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WEB APP HTML CSS JavaScript —

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1990 - 2004

- □□□□
- js□□
- □□□□

**web2.0**  
**2004 - 2008**

- `□□□□□□□`
- `Ajax□□□□□□□`
- `□□:jQuery`

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2008 - 2015

- V8□□□□
- Node.js□□
- MVVM/MVC
- /SPA□□□□□

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2015 - 2020

- 8つのメモリバンク
- OSのメモリ管理
- 8つのメモリバンク
- 7つのメモリバンク

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2020 ~ ?

- 
- 
- 
- serverless
- lowcode/nocode
- WebAssembly



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The only constant in the world is change.

[illegible]

- `ReactDOM.render(

JS`
- `WebApp`
-







# Webpack - 入门

Webpack 是一个模块打包工具，它会将项目中的各种资源（如 JavaScript、CSS、图片等）打包成一个或多个 bundle，方便在浏览器中加载。

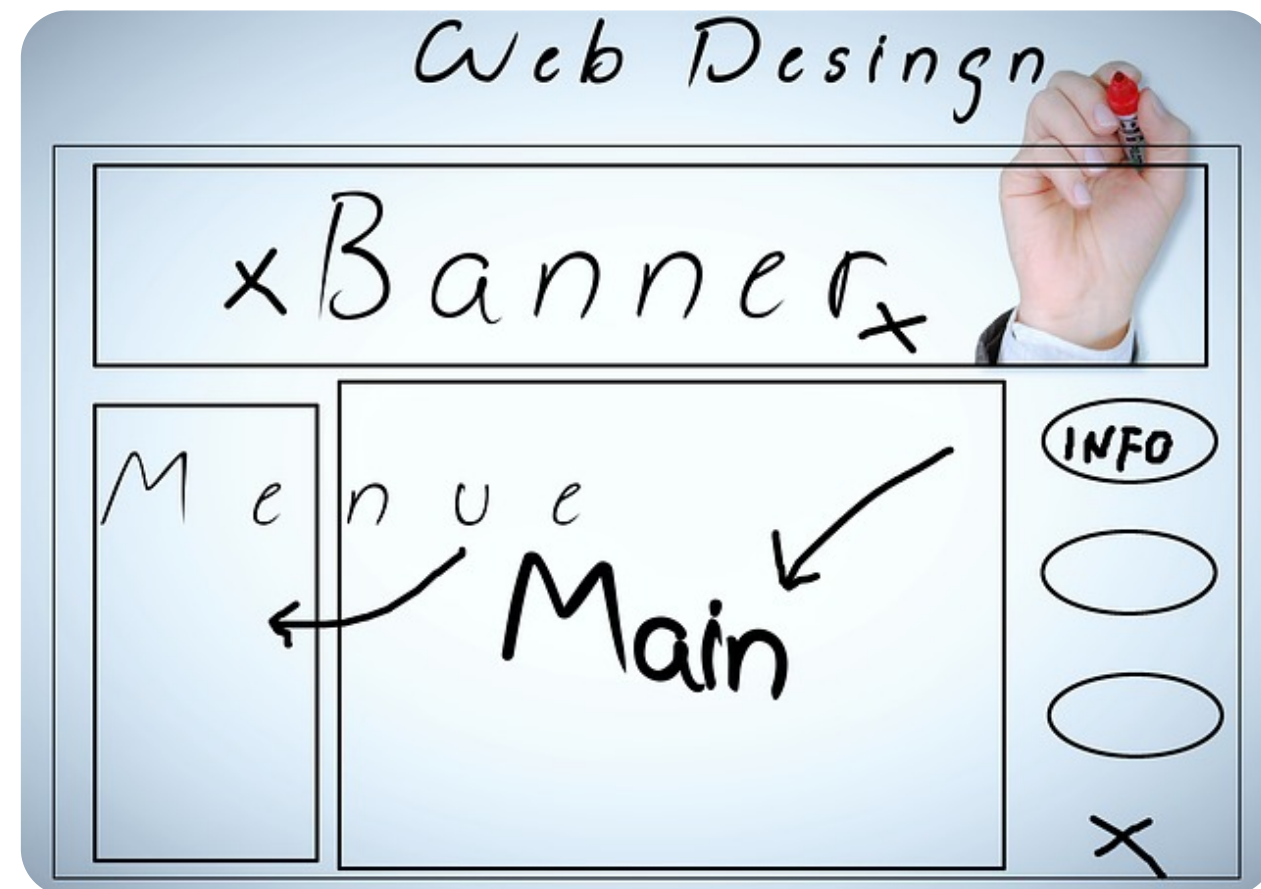


- JS 打包方案 CommonJS、AMD、CMD 打包 ES6 Module 打包
- CSS 打包方案 Sass、Less、Stylus、BEM、CSS Modules 打包方案 BEM 打包方案 CSS Modules 打包方案
- JS 打包方案打包方案 JS 打包方案 CSS 打包方案 Vue 打包 style scoped 打包
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[illegible]

- [illegible]





A horizontal number line with arrows at both ends, labeled from 0 to 100 in increments of 10. The numbers 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100 are placed below the line. Above the line, the number 50 is written in blue. A blue bracket is drawn above the line, starting at 50 and ending at 30. Below this bracket, the number 20 is written in blue. To the right of the bracket, the expression  $50 - 20$  is written in blue.

[illegible]

- 项目初始化;
- 项目目录结构搭建;ESLint+StyleLint 配置;
- 项目配置;
- 项目构建工具搭建;BEM+sass+less+stylus+CSS Modules 配置;
- git flow 项目分支管理;
- code review;

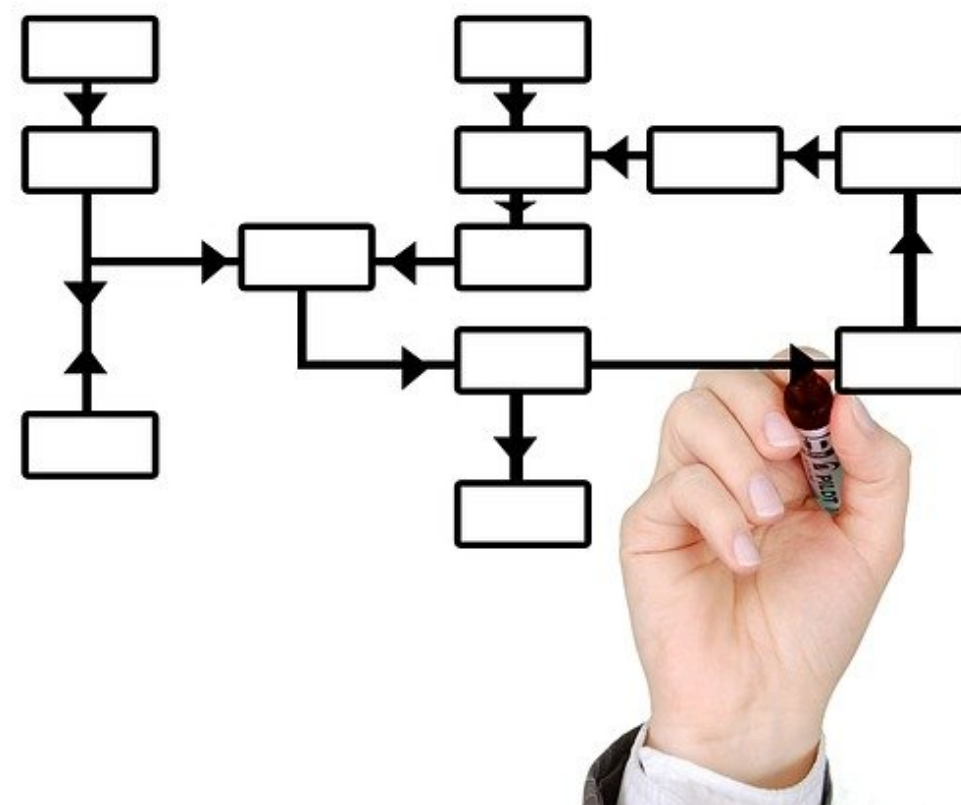
- [illegible]

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- `npm install` BEM Sass Less Stylus CSS Modules `npm install`;

- git flow

- code review;





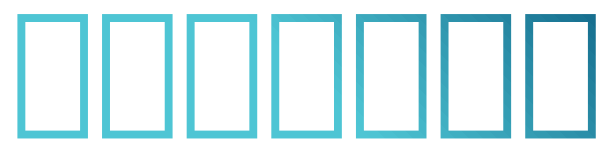
# 前端工程化-部署

【前端工程化部署流程】

- webpack/parcel/ESbuild;
- CI/CD;
- 部署;







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- □□×0×1×□□□□□□□□web□□□□□□





Well begun is half done.

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□□□□□□□□VUE / REACT / ANGULAR / ...□?

|      | Angular         | React             | Vue                        |
|------|-----------------|-------------------|----------------------------|
| □□□□ | 2010□           | 2013□             | 2014                       |
| □□□□ | TypeScript      | □□□□JavaScript□□□ | JavaScript/HTML/TypeScript |
| □□   | Incremental DOM | Virtual DOM       | Virtual DOM                |
| □□□□ | □□              | □□                | □□                         |
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# Incremental DOM

Incremental DOM

Angular

```
@Component({
  selector: 'todos-cmp',
  template: `
    <div *ngFor="let t of todos|async">
      {{t.description}}
    </div>
  `,
})
class TodosComponent {
  todos: Observable<Todo[]> = this.store.pipe(select('todos'))
  constructor(private store: Store<AppState>) {}
}
```

React

```
var TodosComponent = /** @class */ (function () {
  function TodosComponent(store) { /* store component */ }
  TodosComponent.ngComponentDef = defineComponent({
    type: TodosComponent,
    selectors: [["todos-cmp"]],
    factory: function TodosComponent_Factory(t) {
      return new (t || TodosComponent)(directiveInject(Store));
    },
    consts: 2,
    vars: 3,
    template: function TodosComponent_Template(rf, ctx) {
      if (rf & 1) { // create dom
        pipe(1, "async");
        template(0, TodosComponent_div_Template_0, 2, 1, null);
      }
      if (rf & 2) { // update dom
        elementProperty(0, "ngForOf", bind(pipeBind1(1, 1, ctx.todos)));
      }
    },
    encapsulation: 2
  });
  return TodosComponent;
})();
```



□□□□ - Virtual DOM

DOM DOM DOM

## ORIGINAL DIV DOM

```

var div = document.createElement('div')
var str = ''
for (var key in div){
  str += key + ' '
}
< "align title lang translate dir dataset hidden tabIndex accessKey draggable spellcheck contentEditable isContentEditable
offsetParent offsetTop offsetLeft offsetWidth offsetHeight style innerText outerText webkitDropzone onAbort onBlr
onCancel onCanPlay onCanPlayThrough onChange onClick onClose onContextMenu onCueChange onDoubleClick onDrag onDragEnd
onDragEnter onDragLeave onDragOver onDragStart onDrop onDurationChange onEmptied onEnded onError onFocus onInput
onInvalid onKeyDown onKeyPress onKeyUp onLoad onLoadedData onLoadedMetadata onLoadStart onMouseOver onMouseOut
onMouseLeave onMove onMoveOver onMouseout onMouseover onMouseup onMousedown onPause onPlay onPlaying onProgress onRateChange
onReset onResize onScroll onSeeked onSeeking onSelect onShow onStalled onSubmit onSuspend onTimeUpdate onToggle
onVolumeChange onWaiting click focus blur onAudioComplete onAudioCompleteError namespaceURI prefix localName tagName id
className classList attributes innerHTML outerHTML shadowRoot scrollTop scrollLeft scrollWidth scrollHeight clientTop
clientLeft clientWidth clientHeight onBeforeCopy onBeforeCut onBeforePaste onCopy onCut onPaste onSearch onSelectStart
onWheel onWebKitFullscreenChange onWebKitFullscreenError previousElementSibling nextElementSibling children
firstElementChild lastElementChild childElementCount hasAttributes getAttribute getAttributeNS setAttribute
setAttributeNS removeAttribute removeAttributeNS hasAttribute hasAttributeNS getAttributeNode getAttributeNodeNS
setAttributeNode setAttributeNodeNS removeAttributeNode closest matches webkitMatchesSelector getElementsByTagName
getElementsByName getElementsByTagName insertAdjacentElement insertAdjacentText insertAdjacentHTML
createShadowRoot getDestinationInsertionPoints requestPointerLock getClientRects getBoundingClientRect scrollIntoView
scrollIntoViewIfNeeded animate remove webkitRequestFullscreen webkitRequestFullscreen querySelector querySelectorAll
ELEMENT_NODE ATTRIBUTE_NODE TEXT_NODE CDATA_SECTION_NODE ENTITY_REFERENCE_NODE ENTITY_NODE PROCESSING_INSTRUCTION_NODE
COMMENT_NODE DOCUMENT_NODE DOCUMENT_TYPE_NODE DOCUMENT_FRAGMENT_NODE NOTATION_NODE DOCUMENT_POSITION_DISCONNECTED
DOCUMENT_POSITION_PRECEDING DOCUMENT_POSITION_FOLLOWING DOCUMENT_POSITION_CONTAINS DOCUMENT_POSITION_CONTAINED_BY
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC nodeType nodeName baseURI isConnected ownerDocument parentNode parentElement
childNodes firstChild lastChild previousSibling nextSibling nodeValue textContent hasChildNodes normalize cloneNode
isEqualNode isSameNode compareDocumentPosition contains lookupPrefix lookupNamespaceURI isDefaultNamespace insertBefore
appendChild replaceChild removeChild addEventListener removeEventListener dispatchEvent "
```

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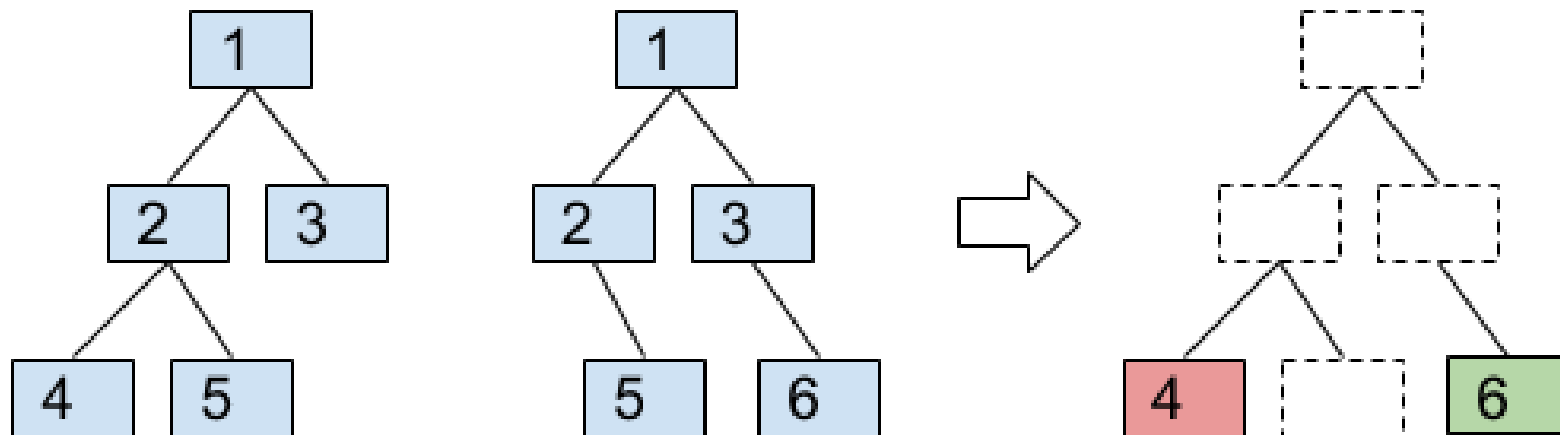


DOM DOM web  
ReactNative Weex.



Diagram illustrating the structure of the DOM (Document Object Model) tree. The top row shows a sequence of boxes, with the 10th box labeled "DOM". The bottom row shows a sequence of boxes, with the 4th box labeled "DOM".

# Virtual DOM DIFF





# □□□□ - React or Vue ?

# JavaScript – Introduction

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# jQuery

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# Github

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Angular



# 📦📦📦📦 - 📦📦📦📦

Talk is cheap. Show me the code. — Linus Torvalds

## 1. 📦📦📦📦 Vue Cli

```
npm install -g @vue/cli
```

## 2. 📦📦📦📦

```
vue create fintech-financeRecon-portal
```

- 📦📦📦📦📦📦nodejs📦📦npm📦📦📦📦📦📦📦npm📦📦📦📦📦📦📦📦📦📦



# 📁📁📁📁 - 📁📁📁📁

convention over configuration 📁📁📁📁

## ■ 📁📁📁📁

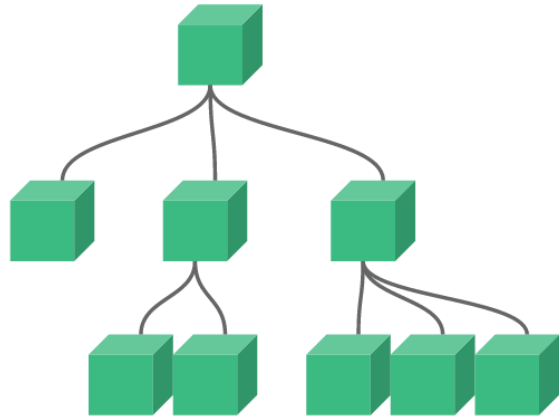
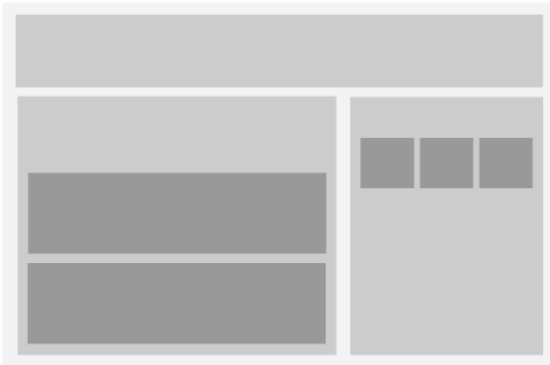
```
├─ README.md      // 📄 📄 📄
├─ package.json   // 📄 📄 📄 📄
├─ src
│   ├─ App.vue    // 📄 📄 📄
│   ├─ api        // api 📄
│   ├─ assets     // 📄 📄 📄
│   ├─ components // 📄 📄 📄 📄
│   │   └─ Charts
│   ├─ config     // 📄 📄 📄 📄
│   │   └─ defaultSettings.js
│   ├─ main.js    // js 📄
│   ├─ router.js  // 📄 📄 📄
│   ├─ store      // 📄 📄 📄
│   ├─ utils      // 📄
│   │   └─ axios.js
│   │   └─ utils.js
│   └─ views      // 📄
│       └─ 404.vue
└─ .env.dev       // 📄 📄 📄 📄
```



# UI - UX

UI/UX Design Process

- UI/UX Design



- UI/UX Design for fintech applications

|             |             |  |
|-------------|-------------|--|
| +---+-----+ |             |  |
|             | hbTablePage |  |
| +---+-----+ |             |  |
| M           | search-bar  |  |
| E           | action-bar  |  |
| N           | data-table  |  |
| U           |             |  |
| +---+-----+ |             |  |

UI/UX Design Process

UI/UX Design for fintech applications Vue.js







# Table - Table2

Table - Table2

Table - Table2

## Table

```
/**
 * TablePage.vue
 * Table
 * this.$emit('myEvent')
 */
onSelectChange(selectedRowKeys, selectedRows) {
  this.$emit('ON_SELECTED_DATA', this.selectedData);
}
```

## Table2

```
/* Page.vue */
<template>
  <div>
    <hbTablePage
      @ON_SELECTED_DATA="onSelectedData"
    >
    </hbTablePage>
  </div>
</template>
```

## Table

- Table prop "Table" Table
- Table update:myPropName Table



# Table - 3

Table component with slots for search bar and action bar

## Table component - Slots

### Table component slots

```
/* TablePage.vue */
<div v-if="$slots.searchBar">
  <slot name="searchBar"></slot>
  <a-divider dashed style="margin: 12px 0px" />
</div>
<div v-if="$slots.actionBar">
  <slot name="actionBar"></slot>
</div>
```

### Table component

```
/* Page.vue */
<template>
  <div>
    <hbTablePage>
      <template v-slot:searchBar>
        <hbTableSearchBar />
      </template>
      <template v-slot:actionBar>
        <hbTableActionBar />
      </template>
    </hbTablePage>
  </div>
</template>
```



# 路由 - 路由

路由配置

## ■ 路由

```
/* router.js
* 路由配置 */
{
  path: '/userLogin',
  name: 'userLogin',
  component: resolve => require(['@/views/user/Login'],
    resolve),
}
```

```
/* router.js
* 路由配置 */
{
  path: '/userLogin',
  name: 'userLogin',
  component: =>import(
    /* webpackChunkName: "userLogin" */
    '../views/userLogin.vue')
}
```

## ■ 路由配置

```
/* babel-plugin-component
* .babelrc */
{
  "presets": [["es2015", { "modules": false }]],
  "plugins": [
    "component",
    {"libraryName": "ant-design-vue",
      "styleLibraryName": "theme-chalk"}]
  ]
}
```

```
/* main.js or page.vue */
import Vue from 'vue';
import { Button, message } from 'ant-design-vue';

Vue.use(Button);
Vue.prototype.$message = message;
```



# webpack - 1

webpack 配置

## ■ 配置

```
/* image-webpack-loader
 * vue.config.js */
{
  test: /\.?(png|jpe?g|gif|svg)(\?.*)?$/,
  use: [{
    loader: 'url-loader',
    options: {
      limit: 10000,
      name: utils.assetsPath('img/[name].[hash:7].[ext]')
    }
  }, {
    loader: 'image-webpack-loader',
    options: {
      bypassOnDebug: true,
    }
  }]
}
```

## ■ 配置

```
/* CommonsChunkPlugin
 * vue.config.js
 * package.json 配置 vendor.js 文件 */
new webpack.optimize.CommonsChunkPlugin({
  name: 'vendor',
  minChunks: function(module, count) {
    return (
      module.resource &&
      /\.js$/.test(module.resource) &&
      module.resource.indexOf(
        path.join(__dirname, '../node_modules')
      ) === 0
    );
  }
}),
/* 配置 */
new webpack.optimize.CommonsChunkPlugin({
  name: 'manifest',
  chunks: ['vendor']
})
```



# webpack - 2

webpack 配置

## ■ ES6 转 ES5 配置

```
/* babel-plugin-transform-runtime
* .babelrc */
"plugins": [
  "transform-runtime"
]
```

## ■ BABEL 转 ES6 转 ES5 配置

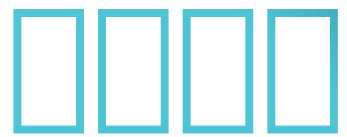
## ■ 转 ES6 转 ES5 配置

## ■ gzip 配置

```
/* compression-webpack-plugin@5.0.1
* vue.config.js
* 配置 .gz 文件 */
const CompressionPlugin = require("compression-webpack-plugin")
configureWebpack: {
  plugins: [
    new CompressionPlugin({
      filename: "[path].gz",
      algorithm: "gzip",
      test: /\.js$|\.css$|\.html$/,
      threshold: 10240, // 压缩文件的大小, 单位字节
      minRatio: 0.8,
      deleteOriginalAssets: false
    })
  ]
}
```

```
/* nginx.conf
* nginx 配置 gzip */
gzip on; # 配置 gzip
...
```





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- □□□□:
  1. □□vue cli□□□□□□□□□□
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  3. □□□□□□□□□□□□□□□□□□□□;

□□VueJs□□□□□□□□□ <https://vuejs.org/>.



# Where to Go From Here?

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

.....



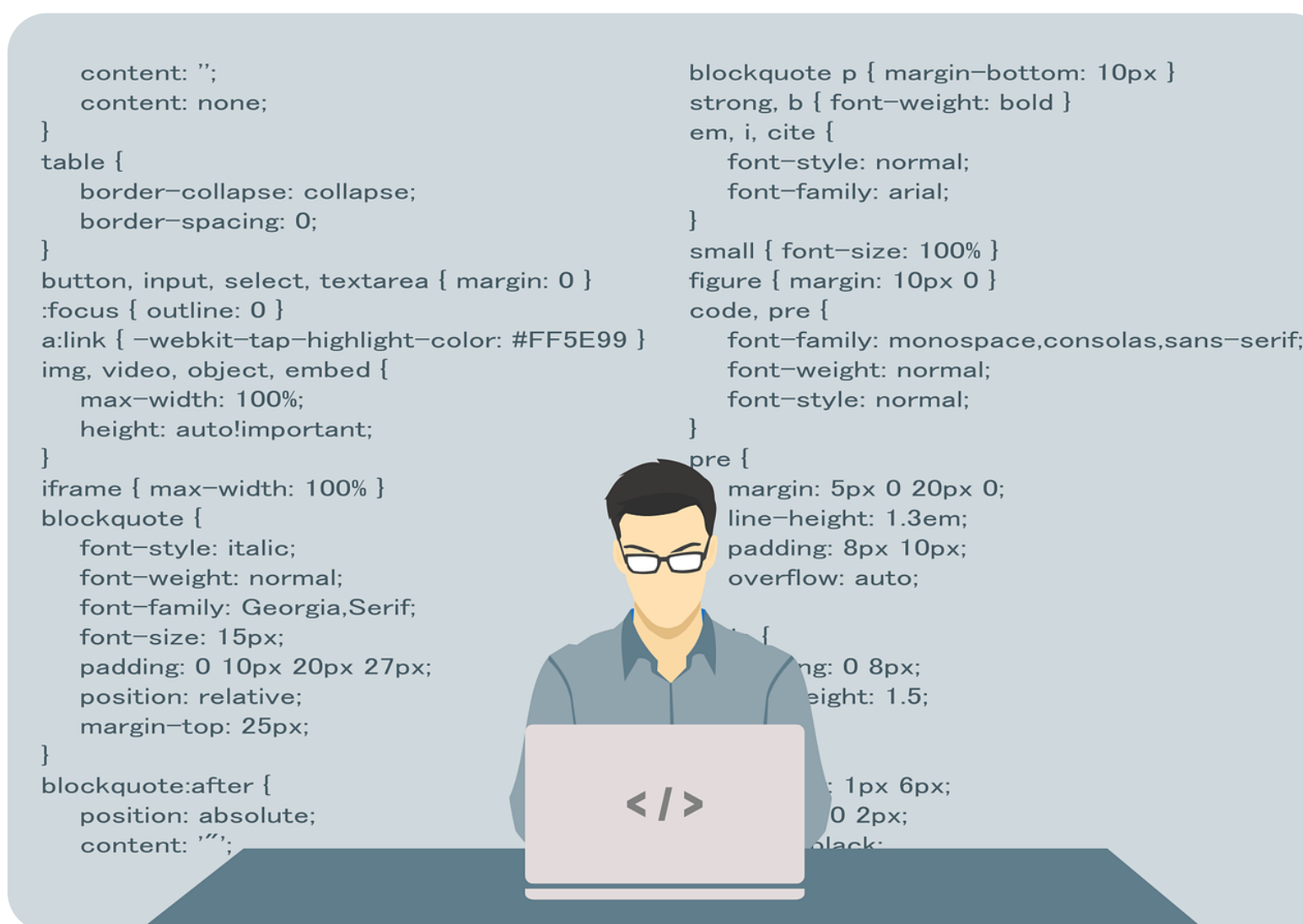
# 前端技术栈

- 基础库 (jQuery, ES5, ES6)
- 框架 (reactjs, vuejs, angularjs) / jquery
- SPA (Single Page Application)





- `0vuejsweb`;
- `vuejs`





THANK YOU !

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# One More Thing

□□□□□□□□□□<https://sli.dev>