance:0.2 | URL:http://www.test.com

These are some phrases in that article which contain the word MARS	These are some phrases in that article which contain the word water	These are some phrases in that article which contain the word MARS	These are some phrases in that article which contain the word water
mph1	kph1	mph1	kph1
mph2	kph2	mph2	kph2
mph3	kph3	mph3	kph3
mph4	kph4	mph4	kph4

Corpus settings

Top frequent words in the Corpus

Top IDFs in the Corpus

Article stats: Longest Avg. Size Shortest

Top 0 Frequent Words		
#	Words	Counts
● ● ●		

(a) waiting for response

Top 1 Frequent Words		
#	Words	Counts
1	value is not set	...

(b) config tab value is empty or zero

Top 2 Frequent Words		
#	Words	Counts
1	the	286
2	of	285

(c) response from Firebase

⚠ FIREBASE WARNING: Using an unspecified index. Consider adding ".indexOn": "doc_with_word" at /Evidence/Corpus/IDFs to your security rules for better performance [firebase.js:276](#)

⚠ FIREBASE WARNING: Using an unspecified index. Consider adding ".indexOn": "IDF" at /Evidence/Corpus/IDFs to your security rules for better performance [firebase.js:276](#)

Unpublished changes | PUBLISH | DISCARD | SIMULATOR

```

1 {
2   "rules": {
3     ".read": true, // "auth != null",
4     ".write": true,
5     "Notifier": {
6       "rated-news": {
7         ".index0n": ["rank"]
8       }
9     },
10    "Evidence": {
11      "Corpus": {
12        "IDFs": {
13          ".index0n": ["doc_with_word", "IDF"]
14        },
15        "Articles": {
16          ".index0n": ["bag_of_words"]
17        }
18      }
19    }
20  }
21 }

```

Top 7 Frequent Words			Top 5 IDFs		
#	Words	Counts	#	Words	IDFs
1	the	286	1	the	0.2571578
2	of	285	2	of	0.2621934
3	and	285	3	and	0.2621934

Depend on the corpus size, calculating article stats might takes a few minutes. Please be patient...

Top 7 Frequent Words			Top 5 IDFs		
#	Words	Counts	#	Words	IDFs
1	the	286	1	the	0.2571578
2	of	285	2	of	0.2621934
3	and	285	3	and	0.2621934
4	to	282	4	to	0.2774065
5	a	275	5	a	0.3135403
6	in	274			
7	is	267			

The longest article in this corpus with 250121 letters is located here:

<https://www.neowin.net/forum/topic/1258256...>

250121

The average article size in the corpus contains 5482 letters

5482

The Shortest article in this corpus with 5 letters can be found here:

<http://ancientsolarsystem.blogspot.com/...>

5

Top 150 Frequent Words			Top 150 IDFs		
#	Words	Counts	#	Words	IDFs
130	scientists	72	130	many	2.2322402
131	last	72	131	take	2.2322402
132	surface	71	132	during	2.2521398
133	during	71	133	see	2.2521398
134	see	71	134	surface	2.2521398
135	well	70	135	should	2.2723176
136	system	70	136	those	2.2723176

Here is the difference between word frequencies and IDFs


⚙️ my template 🖨️

my template

General settings

Template name:

Show: Corpus Size Vocabulary Size Print Button



Chapter 8: The Accuracy Manager Service - Putting It All Together

The Sherlock Project

Collector Rating Notifier Evidence Report Accuracy

Prevention

This is where we prevent incidents in our application

#	Description	Hits
1	Cure for article length problem evidence.service.ts : 77	7

Cure

This is where we cure incidents in our application

id	Description
-K_PGz-4kyg4p1Leuq_b	new cure
-K_PGziSD-d53wQRrEMI	Cure for article length problem

Cure

This is where we cure incidents in our application

id	Description
-K_PGz-4kyg4p1Leuq_b	new cure

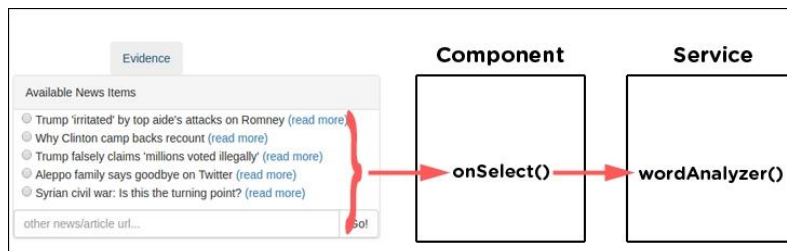
click the plus button to add a new entry for cure automatically

Cure

This is where we cure incidents in our application

id	Description
-K_PGz-4kyg4p1Leuq_b	Cure for article length problem

click/edit/enter the description field for changing it



Nominated keywords for corpus

water,radiation,transport

Mars

Fetch Articles For Corpus

The Sherlock Project

Collector Rating Notifier Evidence Report Accuracy

Prevention

This is where we prevent incidents in our application

#	Description	Hits
1	Cure for article length problem evidence.service.ts : 77	7

Cure +

This is where we cure incidents in our application

id	Description
-K_PGzISD-d53wQRrEMl	Cure for article length problem ✕

```

[Object]
  0: Object
    description: "Cure for article length problem"
    file: "evidence.service.ts"
    hits: 7
    id: "-K_PGzISD-d53wQRrEMl"
    line: 77
    variables: Array[7]
      0: Array[2]
        0: Object
          url: "http://www.accorhotels.com/gb/hotel-1273-mercure-rouen-champ-de-mars-hotel/index.shtml"
          __proto__: Object
        1: Object
          data: Object
            p: Array[62]
            __proto__: Object
          __proto__: Object
          length: 2
          __proto__: Array[0]
        1: Array[2]
        2: Array[2]
        3: Array[2]
        4: Array[2]
        5: Array[2]
        6: Array[2]
  
```

Unusual entries which were blocked
by prevention mechanism

