

MUBASHAR

your *One-Stop News* source

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**A web services project submitted in fulfillment
of the helpful web application requirements
utilizing APIs
from the API directory on Programmable Web**



Submitted to
Dr. Brahim Medjahed

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1. Introduction

News is an everyday vital piece of information that readers look forward to every day. As countries intermingle more and more with the continuous changing nature of politics, the influence of a foreign country upon another increase, and many interested readers flock to news platforms all the time to stay up to date with the news agenda.

Mubashar provides readers a simple friendly platform that brings them the latest news they seek from around the world, and allows them to share it to their contacts through two distinct social media web services. Users can enjoy a collection of up to 20 articles from different news sources through the news web service implemented in this application, with the help of the countries search web service.

2. Architecture

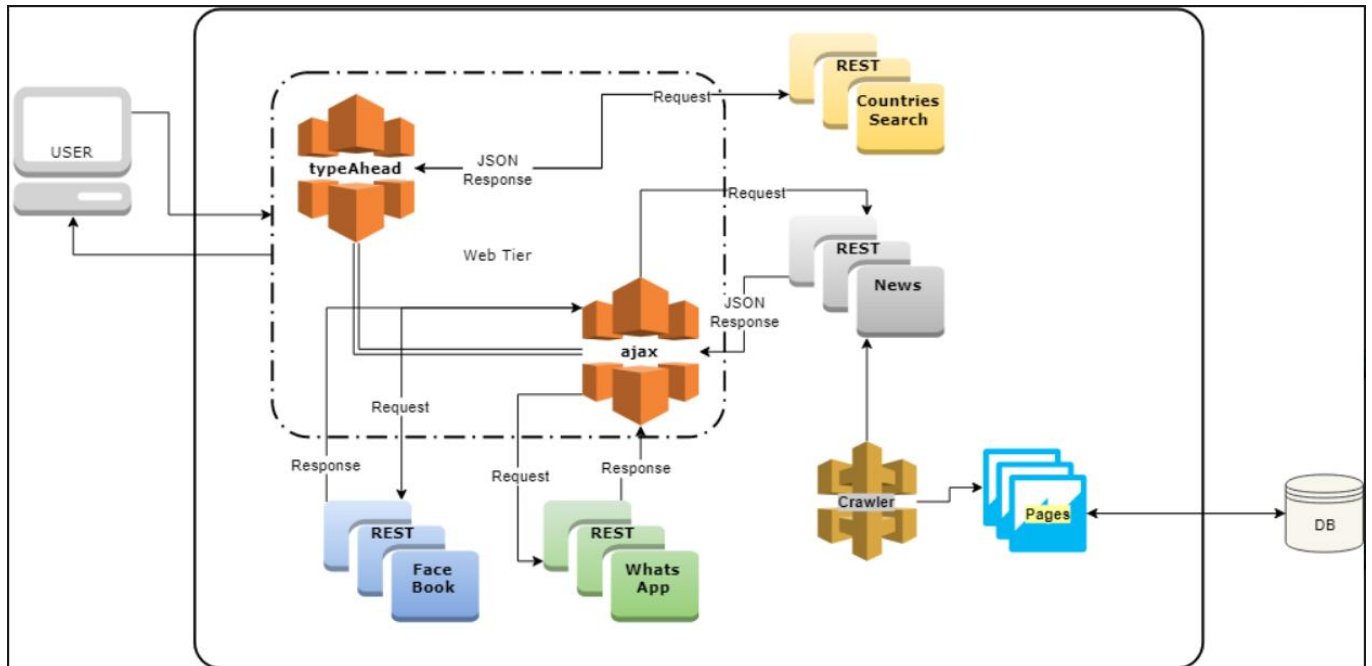


Figure 1 Mubashar Architecture Diagram

Figure 1 shows the architecture of the application. The web application communicates with 4 different web services to provide the desirable user interaction with Mubashar. Typeahead is a feature that enables users to continue typing regardless of a service operation. If the service is busy at the time, it will be called to handle this later. Ajax, which is short for “Asynchronous JavaScript And XMLHttpRequest” is a web technique that exchanges data with a server, and updates a web page without reloading the page. The REST News API service sends the JSON response to Ajax which converts it to the JavaScript object to display the news articles/pages fetched from the news documents database through the crawler. The web crawler is an internet bot that browses the world

wide web for web indexing, which in this case here, it indexes news articles from over 5,000 news sources and blogs.

3. About the Web Services

3.1 REST Countries API

REST Countries provides a simple API for getting information about the world's nations via REST calls. These calls allow users to retrieve all available countries or to retrieve a given country's currency, capital city, calling code, region, sub-region, ISO 639-1 language, name, or country code.

The REST Countries API was used to append the country code received through the typeahead user search into the parameters of the news API URL, which tells it to grab articles from that selected country.

3.2 News API

News API is a simple HTTP REST API for searching and retrieving live articles from all over the web. An API key is needed to use the API - this is a unique key that identifies the user requests. To get one for free non-commercial use, registration is required.

The News API crawls and indexes news articles from over 5,000 news sources and sends the JSON response to Ajax which converts it to the JavaScript object to display the news articles/pages.

3.3 Facebook Social Plugins API

Facebook Social Plugins make a user's friend's social activity available via API. The user can see what their friends have liked, commented on or shared on sites across the web. Social Plugins are a basic method of accessing data on Facebook and are specifically designed so none of the data is shared with the sites on which they appear.

Mubashar provides the user a method to share news articles for discussion with friends, family, or any other contacts.

3.4 WhatsApp API

WhatsApp is a popular messaging app that provides a social communication platform between users from all over the world. Like the Facebook API, this WhatsApp sharing API was added as another method to share articles for more user convenience.

4. Execution Process

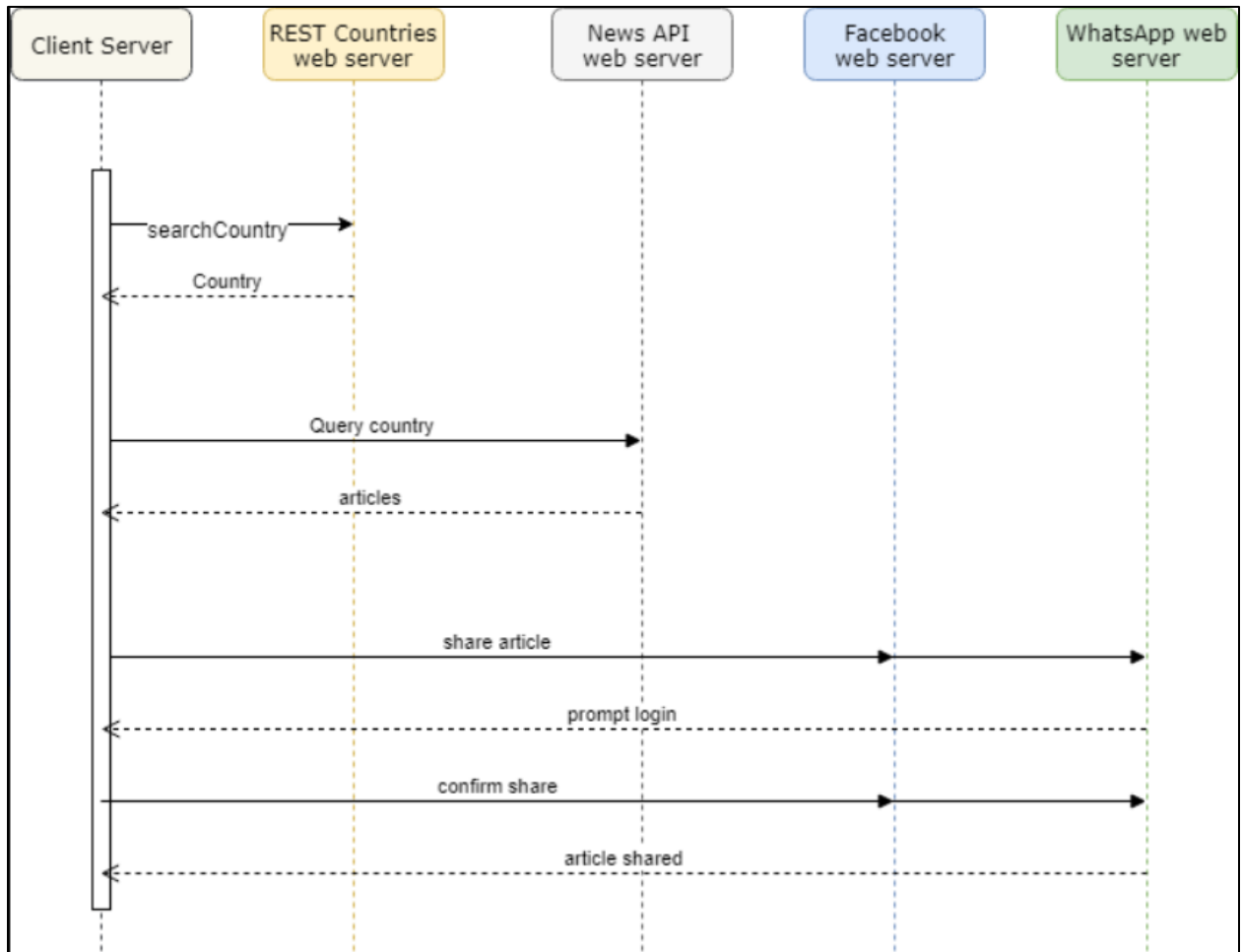


Figure 2 Mubashar Sequence Diagram

Figure 2 explains the sequencing of events that occurs between the client and web services behavior.

1. The user types in a country name to bring up suggestions of countries through the REST Countries API and chooses country to fetch articles for.
2. The country is passed back to the JavaScript query parameter.
3. The client server sends a request to the News API to get articles for the query's country.
4. The News API returns the REST response in JSON, sending the articles in the articles array.
5. The JSON response is converted to JavaScript object
6. The response is sent to the browser for the end user
7. User can decide to read the full article, or simply share it through Facebook/WhatsApp

8. If user decides to read more of the article, they are indexed to the main article source page where they can view full article.
9. As for sharing the articles, user may or may not be prompted to login, and then they will be directed to the platform's sharing widget.

5. Code Segments

The code segments are shown in the following screenshots. A more thorough understanding is given as well for how the JSON message containing the articles can be seen using a software called POSTMAN.

```

$(document).ready(function() {

    $(document).on("scroll",function() {
        var scroll = $(window).scrollTop();
        if(scroll > 900)
        {
            $("#btnGoTop").css("display","inline");
        }else{
            $("#btnGoTop").css("display","none");
        }
    });

    $("#btnGoTop").on("click",function(e) {
        e.preventDefault();
        $("html, body").animate({ scrollTop: 0 }, 'slow');
    });

    (function(d, s, id) {
        var js, fjs = d.getElementsByTagName(s)[0];
        if (d.getElementById(id)) return;
        js = d.createElement(s); js.id = id;
        js.src = 'https://connect.facebook.net/en_US/sdk.js#xfbml=1&ve';
        fjs.parentNode.insertBefore(js, fjs);
    }(document, 'script', 'facebook-jssdk'));

    searchCountry('us','United States of America');

    $.typeahead({
        input: "#countriesList",
        order: "desc",
        maxItem: 20,
        dynamic: true,
        display:"name",
        source: {
            country: {
                ajax: {
                    url: "https://restcountries.eu/rest/v2/name/{{query}}"
                }
            }
        }
    });
});

```

This code here is for the HTML doc display, starting with the scrolling button function

This is the default web page search, set to USA

This is the max COUNTRIES suggestions that can be displayed in the search bar

This is the REST Countries API

Figure 3 apisConsume JavaScript - REST Countries API

In order to test the route for the news API, Postman was used. Postman is a REST client designed to support the API developer by providing a user interface to send requests and save responses. Using Postman, I tested the news API response using the following link:

<https://newsapi.org/v2/top-headlines?country=us&apiKey=67a42360ec12449fb318d49d6beb68f6>

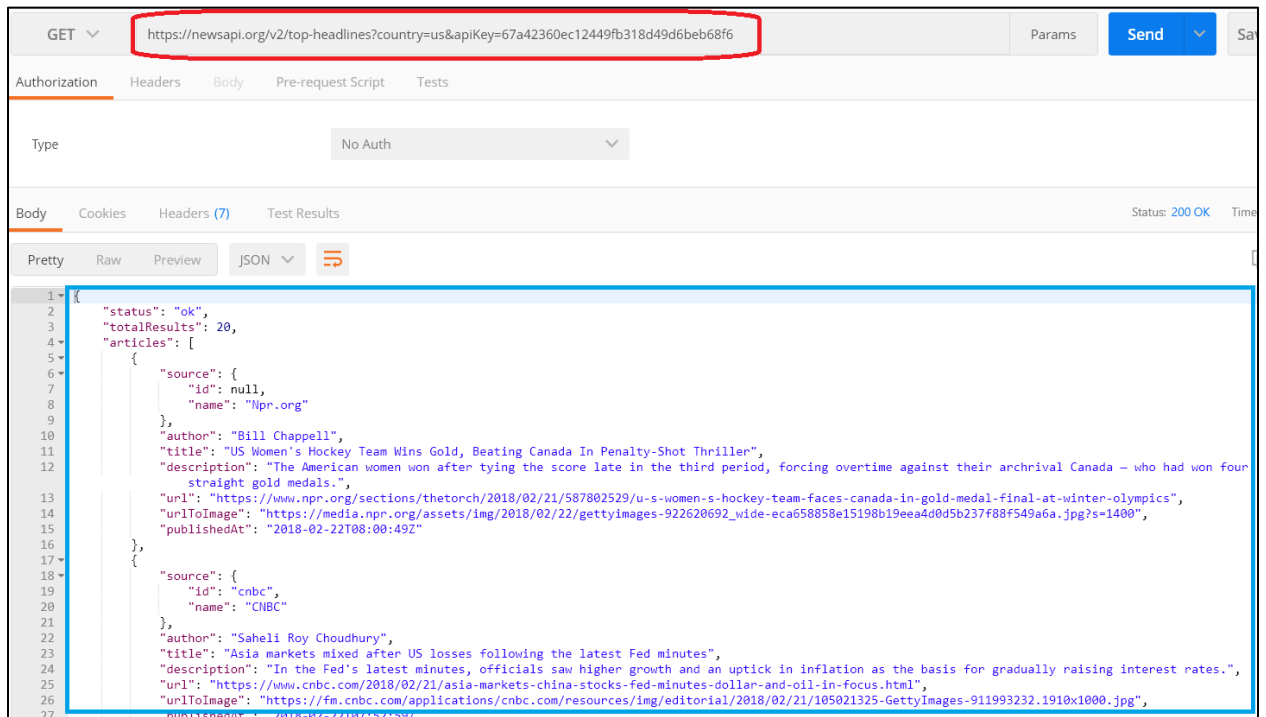


Figure 4 POSTMAN

As can be seen, the **red box** is the request URL, which in this case has 2 parameters:

- Country: the 2-code for the country
- apiKey: your key from the API.

The **blue box** is the response from the API and this is the JSON.

We are going to focus on it:



Figure 5 News API JSON Response - articles array

In the example above, the element article is a JSON Array which means it is like an Array in any language, meaning if we want to access any element of this array, it would be: article [0], article [1], article [2] article[article.length].

In this case, I'm verifying if "articles" is an empty Array.

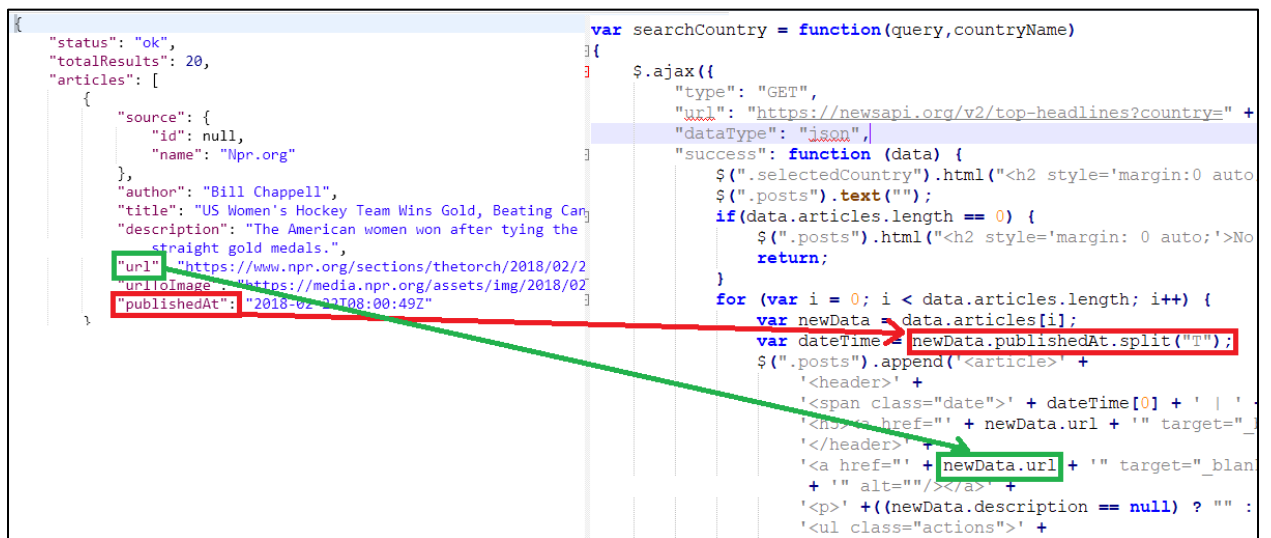


Figure 6 News API JSON Response - accessing and saving elements

But in the green box, I'm accessing the elements for this and saving that value in a variable.

In this way, I can access to any JSON Object (element from the JSON Array) by its key.

And finally, the following are the Facebook and WhatsApp API implementations:


```

    '<a target="_blank" href="https://www.facebook.com/sharer/sharer.php?app_id=412873329046931&id_directed_site=0&adk=joeyjme" + encodeURIComponent(newData.url
    ) + "&display=popup&ref=plugin&src=share_button" class="button button-fb">' +
    '<i class="fa fa-facebook"></i> Share' +
    '</a>' +
    '</li>' +
    '<li>' +
    '<a href="https://api.whatsapp.com/send?text=" + encodeURIComponent(newData.title + '-' + newData.url ) + '" data-action="share/whatsapp/share"
    target="_blank" class="button button-whatsapp" >' +
    '<i class="fa fa-whatsapp"></i> Share' +
    '</a>' +
    '</li>' +
    '</ul>' +
    '<li><a href="" + newData.url + '" target="_blank" class="button">Read more...</a></li>' +
    '</ul>' +
    '</article>');
  }
  FB.XFBML.parse() ;
}

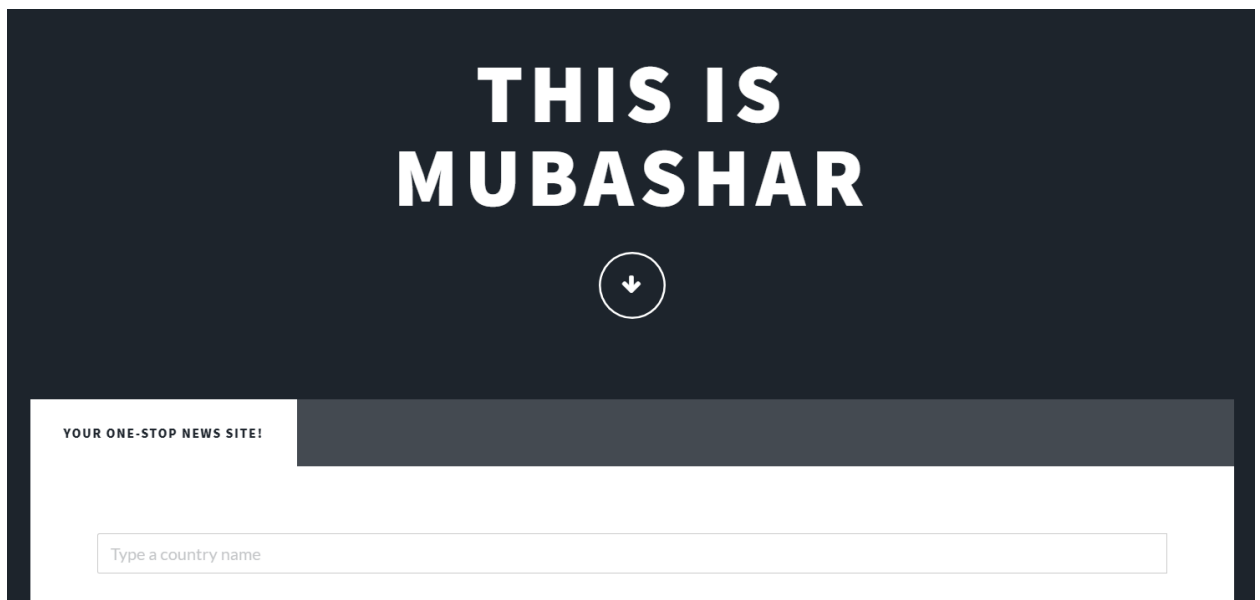
```

Figure 7 The Facebook and WhatsApp API's

The FB.XFBML.parse() parses and renders XFBML markup in the document. XFBML enables incorporation of FBML into websites and IFrame applications. FBML stands for Facebook Markup Language. It's an extension to XHTML used by Facebook applications and sites utilizing the Facebook JavaScript SDK. All of the tags are in the "fb" namespace and look like "<fb:[tag]>" where [tag] is the name of the tag.

6. Demo

Homepage of Mubashar:



The user clicks either on the arrow or simply scrolls a little bit down to explore more of the page and begin the search for news from a country of choice (if applicable). The homepage is defaulted to United States latest news.

Thailand

2018-02-22 | 15:58:05

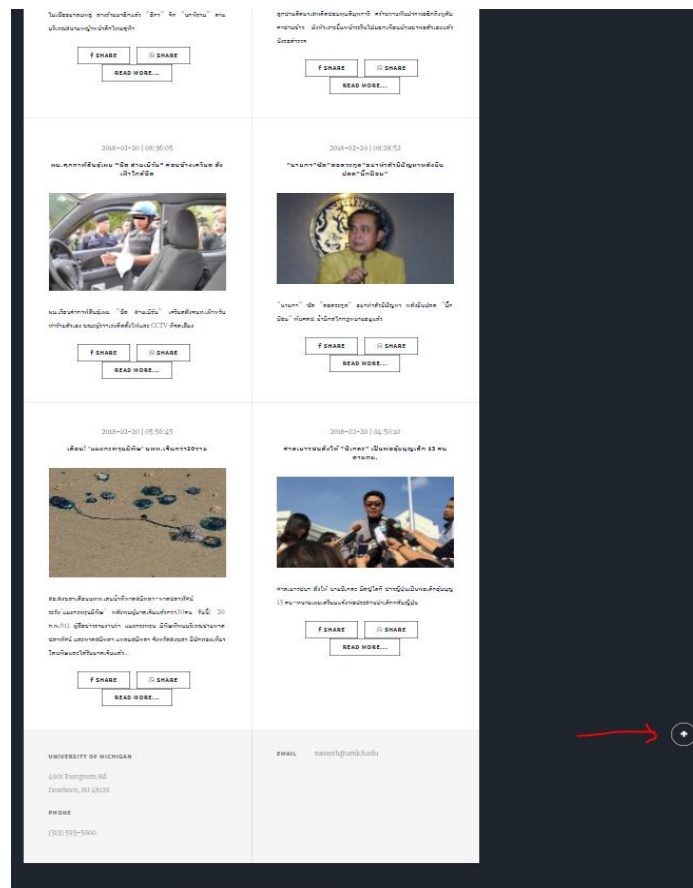
เปิด 14 รายชื่อ! ที่ผ่านการสรรหา กสทช.ชุดใหม่

2018-02-22 | 14:54:00

มีพริก! บ่อนนอกปรับสระเกษเป็นรองครั้งแรก-ชี้เหตุผลทำไม
เฮสตราด้าเป็นต่อ

uments/Notepad++/HTML/mubashar/index.html#

20 news articles are displayed.

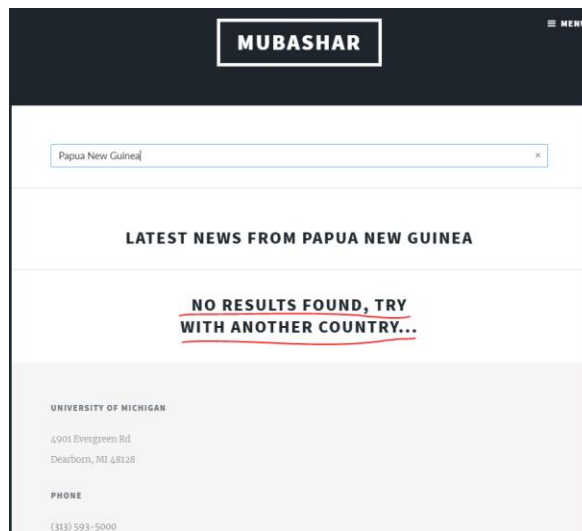


The user can be offset to the very top with the Go-Top button at the side if desired as shown pointed by the red arrow.

The user can read the article from its origin source by clicking on the title, picture, or the “Read More” button. The ability to share the results through Facebook or even WhatsApp is available as well as shown.



Sometimes, if news isn't available through the API, this error message is displayed:

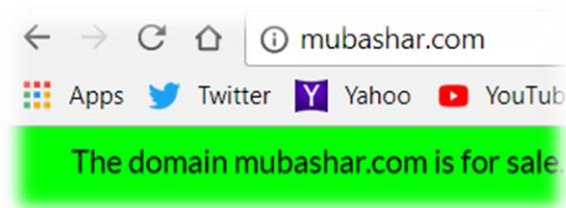


7. Conclusion

Mubashar presents a simple fluid interface that allows users to access articles collected from all over the world from any country desired (contingent to availability). It's a news enthusiast's one stop site for diverse news powered by the News API web service. The interaction starts with searching through the country lists via the REST Countries API in the search bar, which generates a list of ISO 3166-1 2-letter or 3-letter country codes and appends it to the news query variable in the News API URL to fetch the news articles from that selected country.

Mubashar also allows users to share these articles via Facebook or WhatsApp social plugins APIs, encouraging a social interaction between the user and others throughout the world.

As a fun fact, Mubashar means "current" or "latest", a name fitting of this web application features. Even better, the domain name is not taken yet, so with that, I plan to host this application online some time before the name is taken!



8. References

- REST Countries API: <https://www.programmableweb.com/api/rest-countries>
- News API: <https://www.programmableweb.com/api/news>
- Facebook API: <https://www.programmableweb.com/api/facebook-social-plugins>
 - XFBML: <http://fbdevwiki.com/wiki/XFBML>
- WhatsApp API: <https://api.whatsapp.com/send>
- Response POSTMAN: <https://chrome.google.com/webstore/detail/postman/fhbjgbiflinjbdgggehcddbcnccdddomop?hl=en>
- Web Design
 - HTML5
 - Bootstrap: <https://getbootstrap.com>
 - Top/Down button: <http://fontawesome.io>
 - jQuery: <https://jquery.org/>
 - Scrolling effects: <https://github.com/ajlkn/jquery.scrollex>
 - Skel (Responsiveness framework): <https://github.com/ajlkn/skel>
 - Typeahead: <http://www.runningcoder.org/jquerytypeahead/>
 - jQuery Typeahead Search
 - <http://www.runningcoder.org/jquerytypeahead/>