

Programming with Web APIs

SOA 个人作业（一）

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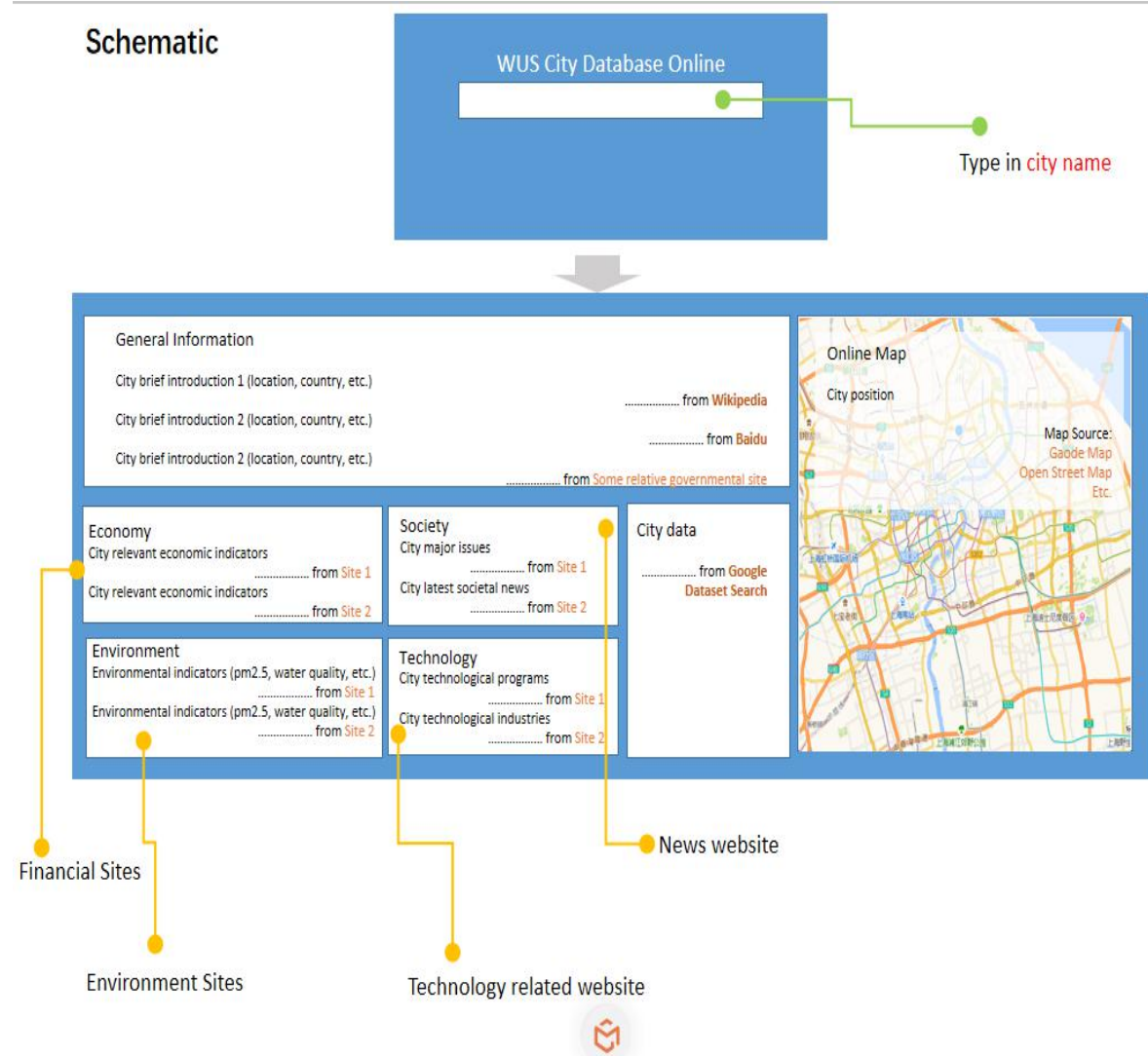
目录

Programming with Web APIs.....	0
1. 项目选题.....	2
2. 环境平台.....	3
3. 设计思路.....	3
4. 应用实现.....	3
4.1 API 调用.....	3
4.2 高德地图 api.....	3
4.3 维基百科 api.....	4
4.4 wthrcdn 网站 api.....	4
4.5 行政区划分 api.....	5
4.6 中国天气网 api.....	5
5. 共享数据格式.....	5
5.1 Json Schema.....	5
5.2 Xml Schema.....	7
6. 应用截图.....	7
6.1 主页面.....	7
6.2 地图放缩及中英文地图.....	8
6.3 高德地图定位.....	8
6.4 当前城市天气.....	9
6.3 搜索调用 api.....	9
6.4 点击信息框跳转网页.....	10

1. 项目选题

在线地图

基于高德地图 api 搜索定位及输入城市名获取相应信息



2. 环境平台

环境: win10

语言: html + javascript

开发 IDE: webstorm

浏览器: chrome

Web 端网页应用

3. 设计思路

1. 调用高德地图 api, 应用其自动定位、输入关键词查询定位、地图放缩移动、中英文地图等功能;
2. 另调用 api 实现—输入城市名称回车, 出现其对应的维基百科词条、天气、行政区划信息, 并点击信息框, 跳转相应网站链接;
3. 调用中国天气网 api 进入在地图界面实时查看当前城市或其他指定地区详细天气及出行状况。

4. 应用实现

4.1 API 调用

高德地图 api

维基百科 api

Wthrcdn 网站 api

行政区划 api

中国天气网 api

4.2 高德地图 api

```
url:  
https://webapi.amap.com/maps?v=1.4.15&key=b7ef129dc18a51aad23cec4f068f70b5&plugin=AMap.Autocomplete,AMap.PlaceSearch
```

JS api, 通过 javascript 传输数据

4.3 维基百科 api

url: `https://en.wikipedia.org/w/api.php?action=query&list=search&srsearch=" + keyword + "&prop=info&inprop=url&utf8=&format=json`

传输数据格式: jsonp

ajax 请求:

```
var getFromWiki = function(keyword) {
    $.ajax({
        url: "https://en.wikipedia.org/w/api.php?action=query&list=search&srsearch=" + keyword +
"&prop=info&inprop=url&utf8=&format=json",
        dataType: "jsonp",
        success: function(response) {
            //console.log(response);
            showResults(response, keyword);
        },
        error: function() {
            alert("Sorry, there's something wrong within the search, please refresh this page and try
again!");
        }
    });
}
```

4.4 wthrcdn 网站 api

url: `http://wthrcdn.etouch.cn/WeatherApi`

传输数据格式: xml

ajax 请求:

```
var getFromTianqi = function(keyword) {
    $.ajax({
        type: "get",
        url: "http://wthrcdn.etouch.cn/WeatherApi?city="+ keyword ,
        dataType: "xml",
        success: function(response) {
            //console.log(response);
            showResults1(response, keyword);
        },
        error: function() {
            alert("Sorry, there's something wrong within the search, please refresh this page and try
again!");
        }
    });
}
```

```
});  
}
```

4.5 行政区划分 api

url: <https://search.heweather.net/find?key=lab689987b454d84aa7242bfc124d1bd>

传输数据格式: json

ajax 请求:

```
var getFromInfo = function(keyword) {  
    $.ajax({  
        type: "get",  
        url: "https://search.heweather.net/find?key=lab689987b454d84aa7242bfc124d1bd&location="+ keyword ,  
        dataType: "json",  
        success: function(response) {  
            //console.log(response);  
            showResults2(response, keyword);  
        },  
        error: function() {  
            alert("Sorry, there's something wrong within the search, please refresh this page and try again!");  
        }  
    });  
}
```

4.6 中国天气网 api

url: <http://i.tianqi.com/index.php?c=code&id=55>

JS api, 通过 javascript 传输数据

5. 共享数据格式

5.1 Json Schema

维基百科:

```

▼ Object f
  batchcomplete: ""
  ▼ continue:
    continue: "-||info"
    sroffset: 10
    ► __proto__: Object
  ▼ query:
    ▼ search: Array(10)
      ▼ 0:
        ns: 0
        pageid: 734845
        size: 84364
        snippet: "The Shanghai Metro (Chinese: <span class="searchmatch">上</span><span class="searchmatch">海</span>地铁) is a rapid transit rail"
        timestamp: "2019-10-12T04:42:30Z"
        title: "Shanghai Metro"
        wordcount: 6613
        ► __proto__: Object
      ► 1: {ns: 0, title: "Shanghai", pageid: 27643, size: 192591, wordcount: 17337, ...}
      ► 2: {ns: 0, title: "Shanghai Tower", pageid: 16450146, size: 32748, wordcount: 2979, ...}
      ► 3: {ns: 0, title: "Shanghai Sharks", pageid: 964226, size: 5815, wordcount: 253, ...}
      ► 4: {ns: 0, title: "Shanghai maglev train", pageid: 1963462, size: 20983, wordcount: 2120, ...}
      ► 5: {ns: 0, title: "SAIC Motor", pageid: 880697, size: 32543, wordcount: 2570, ...}
      ► 6: {ns: 0, title: "Shanghai University", pageid: 919887, size: 25121, wordcount: 2851, ...}
      ► 7: {ns: 0, title: "Expo 2010", pageid: 481459, size: 31764, wordcount: 3107, ...}
      ► 8: {ns: 0, title: "Shanghai Cooperation Organisation", pageid: 152422, size: 73269, wordcount: 6418, ...}
      ► 9: {ns: 0, title: "Shanghai Pudong International Airport", pageid: 354666, size: 77066, wordcount: 3401, ...}
      length: 10
      ► __proto__: Array(0)
    ► searchinfo: {totalhits: 5625}
    ► __proto__: Object
  ► __proto__: Object

```

行政区划分:

```

▼ Object f
  ▼ HeWeather6: Array(1)
    ▼ 0:
      ▼ basic: Array(10)
        ► 0: {cid: "CN101020100", location: "上海", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 1: {cid: "CN10102010011A", location: "上海博物馆", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 2: {cid: "CN10102010016A", location: "上海动物园", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 3: {cid: "CN10102010009A", location: "上海自然博物馆(上海科技馆分馆)", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 4: {cid: "CN10102130009A", location: "上海科技馆", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 5: {cid: "CN10102100002A", location: "上海都市菜园", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 6: {cid: "CN10102130007A", location: "上海海洋水族馆", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 7: {cid: "CN10102130002A", location: "上海滨海森林公园", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 8: {cid: "CN10102080003A", location: "上海大观园", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        ► 9: {cid: "CN10102130010A", location: "上海野生动物园", parent_city: "上海", admin_area: "上海", cnty: "中国", ...}
        length: 10
        ► __proto__: Array(0)
      status: "ok"
      ► __proto__: Object
      length: 1
      ► __proto__: Array(0)
    ► __proto__: Object

```

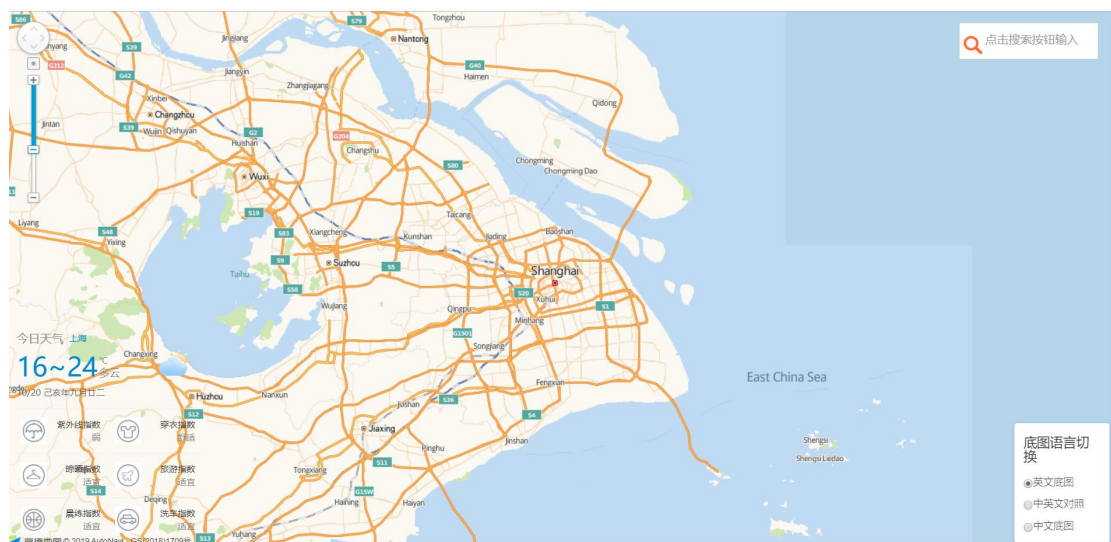
5.2 Xml Schema

```
▼ #document
  <resp>
    <city>上海</city>
    <updatetime>22:19</updatetime>
    <wendu>18</wendu>
    ▶ <fengli>...</fengli>
    <shidu>67%</shidu>
    <fengxiang>东风</fengxiang>
    <sunrise_1>06:00</sunrise_1>
    <sunset_1>17:17</sunset_1>
    <sunrise_2></sunrise_2>
    <sunset_2></sunset_2>
    ▶ <yesterday>...</yesterday>
    ▶ <forecast>...</forecast>
    ▶ <zhishus>...</zhishus>
  </resp>
  <!-- 10.42.121.88(10.42.121.88):17204 ; 10.42.161.121:8080 -->
```

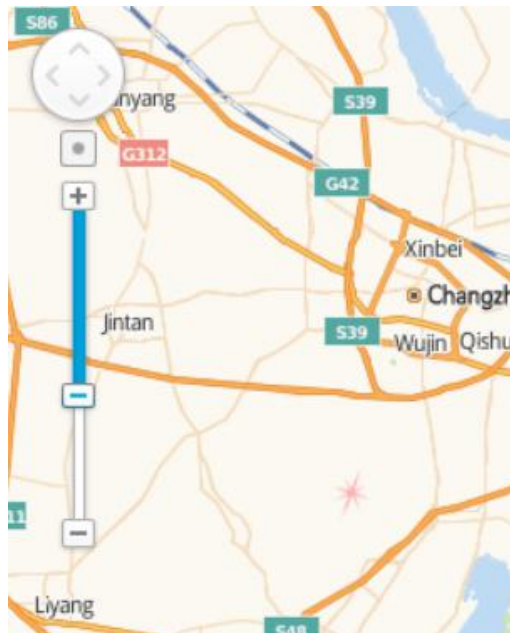
6. 应用截图

【注：输入关键词时，点击下拉选项以地图定位，回车以展示 api 调用内容】

6.1 主页面



6.2 地图放缩及中英文地图



6.3 高德地图定位



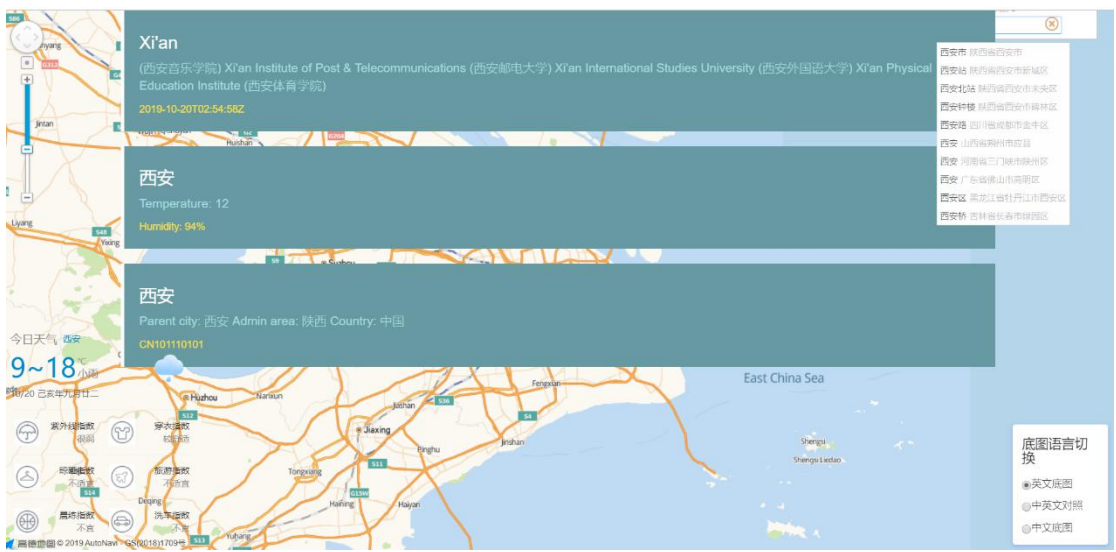
6.4 当前城市天气




定制默认城市

重庆 ▼ C 重庆 ▼ C 重庆 ▼ 确定

6.3 搜索调用 api



6.4 点击信息框跳转网页



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Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction

Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools

What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item
Cite this page

In other projects

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Xi'an

From Wikipedia, the free encyclopedia

*"Xian" redirects here. For other uses, see [Xian \(disambiguation\)](#).
For the Dowager Empress China, see [Ci'an](#).*

Xi'an (/ʃiˈɑːn/ *SHYAHN*, also UK: /ʃiːˈæn/ *shee-AN*, US: /ʃiːˈɑːn/ *shee-AHN*,^{[4][5][6][7]} Chinese: [xi.án] ⓘ (listen)), also known as Sian, is the capital of Shaanxi Province. A sub-provincial city on the Guanzhong Plain in northwest China,^[8] it is one of the oldest cities in China, and the oldest of the Four Great Ancient Capitals, having held the position under several of the most important dynasties in Chinese history,^[9] including Western Zhou, Qin, Western Han, Sui, and Tang.^[9] Xi'an is the starting point of the Silk Road and home to the Terracotta Army of Emperor Qin Shi Huang.^[10]

Since the 1990s, as part of the [economic revival of inland China](#) especially for the central and northwest regions, the city of Xi'an has re-emerged as an important cultural, industrial and educational centre of the central-northwest region, with facilities for [research and development](#), [national security](#) and [space exploration](#). Xi'an currently holds sub-provincial status, administering 9 districts and 4 counties.^[11] As of 2018 Xi'an has a population of 12,005,600, and the Xi'an–Xianyang metropolitan area a population of 12.9 million.^[13] It is the most populous city in Northwest China, as well as one of the three most populous cities in Western China, the other two being Chongqing and Chengdu.^[12] In 2012, it was named as one of the 13 emerging megacities, or [megalopolises](#), in China.^[13]

Contents [hide]

1 Name

2 History

2.1 Prehistory

2.2 Ancient era

2.3 Imperial era

2.4 Modern era

3 Geography

3.1 Climate

3.2 National Time Service Centre

weather.com.cn

2019年10月20日 星期日 农历九月廿二 设为首页 保存至桌面 手机查天气 English

天气

输入城市、乡镇、街道、景点名称 查天气

上海 23°C/16°C +

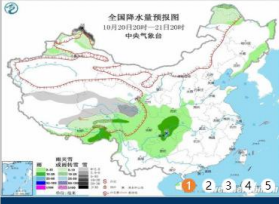
中国天气

预报 预警 临近预报 台风路径 资讯 图片 环境 生态 生活 交通 航空 水利 一带一路 产创平台 省级站
雷达 云图 专业产品 空间天气 视频 专题 旅游 高尔夫 滑雪 保险 病虫害 减灾 气象科普 天气插件 贵州站

全国降水量预报图

10月20日20时—10月21日20时


中央气象台



全国24小时降水量预报

我与新中国相伴

查询我的生日天气



京津冀能见度转好 新一轮冷空气明日来袭

一张图带你揭秘华西秋雨 冷空气威力到底有多大？
秋高气爽在哪？冷空气多强会让广东喊“冷”？
全国银杏观赏地图来了！带你看最美银杏
甘肃酒泉金塔胡杨献金秋 “塞上明珠” 青铜峡秋意浓
河北承德避暑山庄秋意浓 金秋云南石林波斯菊争艳

航拍河北遵化雾气笼罩 建筑物若隐若现

• 风来了！北京今有6级阵风 八达岭迎赏红叶高峰

• 今晨河北大部地区仍有大雾 气温回升较温暖舒适

• 重庆今起三天阴雨为主 明日偏南部分地区有大雨

• 周末江苏昼夜温差超10℃ 浙江周末宜出游早晚凉

• 河南近日气温“天天向上” 湖南天气多云到晴

• “浣熊”加强为强台风级 21号台风“博罗依”生成

更多>>

我的天气

手机随身看

上海 切换 20:56更新

19°C 55良

静风 0级 相对湿度 65%

今天 周一 周二 周三 周四

23°C 24°C 23°C 24°C 24°C

16°C 17°C 18°C 18°C 17°C

东风 <3级 微风 <3级 北风 <3级 北风 <3级 西北风 <3级

40天预报

当前位置: 首页 > 在线服务 > 查询服务 > 全国行政区划信息查询平台

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+

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显示
县级

