Application Design and Software Structure Report

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"Makeyournews: the new way of news!!"

Overview

The goal of the project will be to develop a website/application that permit to a user to organize and customize his/her own news feeder from a more than 1 sources.

MakeYourNews is the content reader built especially for power users who want to save time. Using a content reader helps you keep up with your top information sources - content comes straight to you, saving you the time to go and check every site on your own.

MakeYourNews give the possibilities to have directly and customized news about keywords, subject. And when you need to look up some past piece of content you liked, you can rely on the powerful and full archive of your favorite news.

Features

- More than one sources where gathering information
- Offline news reading
- Sharing the liked news
- Configure language / topic of the gathered information

The REST API Specification

The web-application, offer a simple RESTful API, that permit to customize the search for news information, in atom xml format and permit to customize the label of the user interface, so the final user have a complete user experience in his/her own language.

The endpoint of the RESTful api:

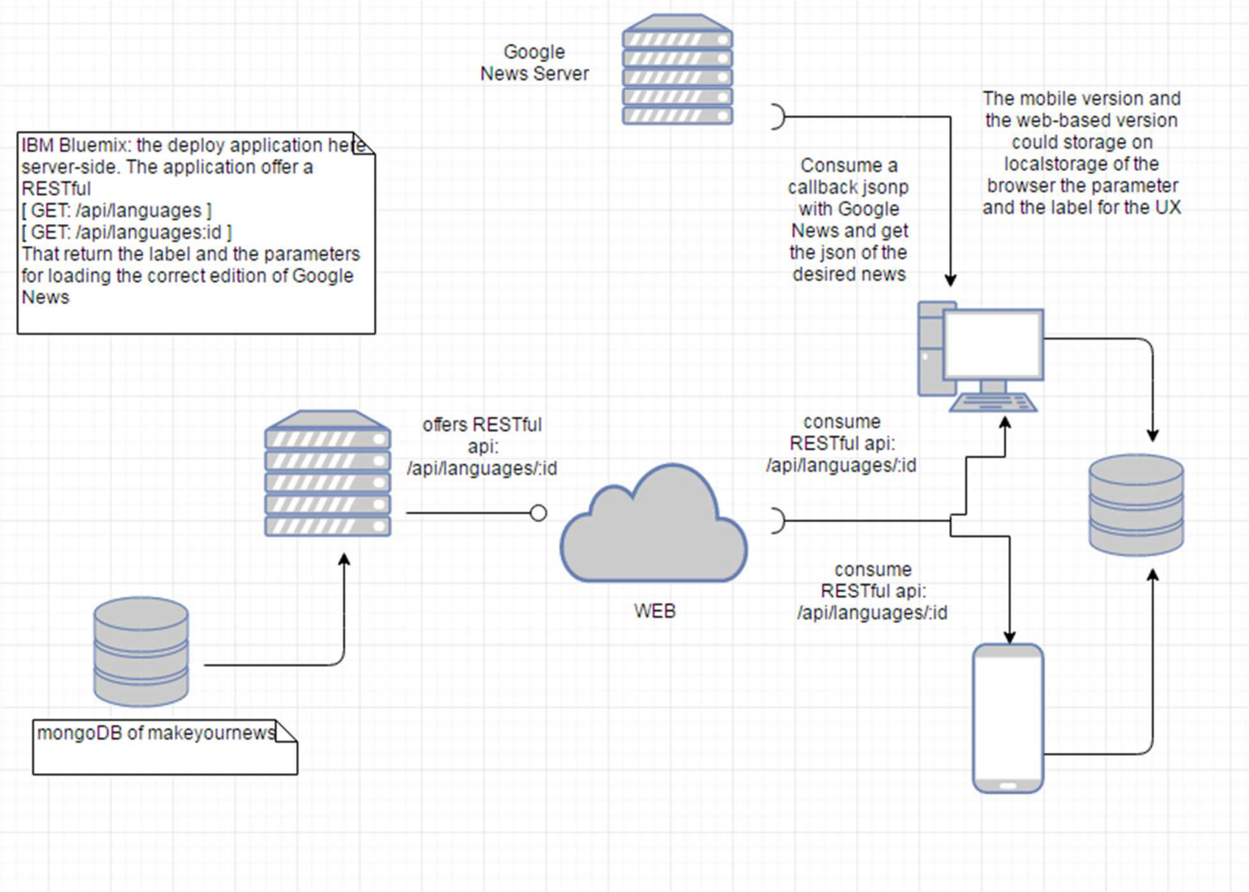
1. GET: [/api/languages] return a json format flow
2. GET: [/api/languages/:id] return a json forma flow select by and [:id]

The REST api, don’t offer any other CRUD operation, because the behavior of the user’s action will be only setting from a predefine list of languages the desired edition to look at. So we only offer GET operation.

The information request via GET call are store in a mongoDB and have the following save format:

Front-end Architecture Design

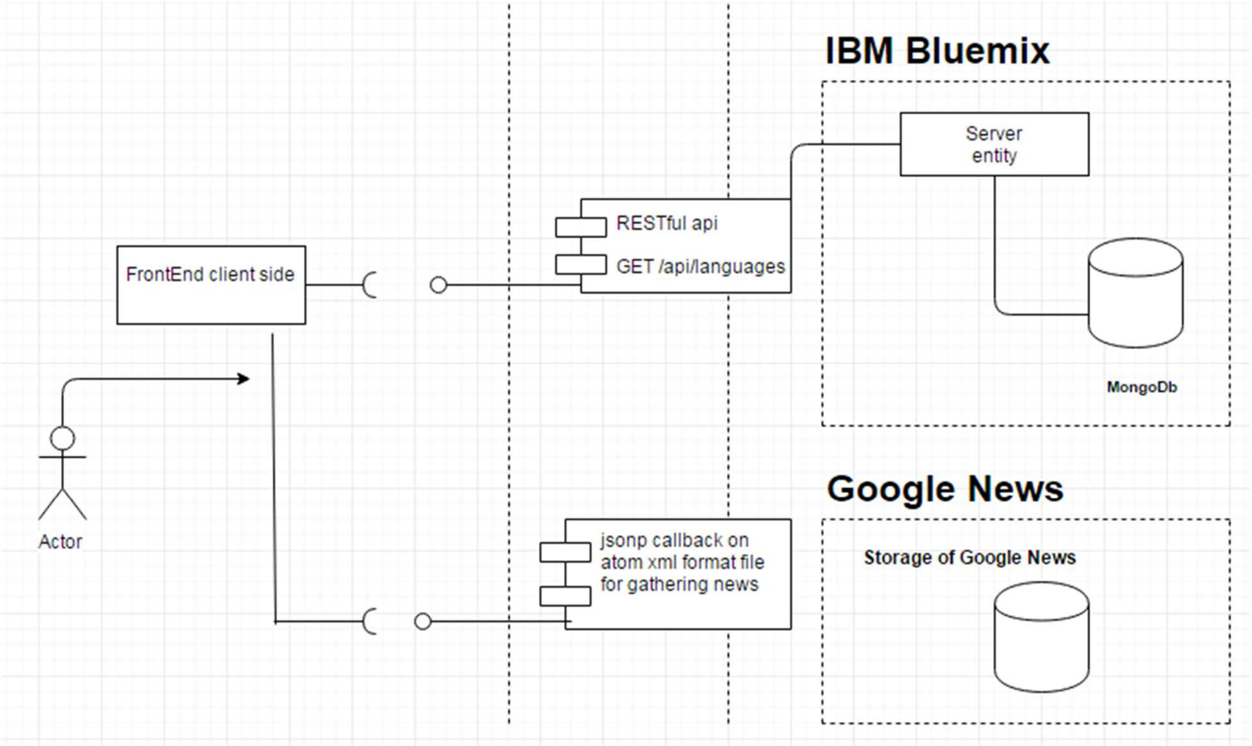
The following picture, show a simple view of the architecture and the structure of the web-application and mobile application:


Google News Server
IBM Bluemix: the deploy application here server-side. The application offer a RESTful [GET: /api/languages] [GET: /api/languages:id] That return the label and the parameters for loading the correct edition of Google News
Consume a callback jsonp with Google News and get the json of the desired news
The mobile version and the web-based version could storage on localstorage of the browser the parameter and the label for the UX
offers RESTful api: /api/languages/:id
consume RESTful api: /api/languages/:id
WEB
consume RESTful api: /api/languages/:id
mongoDB of makeyournews

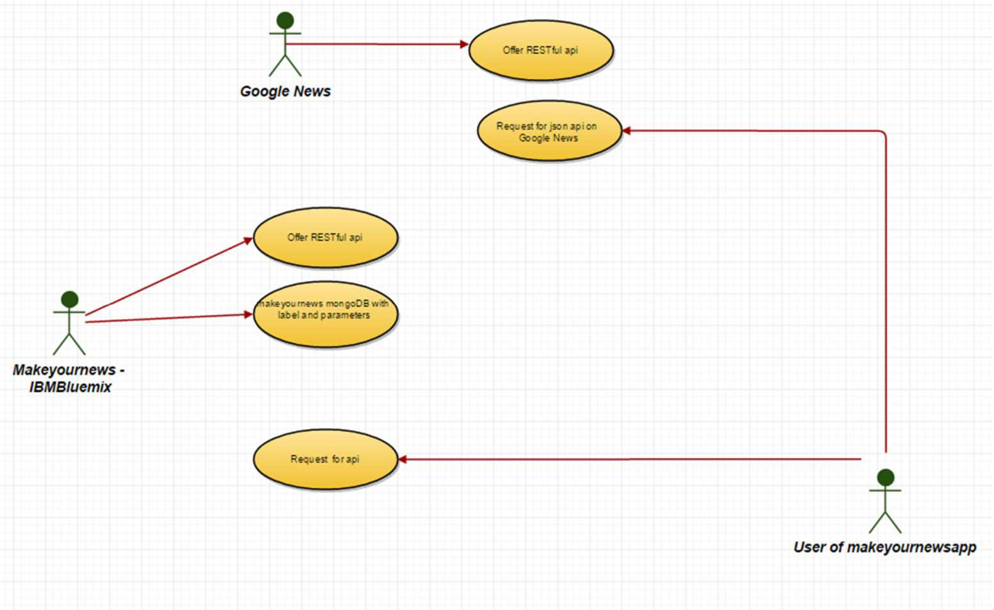
As show we can recognize the 3 principal actors:

1. IBM Bluemix “makeyournews” the server side application
2. Google News Server
3. The client (mobile and web-based) that utilize this architecture

The next image show, in a more formal way, with an UML-Style design, the structure of the web-based and mobile application:



At end I will include a use-case diagram about the basic interaction on the application:


Google News
Offer RESTful api
Request for json api on Google News
Offer RESTful api
makeyournews mongoDB with label and parameters
Makeyournews - IBMBluemix
Request for api
User of makeyournewsapp

Communication

The format of the message, exchange between front-end and back-end are in JSON format as describe below:

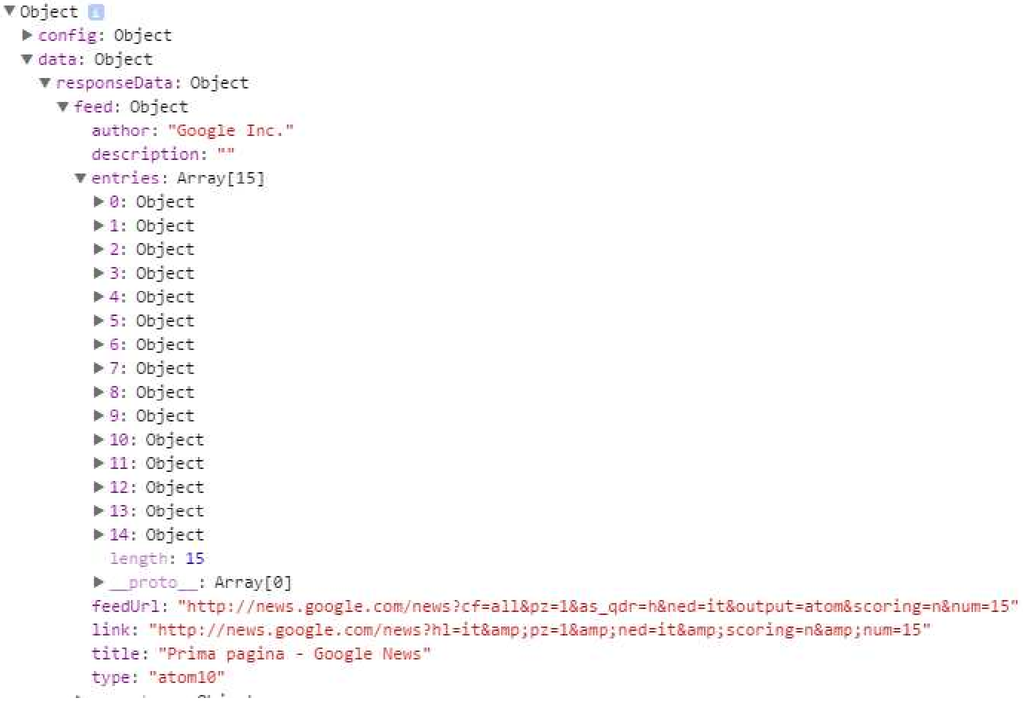
```
[{
 "_id":"57482954bb2e7674137a449f",      -- ObjectID of mongoDB
"label":"Argentina",                    -- label for populate the option box on header bar
"language":"es_ar",                     -- language of the edition choose
"ned":"es_ar",                          -- parameter for query string on Google News
"hl":"es",                              -- parameter for query string on Google News
"title":"Noticias",                    -- Label in languages for the desire edition
"topic1":"Noticias destacadas",        -- Label in languages for the desire edition
"topic2":"Internacional",              -- Label in languages for the desire edition
"active":true,
"__v":0
} ……….. ]
```

The structure it’s an example because the “GET: /api/languages” return and array and above I included only an element of the array.

The other information that will use the application come from atom xml file from Google News. In particular, a possible version of the file it’s viewable at:

https://news.google.com/news?cf=all&hl=it&pz=1&ned=it&output=atom

where “output=atom” parameter in query string specify the format of the information that we request to Google News. When the application perform the JSON_CALLBACK callback to Google News we have to check and manage the following structure:



```
▼Object
  ▶config: Object
  ▼data: Object
    ▼responseData: Object
      ▼feed: Object
         author: "Google Inc."
         description: ""
        ▼entries: Array[15]
          ▶0: Object
          ▶1: Object
          ▶2: Object
          ▶3: Object
          ▶4: Object
          ▶5: Object
          ▶6: Object
          ▶7: Object
          ▶8: Object
          ▶9: Object
          ▶10: Object
          ▶11: Object
          ▶12: Object
          ▶13: Object
          ▶14: Object
            length: 15
          ▶__proto__: Array[0]
         feedUrl: "http://news.google.com/news?cf=all&pz=1&as_qdr=h&ned=it&output=atom&scoring=n&num=15"
         link: "http://news.google.com/news?hl=it&amp;pz=1&amp;ned=it&amp;scoring=n&amp;num=15"
         title: "Prima pagina - Google News"
         type: "atom10"
```

This is a response in JSON format and the data we will display are in:

response.data.responseData.feed.entries

Conclusion

The result excepted from the project will be showing in a well format news from Google News Channel from all over the world in the current languages of a nations.
The target user can with only one server request (consuming RESTful API) perform a customization of the language and the news will be available to reading. The response from Google will be save in the local storage of the browser so if the user lost connection to the net could instead reading, at least, some abstract.

References

Material

- https://news.google.com/news?pz=1&hl=it&tab=nn
- https://support.google.com/news/answer/40796?hl=it&ref_topic=2428792
- https://productforums.google.com/forum/#!forum/news-it
- http://thinktostart.com/creating-custom-rss-feeds-with-google/
- http://www.makeuseof.com/tag/5-interesting-ways-google-news-rss-feeds/

- https://en.wikipedia.org/wiki/OPML
- https://en.wikipedia.org/wiki/RSS

Similar application

- http://www.inoreader.com/
- http://noinnion.com/greader/
- https://play.google.com/store/apps/details?id=com.madsvyat.simplerssreader
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- https://tt-rss.org/gitlab/fox/tt-rss/wikis/home