

# Frontend Framework - Vue

國立屏東大學

電腦科學與人工智慧學系

咪路 <[mail@mirumo.org](mailto:mail@mirumo.org)> />

**\*\*資安Conf的LT\*\***

**講者: "關於這點，懂得都懂!! >.0 "**

那個沒聽懂的→



既然你會說話，就講明白一點



# What are Frontend Frameworks?



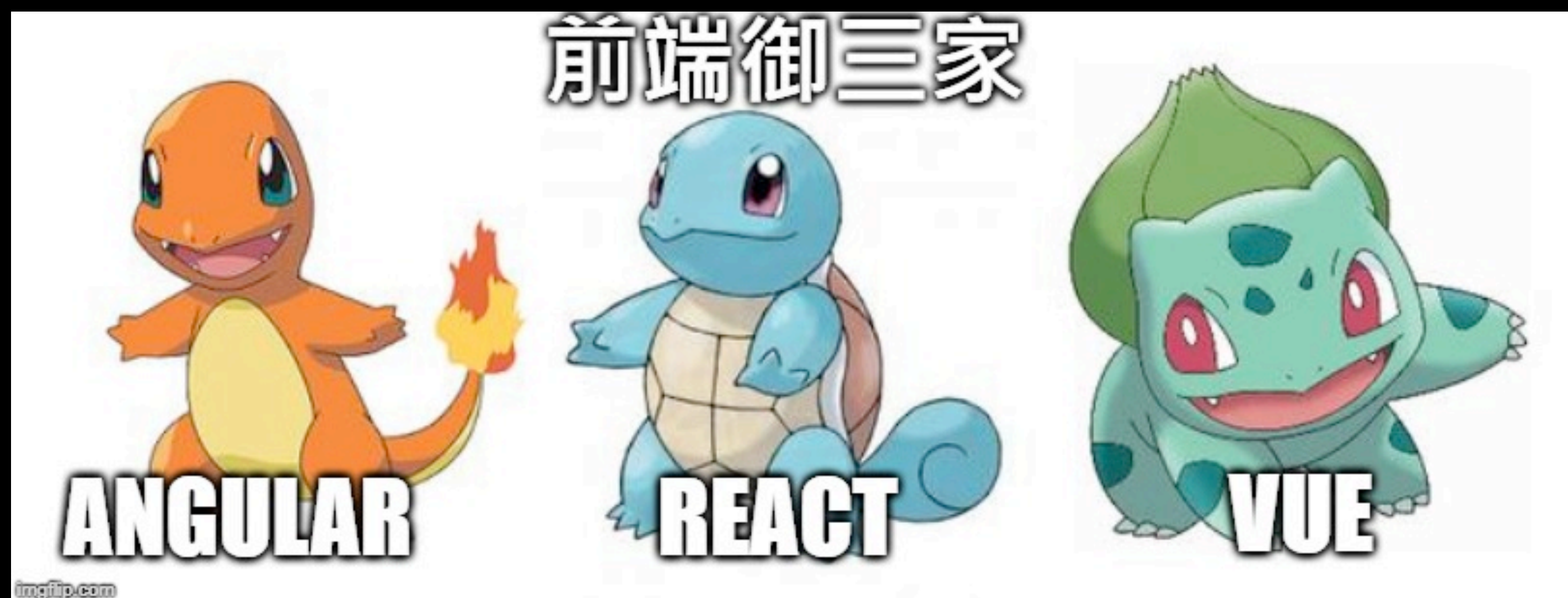
# What are frontend frameworks?

The front-end of a website or application is the stuff visible to the user on the website. The graphics, typography, and arrangement of these two are what contribute. In addition, it includes building user-friendly interfaces and efficiently presenting the data from the back end to a user.

# Benefits of frontend frameworks?

- Faster development time
- Reduced code length
- Maintainability
- Data binding





# Before Starting ...



譯：迷因傑西 IG/FB

當蜘蛛在  
自己織的網上  
找到BUG  
(蟲蟲)



當工程師在  
自己寫的網上  
找到BUG

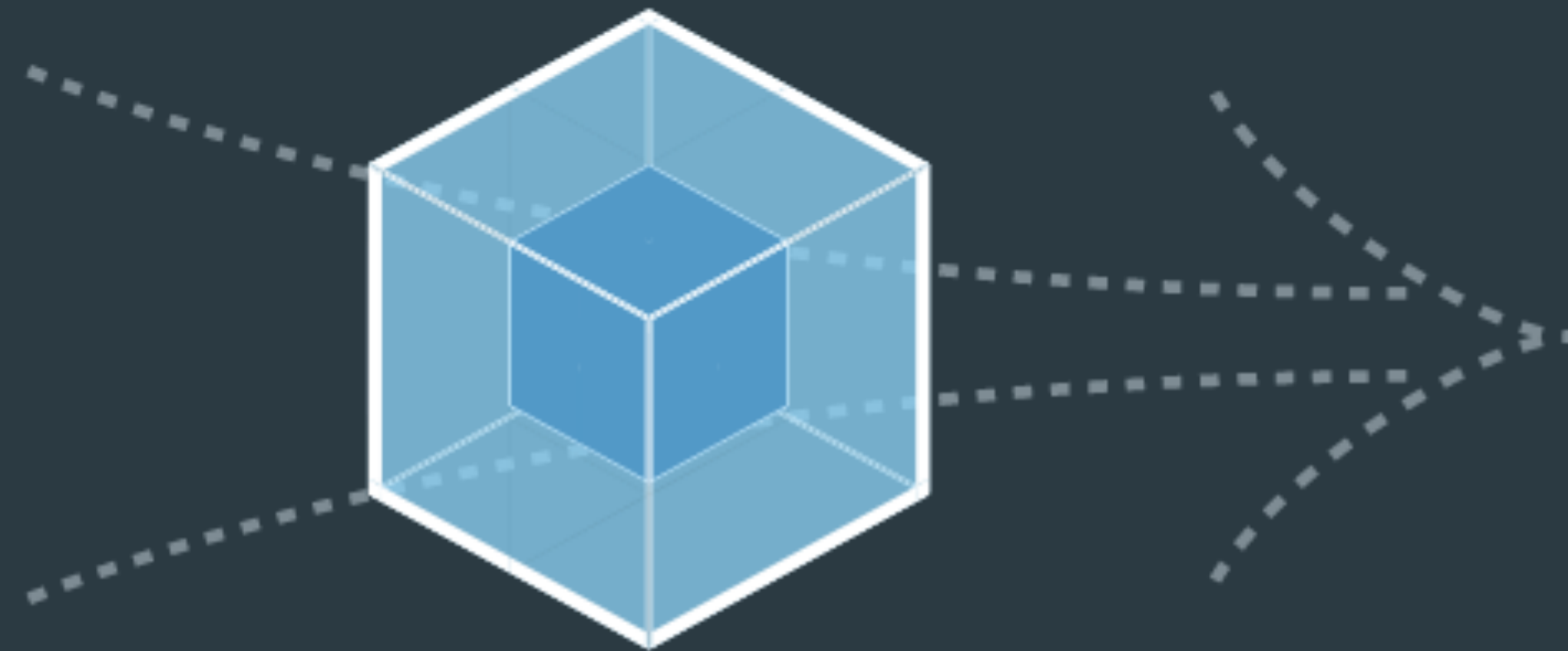
# Webpack



## bundle your scripts



MODULES WITH DEPENDENCIES



STATIC ASSETS

**Node.js / NPM**

# NPM

## Node Package Manager

- `npm init <template name>`
- `npm install <package name>`
- `npm remove <package name>`
- `npm run <script name>`





Vue.js

# Start first vue app

npm init vue

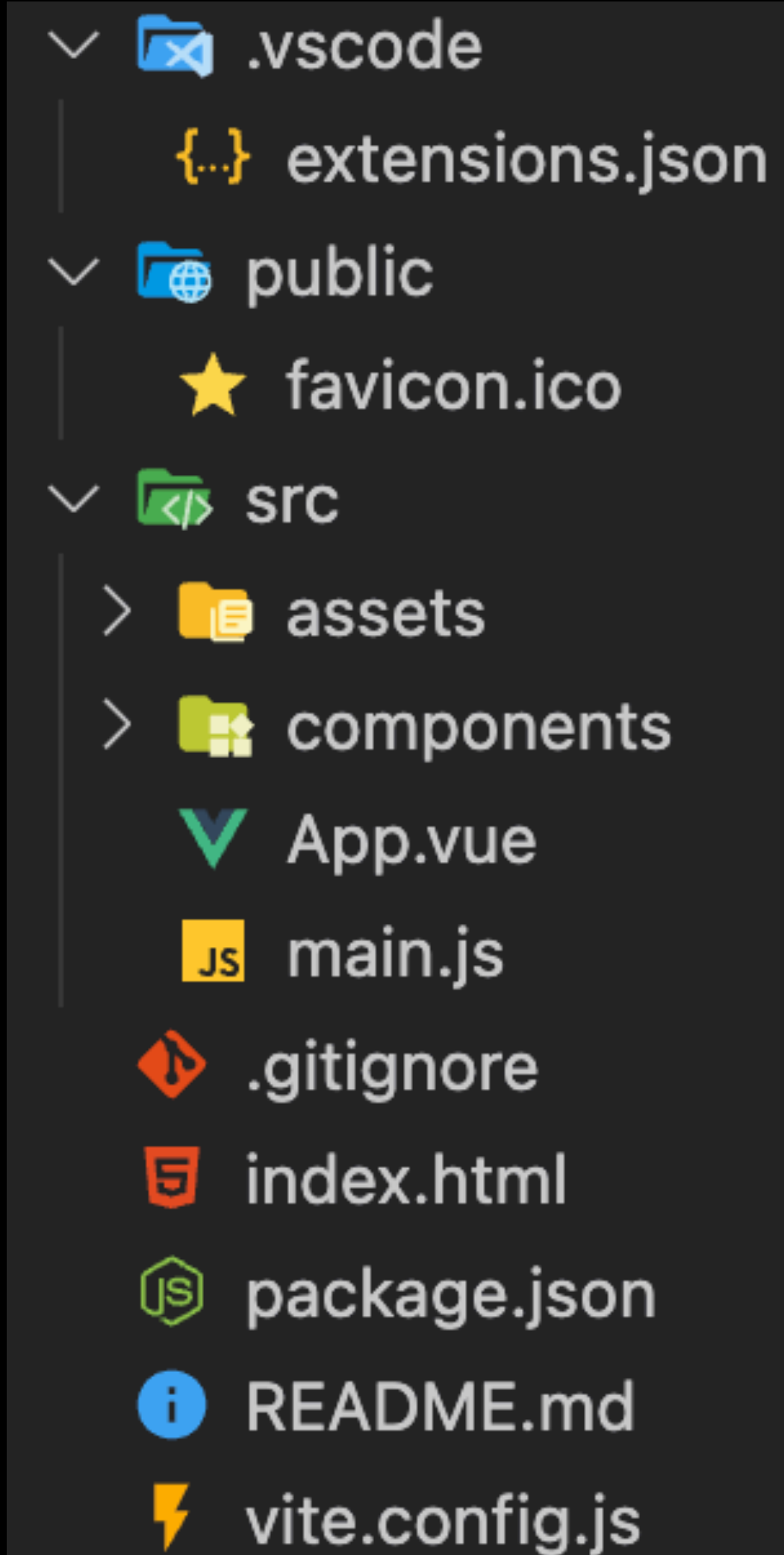
- ✓ Project name: ... <your-project-name>
- ✓ Add TypeScript? ... No / Yes
- ✓ Add JSX Support? ... No / Yes
- ✓ Add Vue Router for Single Page Application development? ... No / Yes
- ✓ Add Pinia for state management? ... No / Yes
- ✓ Add Vitest for Unit testing? ... No / Yes
- ✓ Add Cypress for both Unit and End-to-End testing? ... No / Yes
- ✓ Add ESLint for code quality? ... No / Yes
- ✓ Add Prettier for code formatting? ... No / Yes

Scaffolding project in ./<your-project-name>...

Done.

# Vue Folder Structure

- .vscode
- public
- src
- .gitignore
- index.html
- package.json
- README.md
- vite.config.js





# Install Package and Start Vue App

npm install

npm run dev

```
→ first-vue npm install
```

```
added 33 packages, and audited 34 packages in 6s
```

```
4 packages are looking for funding  
  run `npm fund` for details
```

```
found 0 vulnerabilities
```

```
→ first-vue npm run dev
```

```
VITE v3.1.8  ready in 668 ms
```

```
→ Local:    http://localhost:5173/
```

```
→ Network:  use --host to expose
```

# Template

App.vue



```
1  <template>
2    <h1>Hello World</h1>
3  </template>
```

# Reactivity Fundamentals

App.jsx



```
1  <template>
2    <h1>Hello World</h1>
3    <p>counter: {{ counter }}</p>
4  </template>
5  <script>
6    export default {
7      data() {
8        return {
9          counter: 0
10       }
11     }
12
13   }
14  </script>
```



# Computer Properties

## App.jsx

```
1  <template>
2    <h1>Hello World</h1>
3    <p>User name: {{ name }}</p>
4  </template>
5  <script>
6    export default {
7      data() {
8        return {
9          firstName: 'Alice',
10         lastName: 'Bob'
11        }
12      },
13      computed: {
14        name() { return `${this.firstName} ${this.lastName}` }
15      }
16    }
17  }
18  </script>
```

# Conditional Rendering

## v-if



```
1  <template>
2    <h1 v-if="show">Hello World</h1>
3  </template>
4  <script>
5    export default {
6      data() {
7        return {
8          show: false
9        }
10     }
11   }
12 </script>
```

# List Rendering

## v-for



```
1  <template>
2    <ul>
3      <li v-for="item in list">{{ item }}</li>
4    </ul>
5  </template>
6  <script>
7    export default {
8      data() {
9        return {
10          list: [
11            'the first item',
12            'the second item',
13            'the third item'
14          ]
15        }
16      }
17    }
18  </script>
```



# Event Handling

## v-on



```
1 <template>
2   <h1>Counter: {{ counter }}</h1>
3   <button v-on:click="counter++">Click Me</button>
4 </template>
5 <script>
6   export default {
7     data() {
8       return {
9         counter: 0
10      }
11    }
12  }
13 </script>
```



```
1 <button @click="counter++">Click Me</button>
```

# Method Handlers

## Methods




```
1 <script>
2 export default {
3   data() {
4     return {
5       counter: 0
6     }
7   },
8   methods: {
9     add() {
10       this.counter++;
11     }
12   }
13 }
14 </script>
```



```
1 <button v-on:click="add">Click Me</button>
```

# Form Input Bindings

## V-model



```
1 <template>
2   <input v-model="inputValue" />
3 </template>
4 <script>
5 export default {
6   data() {
7     return {
8       inputValue: 'Hello'
9     }
10  }
11 }
12 </script>
```

咪路 <[mail@mirumo.org](mailto:mail@mirumo.org) />