

Location and Maps

Agenda

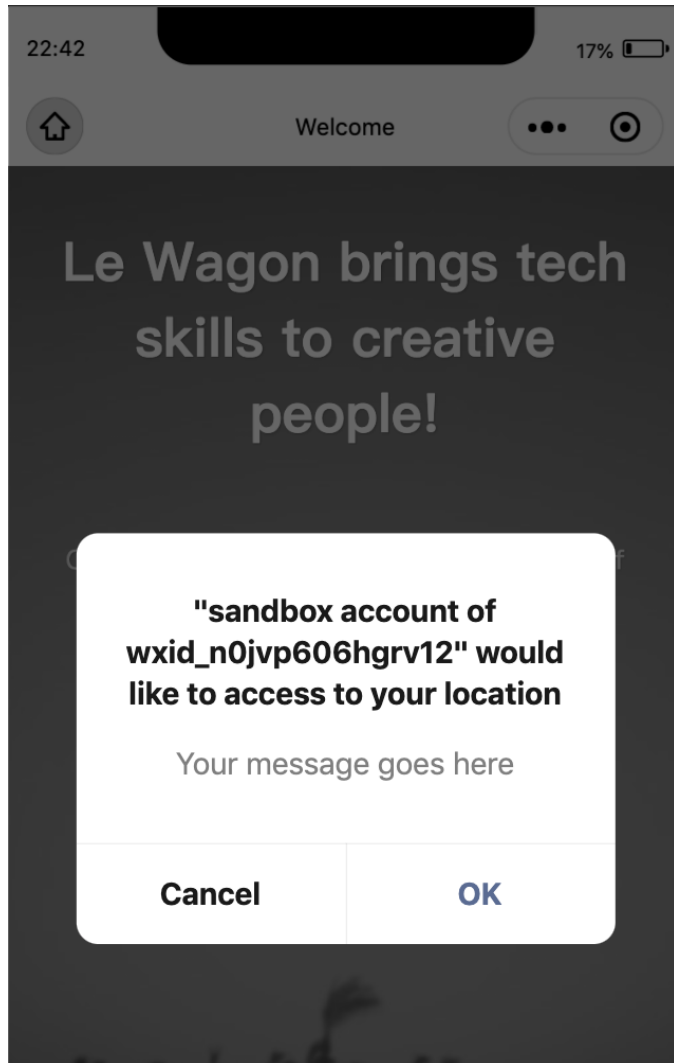
1. Authorizing location
2. Getting user's current location
3. Picking a location on a map
4. WXMP Map component

Authorizing location

Only if you are planning to get user's location

User location is sensitive information, hence Tencent requires a special `permission` clause in your `app.json`:

```
// make sure to put commas in the right places...
"permission": {
  "scope.userLocation": {
    "desc": "A message to tell the user why you need permission"
  }
}
// ...
```



This will create a popup like this when you try to get user's location.

We are now ready to access user location! 📍

Getting user's current location

Tencent provides us with a nifty `wx.getLocation` API

```
wx.getLocation({
  type: 'wgs84',
  success: function(res) {
    console.log(res)
  }
})
```

Result that we want 📍

```
errMsg: "getLocation:ok"
latitude: 31.2494
longitude: 121.397
// ...
```

Note the parameter `type`. You want to use the [World Geodetic System \(WGS84\)](#) to get a precise location.

BUT If you plan to open a **Tencent map** centered on your user with `wx.openLocation()`, you want to use the type `gcj-02` instead. For national security the GPS coordinates were offset on China maps!

We can set the `latitude` and `longitude` to the page data and use it to:

- Pin nearby locations
- Pinpoint the user on a map
- Recommend nearest venues

Picking a location on a map

The `wx.chooseLocation()` API is a convenient way for your user to pick a spot on a map.

They can search (best in Chinese or pinyin) or move around a marker. After confirmation, the `success` callback will contain the location information of the selected place.



`wx.chooseLocation()` in action!

`wx.chooseLocation()` in action! (under the hood)

```
wx.chooseLocation({  
  success: function(res) {  
    console.log(res)  
  }  
})
```

Result that we want 📍

```
//...  
address: "上海市长宁区愚园路1300号"  
latitude: 31.219042698  
longitude: 121.424379349
```



Question - do we store the address or the coordinates in the BaaS? 🤔

Answer - Both!

- We're going to use the address to display to the user (in a restaurant `show` page for example)
- We're going to use the coordinates to mark the location on a map or calculate distance

In our `restaurants` table in the BaaS add three columns:

- `address` as a string
- `latitude` and `longitude` as a number

re...	meta	校验器	Add column	Add row	Index settings	Query	Show columns	Display density	...		
<input type="checkbox"/>	id		name			description		created_by		Operation	
	id		string			string		integer			
<input type="checkbox"/>	5f67424375762258a13469e7		KFC			Chicken by the bucket!		80209474		Edit	Delete
<input type="checkbox"/>	5f6742227576226d74346c49		Pizza Hut			Best pizza out there!		80209474		Edit	Delete
<input type="checkbox"/>	5f674203a0f5982923736239		McDonald's			I'm lovin' it		80209474		Edit	Delete

After that is done, you can set the properties of a new restaurant the same way as you would for anything else.

```
// inside the wx.chooseLocation success callback
let latitude = res.latitude
let longitude = res.longitude
let address = res.address

let Restaurant = new wx.BaaS.TableObject('restaurants')
let restaurant = Restaurant.create()
restaurant.set({ latitude, longitude, address }).save()
```

Make sure to check your BaaS to see that the properties are updated! 📌



Bonus - `wx.openLocation()`

`wx.openLocation` API will open a full-screen map, centered on given coordinates, and allow the user to navigate via any installed map app.

```
// example
wx.openLocation({
  latitude: 31.219042698,
  longitude: 121.424379349,
})
```

Maps




Maps are cool!

Tencent thinks so too, so they added a handy `map` component.



```
<map
  style="width: 100vw; height: 100vh;"
  longitude="113.324520"
  latitude="23.099994">
</map>
```

WXMP map component has a ton of attributes - enabling 3D, showing traffic information, adding satellite image maps and more. Make sure to check the docs 



```
<!-- show.wxml -->
<map
  style="width: 100vw; height: 100vh;"
  longitude="{{longitude}}"
  latitude="{{latitude}}">
</map>
```

```
// show.js
data: {
  longitude: 113.324520,
  latitude: 23.099994
}
```

Make sure you are making your maps
dynamic from the start!

Adding markers to the map 

`map` also has an optional attribute called `markers` - this attribute takes an array of Marker objects. Here is an example:

```
markers: [{  
  iconPath: "/images/marker.png",  
  id: 0,  
  latitude: 23.099994,  
  longitude: 113.324520,  
  width: 50,  
  height: 50  
}]
```

This is an array with one marker



```
<map
  style="width: 100vw; height: 100vh;"
  longitude="{{longitude}}"
  latitude="{{latitude}}"
  markers="{{markers}}">
</map>
```

Ta-da! But this is the default marker icon. 😞

You can (and should) replace it with a custom
`marker.png`

Check out [Iconfont](#) for some cool icons!



The marker can also have a `callout` object, giving it a small tooltip when you tap it.

```
markers: [{
  id: 0,
  latitude: 23.099994,
  longitude: 113.32493,
  width: 50,
  height: 50,
  callout: {
    content: "👜 Tencent HQ\nShenzhen, China",
    fontSize: 15,
    color: "#000000",
    padding: 1
  }
}]
```

You can call a custom function when a marker is tapped by using `bindmarkertap`

```
<map
  style="width: 100vw; height: 100vh;"
  longitude="{{longitude}}"
  latitude="{{latitude}}"
  markers="{{markers}}"
  bindmarkertap="goToVenue">
</map>
```

```
// in your JS file
goToVenue: function(e) {
  console.log(e.detail.markerId)
}
```

Happy Mapping! 🌍