



Web Development Fundamentals

Vue 数据与事件处理

Work with data and events in Vue.js

Jun 2021

Microsoft Reactor | Ryan Chung

```
led by player to
            .load_image("kg.png")
(self):
ialize Dog object and create Text o
g, self).__init__(image = Dog.image,
x = games.mouse.x,
bottom = games.screen.height)
re = games.Text(value = 0, size = 24,
top = 5, right = game
reen.add(self.score)
1 = games.Text(value = 0, size = 24,
top = 5, left = game
reen.add(self.life)
```



Ryan Chung

Instructor / DevelopIntelligence
Founder / MobileDev.TW

@ryanchung403 on WeChat
Ryan@MobileDev.TW





Reactor



developer.microsoft.com/reactor/
@MSFTReactor on Twitter



处理 Vue.js 中的数据和事件

25 分钟 • 模块 • 9 单元

★★★★★ 5 (7)

对其进行评级

中级

学生

开发人员

应用服务静态 Web 应用

Visual Studio Code

动态 Web 应用程序通常允许用户与页面和数据交互。在此模块中，你将了解如何将窗体添加到 Vue.js 页面并响应用户事件。你还将了解如何添加可基于数据更新计算的计算值。

学习目标

在此模块中，你将执行以下操作：

- 处理窗体。
- 添加事件。
- 计算属性。

先决条件

熟悉：

- HTML 或 CSS
- Git
- npm
- JavaScript

开始 >

⊕ 保存

学习目标

- 表单数据处理
- 事件处理
- 数值运算

练习：使用表单呈现Vue Model中的资料

Name :

Active

Benefits selected : YES

1 : part-time ▾

建立项目

- VS Code -> 档案-> 打开文件夹
- 建立文件夹 FormDataPractice
- 创建文件
 - index.html
 - main.js

main.js

```
let pageData = {  
    name: 'Ryan',  
    status: -1,  
    active: true,  
    benefitSelected: 'yes',  
    statusList:[  
        'full-time',  
        'part-time',  
        'contrator'  
],  
    selectedIndex: null  
const app = Vue.createApp({  
    data(){  
        return pageData;  

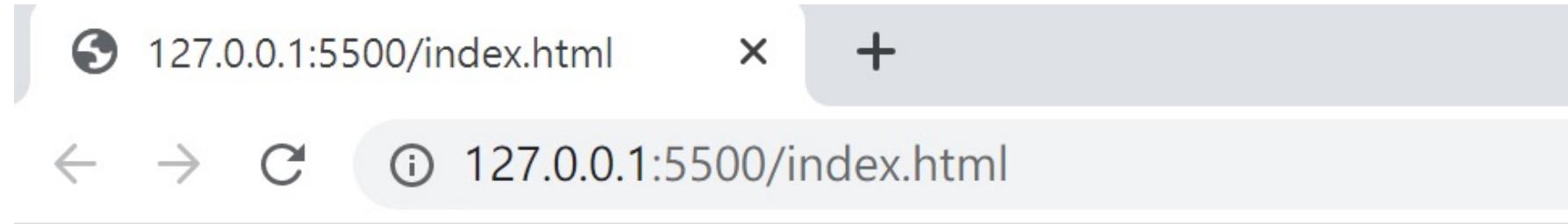
```

index.html

<https://github.com/ryan403/reactor-sh-2021-vue>

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title></title>
    <link rel="stylesheet" href="style.css">
  </head>
  <body>
    <h1></h1>
    <div id="app">
      Name : <input type="text" v-model="name"><br>
      <input type="checkbox" v-model="active"> Active<br>
      <input type="checkbox" v-model="benefitSelected" true-value="yes" false-value="no">
      Benefits selected : {{benefitSelected.toUpperCase()}}<br>
      <select v-model="selectedIndex">
        <option v-for="(stringItem, index) in statusList" :value="index">
          {{index + " : " + stringItem}}
        </option>
      </select>
    </div>
    <script src="https://unpkg.com/vue@next"></script>
    <script src="main.js"></script>
  </body>
</html>
```

浏览器检视



Name :

Active

Benefits selected : YES



在main.js中修改资料，观察网页变化

```
let pageData = {  
    name: 'Chung',  
    status: -1,  
    active: true,  
    benefitSelected: 'yes',  
    statusList:[  
        'full-time',  
        'part-time',  
        'contrator'  
],  
    selectedIndex: null  
};
```

Name :

Active

Benefits selected : YES

布林值决定勾选、不勾选

```
let pageData = {  
    name: 'Chung',  
    status: -1,  
    active: false,  
    benefitSelected: 'yes',  
    statusList:[  
        'full-time',  
        'part-time',  
        'contrator'  
    ],  
    selectedIndex: null  
};
```

Name :

Active

Benefits selected : YES

客制化布林值

```
let pageData = {  
    name: 'Chung',  
    status: -1,  
    active: false,  
    benefitSelected: 'no',  
    statusList:[  
        'full-time',  
        'part-time',  
        'contrator'  
    ],  
    selectedIndex: null  
};
```

Name :

Active

Benefits selected : NO

```
<input type="checkbox" v-model="benefitSelected" true-value="yes" false-value="no">  
Benefits selected : {{benefitSelected.toUpperCase()}}<br>
```

下拉式选单

```
let pageData = {  
    name: 'Chung',  
    status: -1,  
    active: false,  
    benefitSelected: 'no',  
    statusList:[  
        'full-time',  
        'part-time',  
        'contrator'  
    ],  
    selectedIndex: null  
};
```

Name : Chung

Active

Benefits selected : NO

▼

- 0 : full-time
- 1 : part-time
- 2 : contrator

```
<select v-model="selectedIndex">  
    <option v-for="(stringItem, index) in statusList" :value="index">  
        {{index + " : " + stringItem}}  
    </option>  
</select>
```

修改selectedIndex

```
let pageData = {  
    name: 'Chung',  
    status:-1,  
    active:false,  
    benefitSelected:'no',  
    statusList:[  
        'full-time',  
        'part-time',  
        'contrator'  
    ],  
    selectedIndex:1  
};
```

Name :

Active

Benefits selected : NO

1 : part-time ▾

```
<select v-model="selectedIndex">  
    <option v-for="(stringItem, index) in statusList" :value="index">  
        {{index + " : " + stringItem}}  
    </option>  
</select>
```

练习 - 银河之旅

- 下载练习档案
 - git clone <https://github.com/MicrosoftDocs/mslearn-vue-data-events>
- 开启练习文件夹
 - VS Code -> 档案-> 打开文件夹... -> mslearn-vue-data-events/starter

任务一：建立表单

Relecloud Galaxy Tours

Cruise to the moon

Cruise to the moon in our luxurious shuttle. Watch the astronauts working outside the International Space Station.

Book now!

Select class:

Coach US\$ 125,000

Notes:

- 找到TODO: Add booking form

```
<!-- TODO: Add booking form -->
<form v-show="!booking.completed">
  <h2>Book now!</h2>
  <div class="row">
    <label for="product-cabin">Select class:</label>
    <select id="product-cabin" v-model="booking.cabinIndex">
      <option v-for="(cabin, index) in product.cabins" :value="index">
        {{cabin.name}} US$ {{cabin.price.toLocaleString('en-US')}}
    </option>
  </select>
</div>
<div class="row">
  <label for="notes">Notes:</label>
  <textarea v-model="booking.notes" rows="3"></textarea>
</div>
<div class="row">
  <!--TODO: Add button here later-->
</div>
</form>
```

- 找到TODO: Add booking form

```
<!-- TODO: Add booking form -->
<form v-show="!booking.completed">
  <h2>Book now!</h2>
  <div class="row">
    <label for="product-cabin">Select class:</label>
    <select id="product-cabin" v-model="booking.cabinIndex">
      <option v-for="(cabin, index) in product.cabins" :value="index">
        {{cabin.name}} US$ {{cabin.price.toLocaleString('en-US')}}
    </option>
  </select>
</div>
<div class="row">
  <label for="notes">Notes:</label>
  <textarea v-model="booking.notes" rows="3"></textarea>
</div>
<div class="row">
  <!--TODO: Add button here later-->
</div>
</form>
```

↑ 判断 booking.completed 来决定表单是否显示

• 找到TODO: Add booking form

```
<!-- TODO: Add booking form -->
<form v-show="!booking.completed">
  <h2>Book now!</h2>
  <div class="row">
    <label for="product-cabin">Select class:</label>
    <select id="product-cabin" v-model="booking.cabinIndex">
      <option v-for="(cabin, index) in product.cabins" :value="index">
        {{cabin.name}} US$ {{cabin.price.toLocaleString('en-US')}}
```

booking.cabinIndex 决定默认值
product.cabins 选项

```
      </option>
    </select>
  </div>
  <div class="row">
    <label for="notes">Notes:</label>
    <textarea v-model="booking.notes" rows="3"></textarea>
  </div>
  <div class="row">
    <!--TODO: Add button here later-->
  </div>
</form>
```

- 找到TODO: Add booking form

```
<!-- TODO: Add booking form -->
<form v-show="!booking.completed">
  <h2>Book now!</h2>
  <div class="row">
    <label for="product-cabin">Select class:</label>
    <select id="product-cabin" v-model="booking.cabinIndex">
      <option v-for="(cabin, index) in product.cabins" :value="index">
        {{cabin.name}} US$ {{cabin.price.toLocaleString('en-US')}}
    </option>
  </select>
</div>
<div class="row">
  <label for="notes">Notes:</label>
  <textarea v-model="booking.notes" rows="3"></textarea>
</div>
<div class="row">
  <!--TODO: Add button here later-->
</div>
</form>
```

显示 booking.notes 的值 · 目前为空字符串

事件处理

- 按按钮，Console显示名字

main.js

```
let pageData = {  
    name: "Ryan Chung"  
};  
  
let pageMethods = {  
    displayName(){  
        console.log(this.name);  
    }  
}  
  
const app = Vue.createApp({  
    data(){  
        return pageData;  
    },  
    methods: pageMethods  
});  
  
app.mount("#app");
```

index.html

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title></title>
    <link rel="stylesheet" href="style.css">
  </head>
  <body>
    <h1></h1>
    <div id="app">
      <button @click="displayName" type="button">Display Name</button>
    </div>
    <script src="https://unpkg.com/vue@next"></script>
    <script src="main.js"></script>
  </body>
</html>
```

确认是否成功

A screenshot of a browser's developer tools, specifically the Console tab, which is highlighted with a blue underline. The page URL in the address bar is 127.0.0.1:5500/index.html. The console output displays the following messages:

- You are running a development build of Vue.
- Make sure to use the production build (*.prod.js) when deploying for production.
- Live reload enabled.
- Ryan Chung

练习：银河之旅 Part II

- 打开前面的银河之旅项目

index.js

- 找到最下方TODO: Add methods

```
// TODO: Add methods
methods: {
    bookCabin(){
        this.booking.completed = true;
    }
}
```

index.html

- 加上按钮与Vue事件处理

```
<div class="row">
  <!--TODO: Add button here later-->
  <button class="button" type="button" @click="bookCabin">Book now!</button>
</div>
```

测试

- 按下按钮后，表单会消失

Relecloud Galaxy Tours

Cruise to the moon

Cruise to the moon in our luxurious shuttle. Watch the astronauts working outside the International Space Station.

Book now!

Select class:

First US\$ 430,000

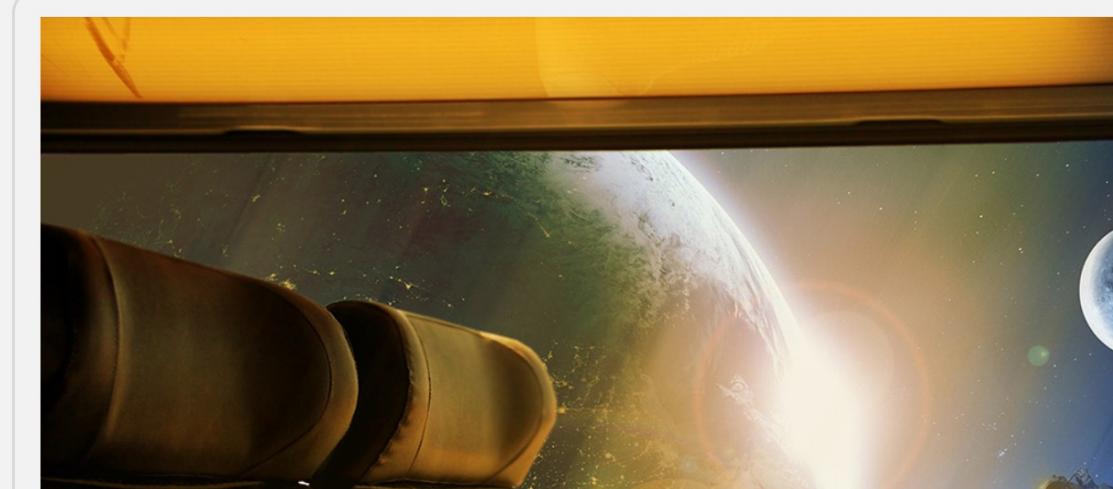
Notes:

Book now!

Relecloud Galaxy Tours

Cruise to the moon

Cruise to the moon in our luxurious shuttle. Watch the astronauts working outside the International Space Station.



Computed Property

- 即时反应一个变量的最新数值
- 在Vue建立时设定computed属性
- 透过方法的宣告，将值回传至页面上

建立：使用Vue打造计算机

- 输入数字、选择运算符，按下按钮计算结果

333	*	2
-----	---	---

Calculate

666

31

Microsoft

Reactor

main.js

```
let pageData = {  
    firstNumber:0,  
    secondNumber:0,  
    result:0,  
    operators:[ "+", "-", "*", "/", "%", "**" ],  
    selectedOperator:0,  
    showResult:false  
};  
  
let pageMethods = {  
    calculate(){  
        this.result = eval(this.firstNumber+this.operators[this.selectedOperator]+this.secondNumber);  
        this.showResult=true;  
    },  
    clearResult(){  
        this.showResult=false;  
    }  
}  
  
let pageComputed = {  
    resultArea(){  
        return this.result;  
    }  
}
```

main.js

```
const app = Vue.createApp({  
  data(){  
    return pageData;  
  },  
  computed:pageComputed,  
  methods:pageMethods  
});  
  
app.mount("#app");
```

index.html

<https://github.com/ryan403/reactor-sh-2021-vue>

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title></title>
    <link rel="stylesheet" href="style.css">
  </head>
  <body>
    <h1></h1>
    <div id="app">
      <input type="text" v-model="firstNumber" @input="clearResult">&ampnbsp
      <select v-model="selectedOperator" @change="clearResult">
        <option v-for="(operator, index) in operators" :value="index">{{operator}}</option>
      </select>&ampnbsp
      <input type="text" v-model="secondNumber" @input="clearResult"><br><br>
      <button @click="calculate" type="button">Calculate</button>
      <p v-show="showResult">{{resultArea}}</p>
    </div>
    <script src="https://unpkg.com/vue@next"></script>
    <script src="main.js"></script>
  </body>
</html>
```

style.css

```
button{  
    margin: auto;  
    display: flex;  
}  
  
p{  
    text-align: center;  
}
```

练习：银河之旅 Part III

- 显示订票记录

Relecloud Galaxy Tours

Cruise to the moon

Cruise to the moon in our luxurious shuttle. Watch the astronauts working outside the International Space Station.

You are on your way

Booking details:

First : US\$ 430,000

Notes : Prefer Window-side seat



index.js

- 利用computed回传更新后的座舱等级与价格

```
// TODO: Add completed values
computed: {
  bookingCabinDisplay(){
    const cabin = this.product.cabins[this.booking.cabinIndex];
    return `${cabin.name} : US$ ${cabin.price.toLocaleString('en-US')}`
  }
},
```

index.html

- 完成订位时显示

```
<!-- TODO: Add success display -->
<div v-show="booking.completed">
  <h2 class="row">You are on your way</h2>
  <div class="row">
    <div>Booking details:</div>
    <div>{{bookingCabinDisplay}}</div>
    <div>Notes : {{booking.notes}}</div>
  </div>
</div>
```

测试

Relecloud Galaxy Tours

Cruise to the moon

Cruise to the moon in our luxurious shuttle. Watch the astronauts working outside the International Space Station.

Book now!

Select class:

Business US\$ 275,000 ▾

Notes:

Prefer Aisle Side

Book now!

Relecloud Galaxy Tours

Cruise to the moon

Cruise to the moon in our luxurious shuttle. Watch the astronauts working outside the International Space Station.

You are on your way

Booking details:

Business : US\$ 275,000

Notes : Prefer Aisle Side



知识检查

- `:`
- `v-bind`
- `@`
- `v-for`

2. 哪项指令用于在数据和窗体控件之间创建双向绑定?

- `v-for`
- `v-model`
- `v-bind`
- `v-if`

3. 哪个 HTML 控件最适合处理布尔值?

- `textarea`
- `checkbox`
- `input type='text'`
- `input type='email'`

Summary 摘要

- **v-model**
 - 表单组件的数值，透过Vue来控制，Vue也借此可获取用户输入
 - checkbox组件可通过v-model对应的布林值呈现勾不勾选
 - checkbox组件也可透过true-value，false-value 定制布林值
 - 下拉式菜单也可通过v-model决定预选，并通过v-for呈现选项
- **@EventName="EventHandler"**
 - 在器件开始标签中，指定事件与触发方法
 - 在Vue初始化区段增加methods
- **computed**
 - 一样增加于Vue初始化区段，透过方法回传要显示的运算结果



Reactor



developer.microsoft.com/reactor/
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议程结束
感谢聆听



请记得填写课程回馈问卷 (Event ID : **XXXXX**)

<https://aka.ms/Reactor/Survey>

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