

# KIT 405 Tutorial 4

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For the development of Web API, you can choose any your familiar IDE for HTML and PHP programming.

## Learning Objective

Learn how to use Place API (you can choose Google API or Baidu API) and Bing News API

## Tutorial Tasks

### Task 1: Google Place API Demo

1. Create your account for google. Your username should be in the following format: username.405



#### Create your Google Account

First name Wenli	Last name Yang
Username wenli.405 @gmail.com	
You can use letters, numbers & periods	
<a href="#">Use my current email address instead</a>	
Password .....	Confirm .....
Use 8 or more characters with a mix of letters, numbers & symbols	

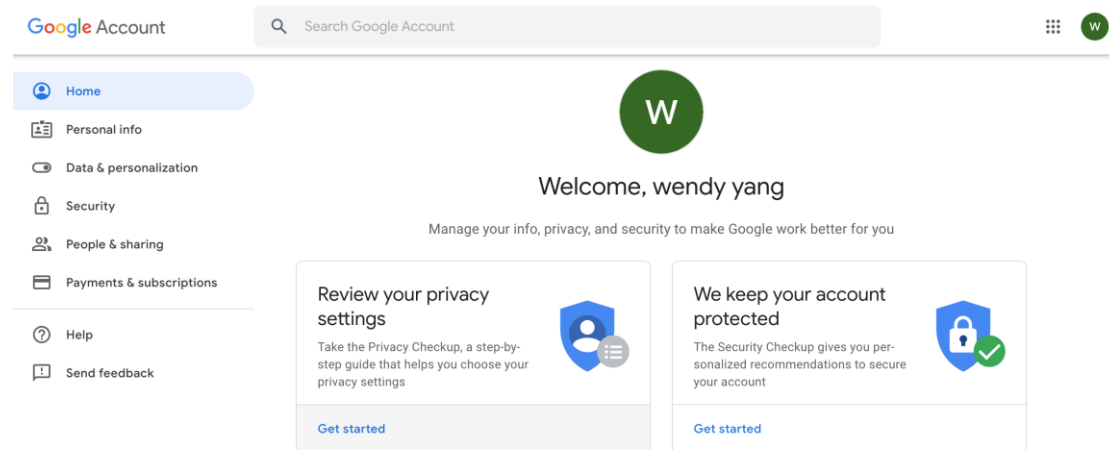


One account. All of Google working for you.

[Sign in instead](#)

Next

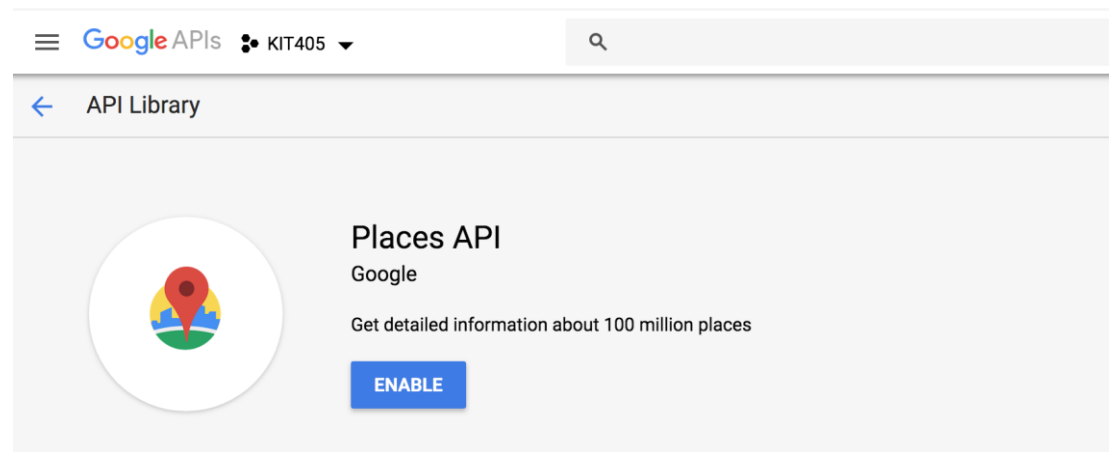
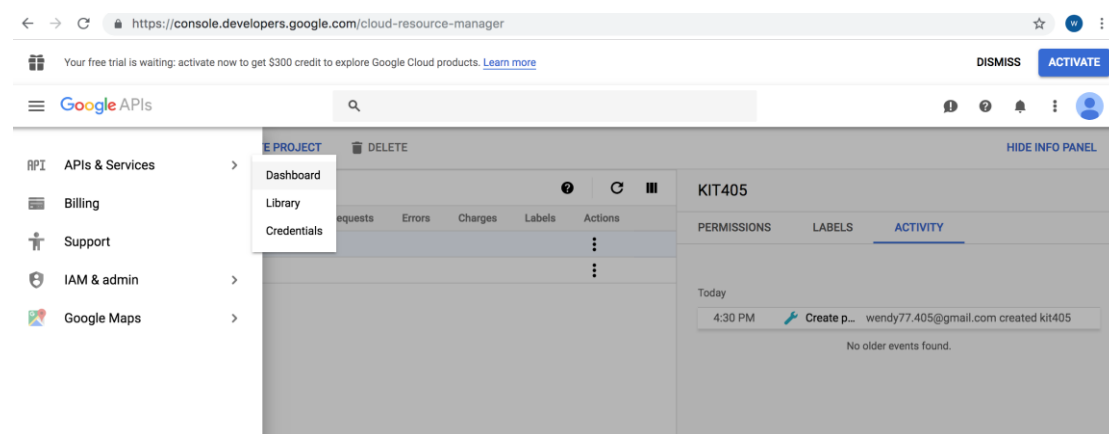
2. Follow the instructions, when you see the following page, it means your account has been created successfully.

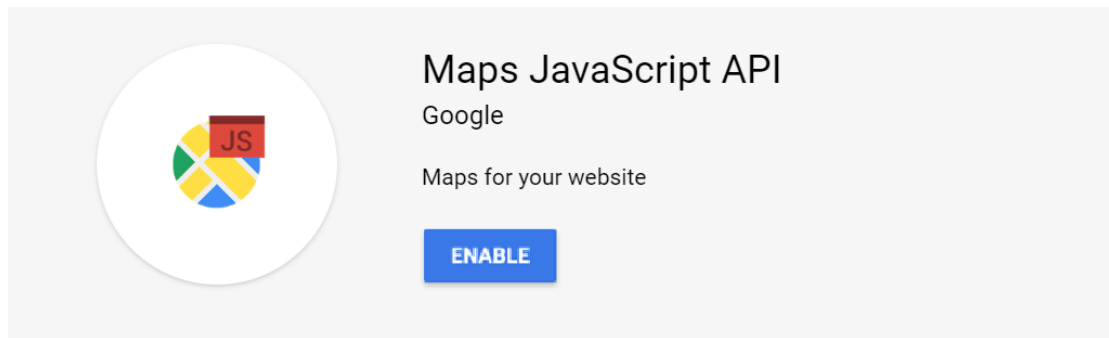


### 3. Create the new project

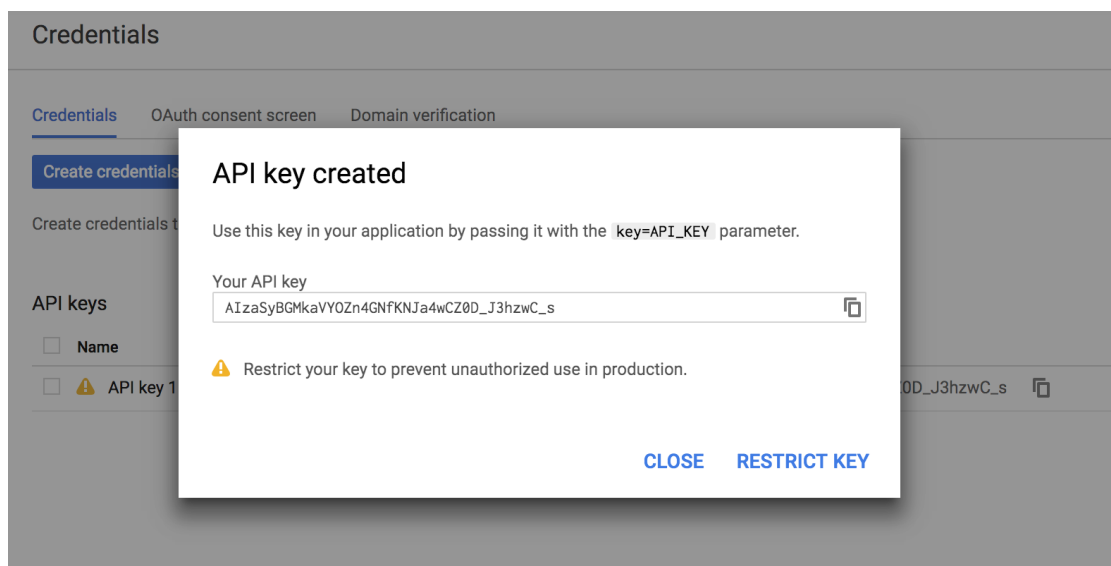
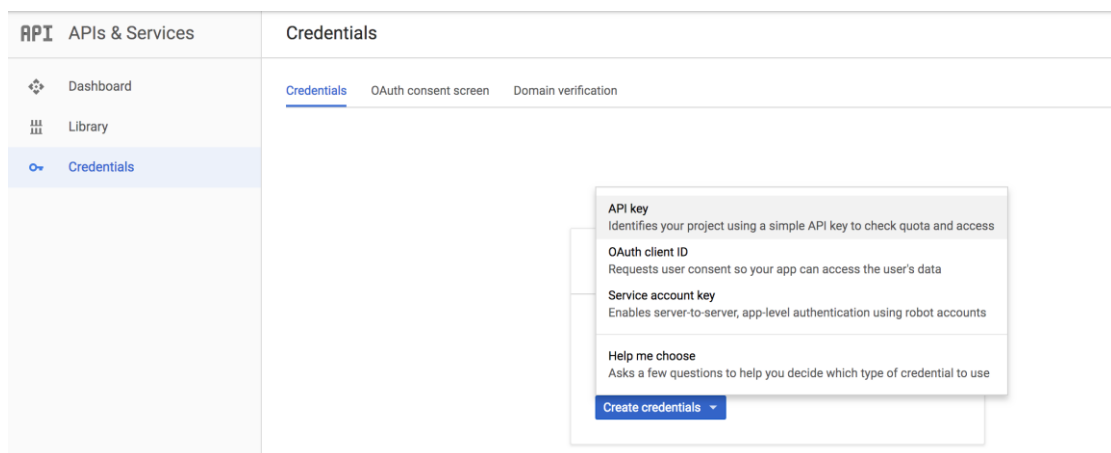
- <https://console.developers.google.com/project>
- Project name should be KIT405

### 4. Choose the API & Services, and click Library, then choose the API you will use( make it "ENABLE").





5. Click Credentials and select API key to get your API key.



That is the API key you need to remember when you want to access to the Google APIs.

6. Restrict the API key, click your create API key, set the restrictions:

API Keys

<input type="checkbox"/>	Name	Creation date ↓	Restrictions	Key	
<input type="checkbox"/>	✓ API key 2	Mar 17, 2021	2 APIs	AIzaSyCpcK...aahsEk1lLQ	
<input type="checkbox"/>	✓ API key 1	Mar 16, 2021	4 APIs	AIzaSyDSro...e0weA09ygM	

## 1) Application restrictions

**Application restrictions**

An application restriction controls which websites, IP addresses, or applications can use your API key. You can set one application restriction per key.

☒ None  
☐ HTTP referrers (web sites)  
☐ IP addresses (web servers, cron jobs, etc.)  
☐ Android apps  
☐ iOS apps

## 2) API restrictions

**API restrictions**

API restrictions specify the enabled APIs that this key can call

☐ Don't restrict key  
This key can call any API  
☒ Restrict key

☰ |Type to filter

☐ Gmail API  
☐ Google Calendar API  
☒ Maps JavaScript API  
☒ Places API

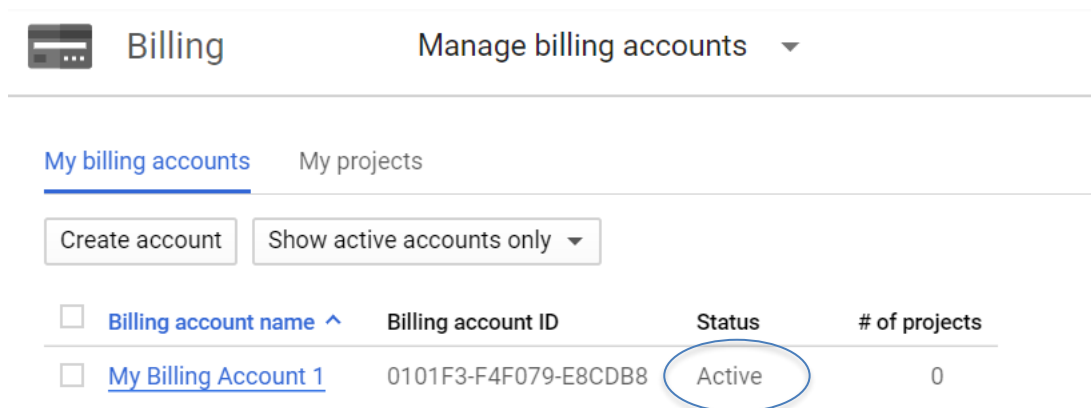
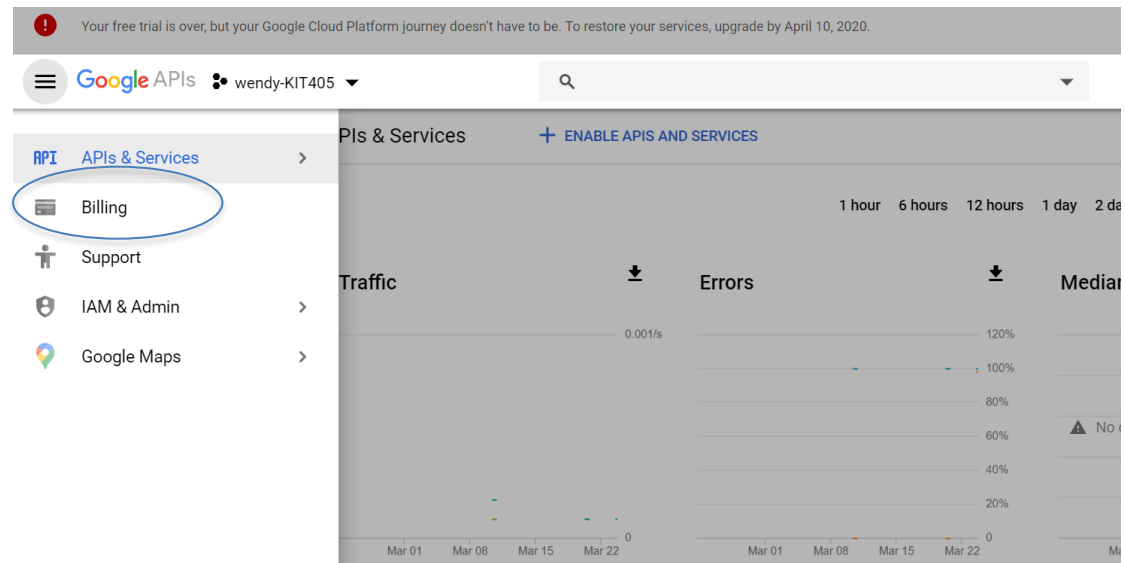
CANCEL OK

- Select Restrict key.
- Click Select APIs and select Places API and Maps JavaScript API. (If the Places and Maps JavaScript API are not listed, you need to enable it.)
- Click SAVE.

**Note:** It should wait 5 minutes to set successfully.

## 7. Billing management

Select Billing—>Manage Billing account, to check the status should be “Active”, if not, click “create account” to set it active.



Note: this step is becoming necessary to use Google API, however, you don't need to pay if you follow the limitations. (<100,000 per month)  
<https://developers.google.com/maps/billing/gmp-billing>

## 8. Place searches

```
// This example requires the Places library. Include the libraries=places
// parameter when you first load the API. For example:
// <script
src="https://maps.googleapis.com/maps/api/js?key=YOUR_API_KEY&libraries=places">

<!DOCTYPE html>
<html>
<head>
<title>Place searches</title>
<meta name="viewport" content="initial-scale=1.0, user-scalable=no">
<meta charset="utf-8">
<style>
html, body, #map-canvas {
height: 100%;
```

```

    margin: 0px;
    padding: 0px
  }
</style>
<script src="https://maps.googleapis.com/maps/api/js?key=You_API_KEY
&libraries=places"></script>
<script>
var map;
var infowindow;

function initialize() {
  var city = new google.maps.LatLng(-42.882391,147.328591);

  map = new google.maps.Map(document.getElementById('map-canvas'), {
    center: city,
    zoom: 15
  });

  var request = {
    location: city,
    radius: 1000,
    types: ['restaurant']
  };
  infowindow = new google.maps.InfoWindow();
  var service = new google.maps.places.PlacesService(map);
  service.nearbySearch(request, callback);
}

function callback(results, status) {
  if (status == google.maps.places.PlacesServiceStatus.OK) {
    for (var i = 0; i < results.length; i++) {
      createMarker(results[i]);
    }
  }
}

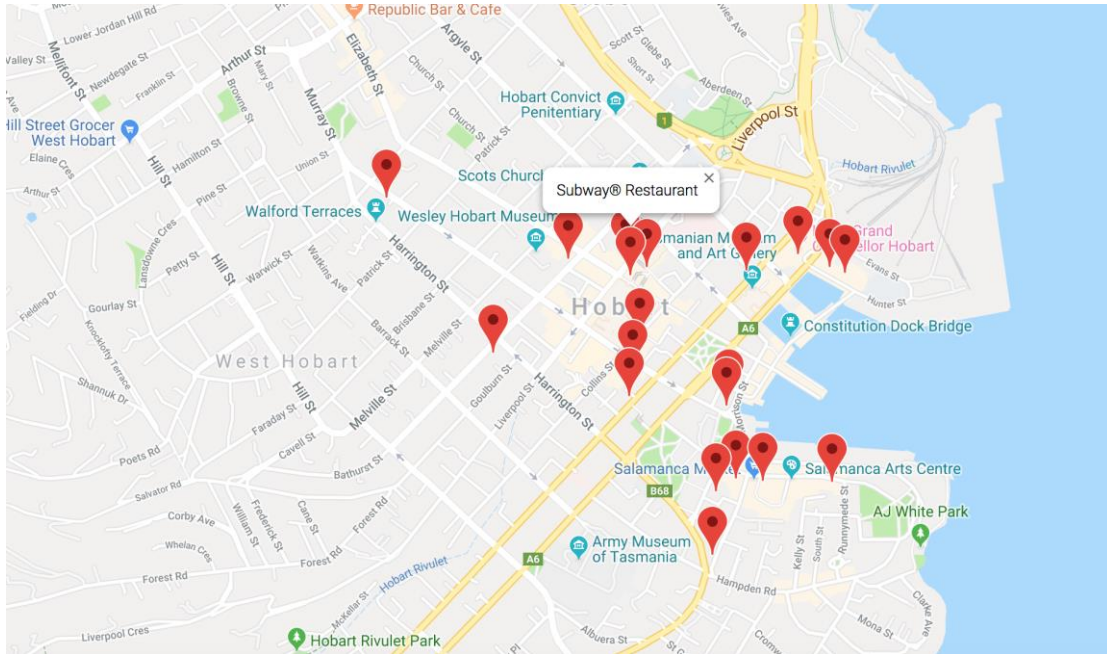
function createMarker(place) {
  var placeLoc = place.geometry.location;
  var marker = new google.maps.Marker({
    map: map,
    position: place.geometry.location
  });

  google.maps.event.addListener(marker, 'click', function() {
    infowindow.setContent(place.name);
    infowindow.open(map, this);
  });
}

google.maps.event.addDomListener(window, 'load', initialize);

</script>
</head>
<body>
  <div id="map-canvas"></div>
</body>
</html>

```



9. Change the search the hotel within a radius of 500 meters to show the searching results in the google map.

**Submit the screenshots of above hotel searching results !**

## Task 1: Baidu Place API Demo (If you can't get access for google place API, you can choose Baidu Place API)

1. Get Baidu Map API key followed the document "Apply Baidu AK" from MyLo.
2. Place searches

```
<!DOCTYPE html>
<html>
  <head>
    <title>Place searches</title>
    <meta name="viewport" content="initial-scale=1.0, user-scalable=no">
    <meta charset="utf-8">
    <style>
      html, body, #map-canvas {
        height: 100%;
        margin: 0px;
        padding: 0px
      }
    </style>
  </head>
  <body>
    <div id="allmap" style="width:500px;height:380px;"></div>
  </body>
  <script src="http://api.map.baidu.com/api?v=2.0&ak=You BAIDU API"></script>
  <script>
```

```

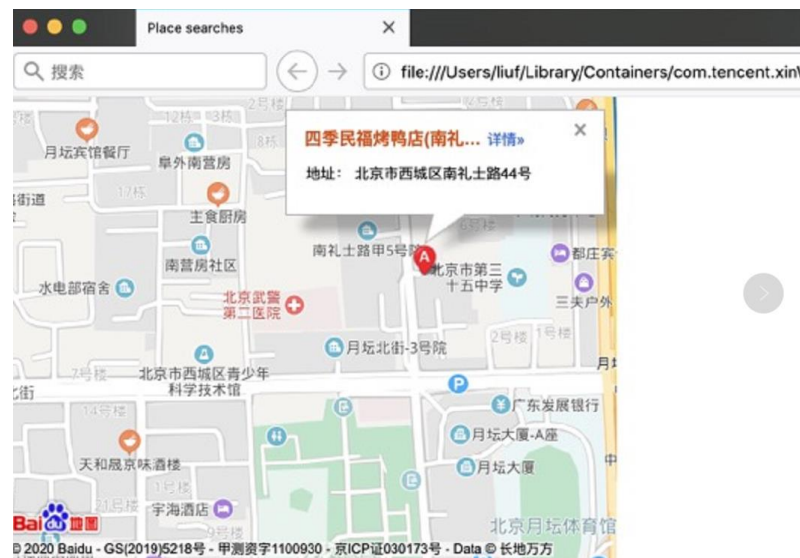
var map = new BMap.Map("allmap")
var myCenter = new BMap.Point(116.331398, 39.897445);
map.centerAndZoom(myCenter, 17);
var mk = new BMap.Marker(myCenter);
map.addOverlay(mk);
map.panTo(myCenter);

search(myCenter, 1000_000)

function search(point, radiu) {
    var local = new BMap.LocalSearch(map, { renderOptions: { map: map,
autoViewport: false } });
    local.searchNearby('餐馆', point, radiu);
}

</script>
</html>

```



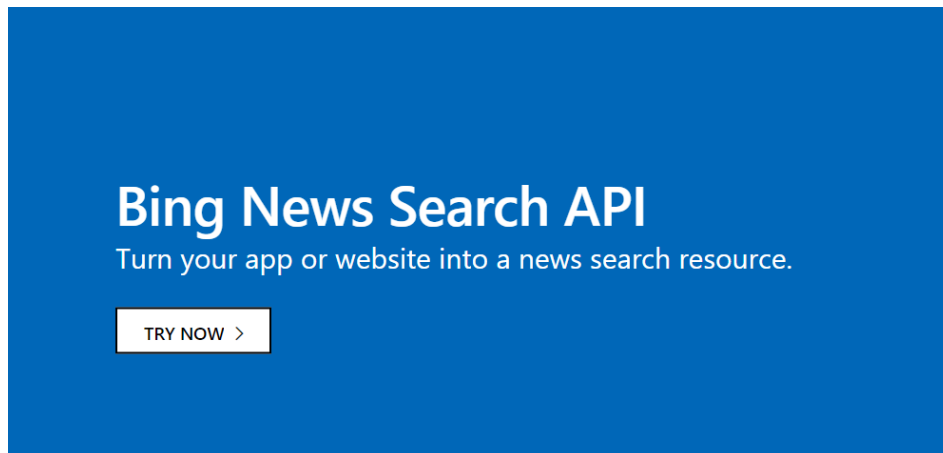
3. Try to change the search the hotel (宾馆) within a radius of 500 meters to show the searching results in the google map.

**Submit the screenshot of above hotel searching results!**

## Task 2: News API demo

1. Open <https://www.microsoft.com/en-us/bing/apis/bing-news-search-api>
2. Select Bing Search API to get all available endpoints and Keys.





Click Try now to create a resource.

## Create

Bing Resource

Name \*

Wenli

Subscription \* ⓘ

Azure subscription 1

Pricing tier (View full pricing details) \*

Free F1 (3 Calls per second, 1k Calls per month)

Resource group \* ⓘ

(New) KIT405

Create new



Resource group location \* ⓘ

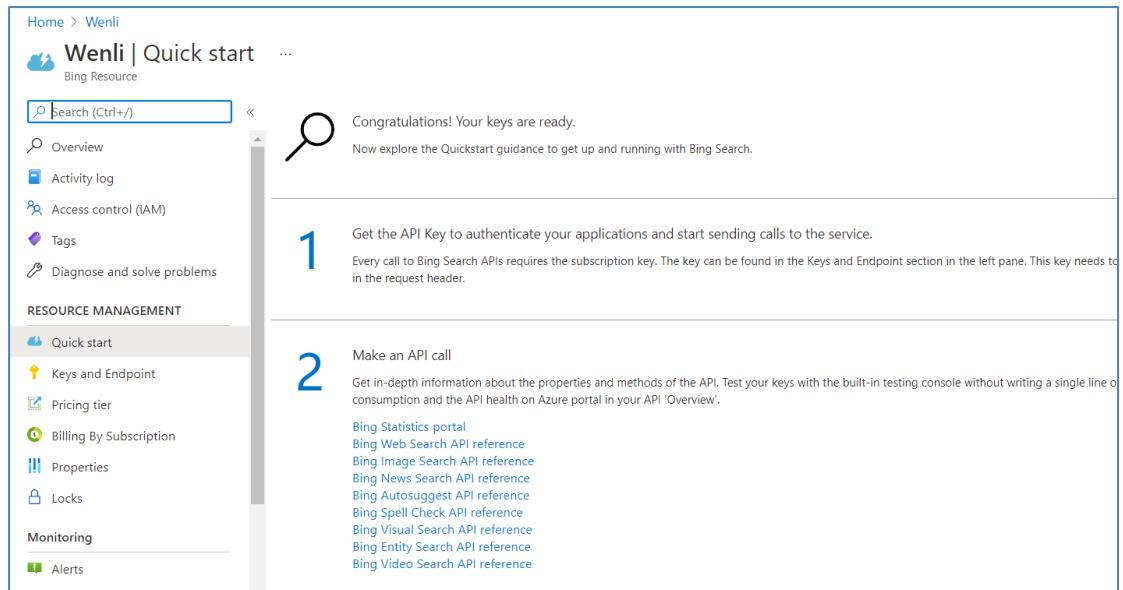
(US) East US

☒ I confirm I have read and understood the notice below. \*

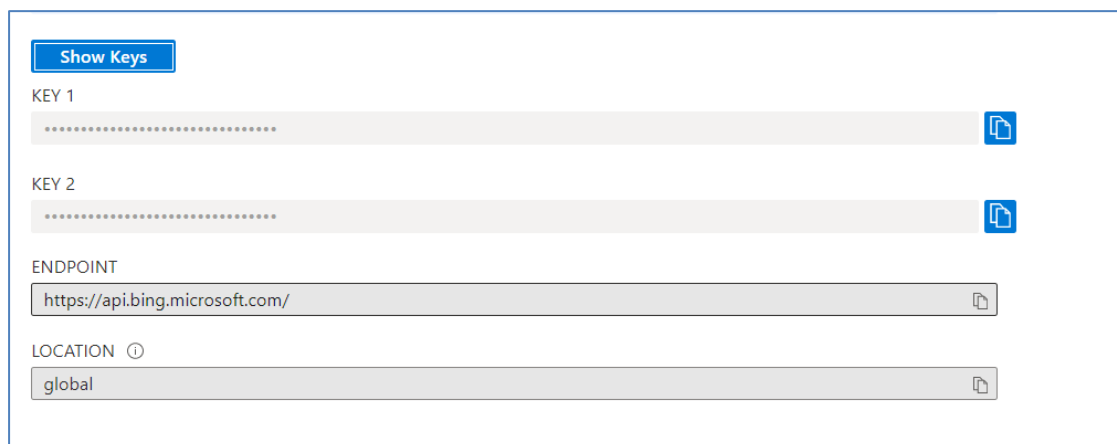
Microsoft will use data you send to Bing Search Services to improve Microsoft products and services. Where you send personal data to this service, you are responsible for obtaining sufficient consent from the data subjects. The General Privacy and Security Terms in the Online Services Terms do not apply to this Services. Please refer to the [Search Services Terms](#) for details.

3. Back to home page, click your created resource name.

Recent resources		
Name	Type	Last Viewed
 Wenli	Bing Resource	a few seconds ago
 KIT405	Resource group	19 minutes ago



4. Click key and Endpoint and it will show the endpoints and Keys.



Notice: guess and free account has some limitations, such as Search endpoint supports 1,000 transactions per month up to 1 per second, whereas all the other endpoints support 3,000 transactions per month, up to 3 per second.

5. Input the access key and news endpoints, then check whether the sample code "news\_api\_demo.zip" (download from MyLo) is working..

```
// YOUR API KEY DOES NOT GO IN THIS CODE, DON'T PASTE
API_KEY_COOKIE = "YOU_API_KEY";
CLIENT_ID_COOKIE = "bing-search-client-id";

// Bing Search API endpoint
BING_ENDPOINT = "ADD endpoints";
```

6. Try to change the corresponding endpoints as below to get image or video news of your input term.

1) Image search endpoint:

<https://api.bing.microsoft.com/v7.0/images/search>

2) Video search endpoint:

<https://api.bing.microsoft.com/v7.0/videos/search>

**Submit the screenshots of above image and video searching results!**

## Tutorial submission

Submit a zip file that contains all screenshots of results.

Due Date: 11:55PM Wednesday 31 March 2021

Submission: Use MyLo Dropbox (Tutorial\_week 5)