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WEB APP HTML CSS JavaScript —

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1990 - 2004

- `□□□□`
- `js□□`
- `□□□□□`

web2.0
2004 - 2008

- `jQuery.ajax()`
- `$.ajax()`
- `$.ajaxSetup()`
- `$.ajaxSettings`
- `$.ajaxTransport()`
- `$.ajaxPrefilter()`
- `$.ajaxSuccess()`
- `$.ajaxError()`
- `$.ajaxComplete()`
- `$.ajaxStop()`




2008 - 2015

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

□□□□□
2015 - 2020

- 10개의 블록을 사용한다
- OS가 블록을 관리한다

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2020 ~ ?

- 
- 
- 
- serverless
- lowcode/nocode
- WebAssembly

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The only constant in the world is change.

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[illegible]

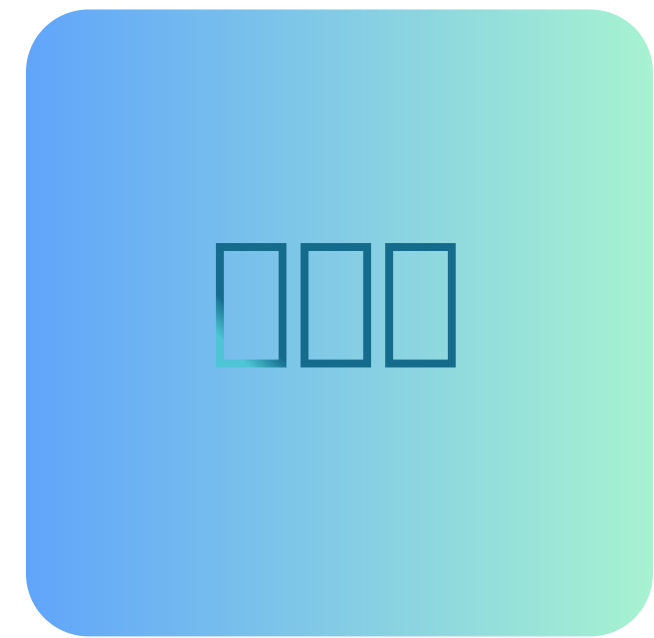
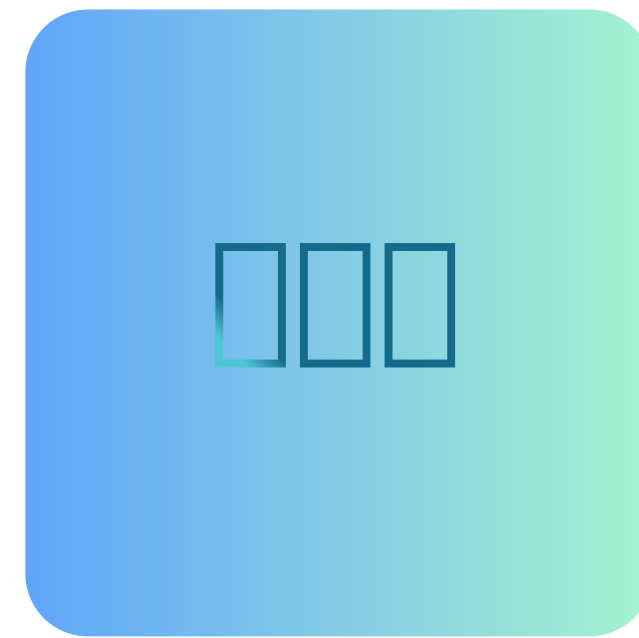
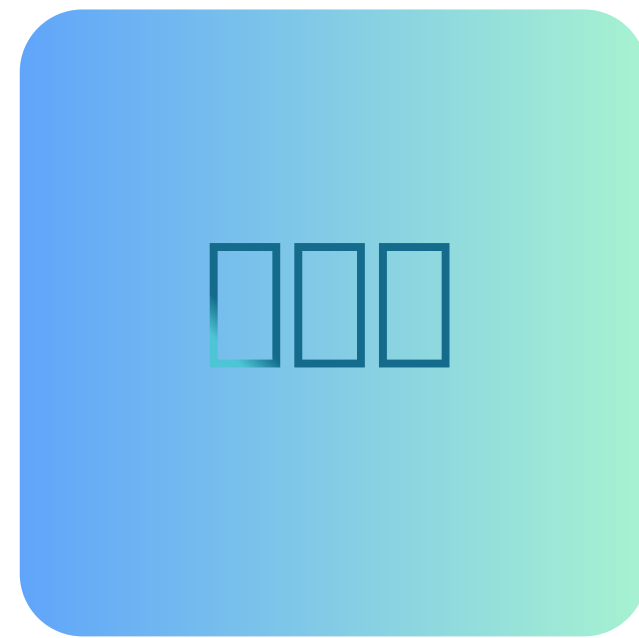
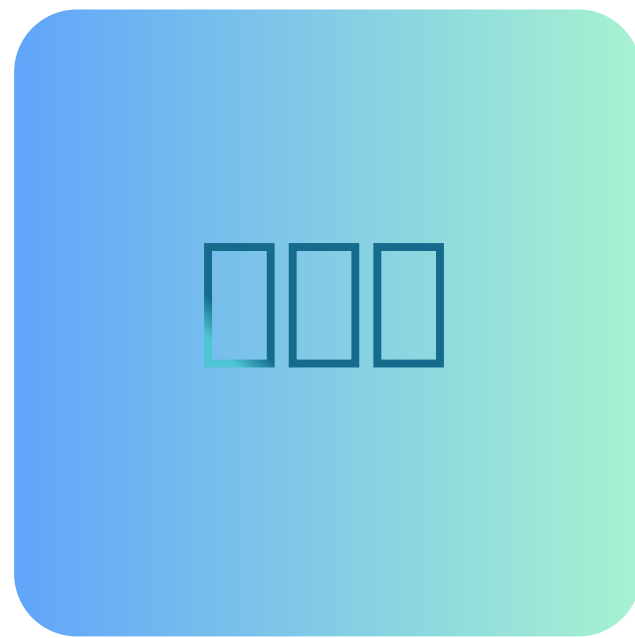
- `ReactDOM.render(

JS`
- `WebApp`
-

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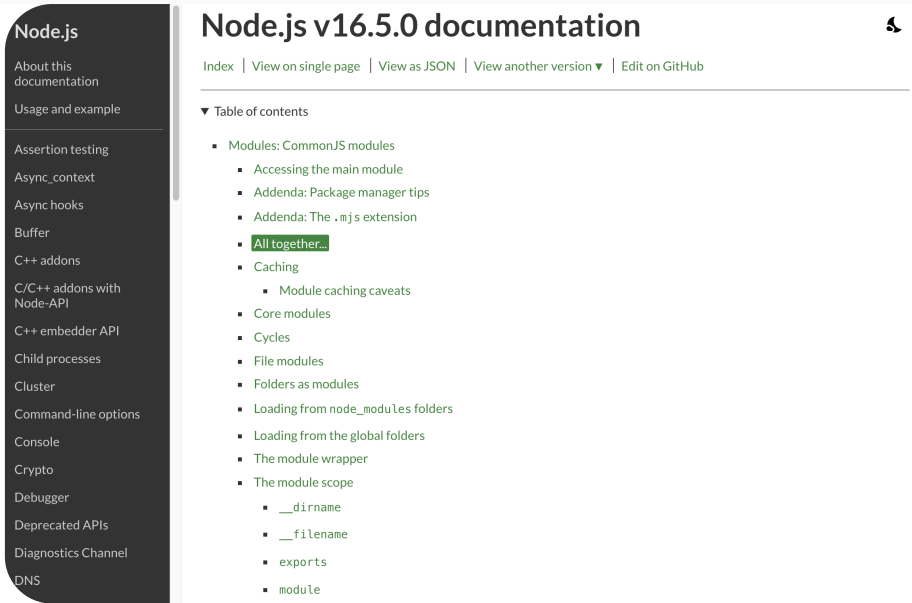
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Webpack 与 ES6

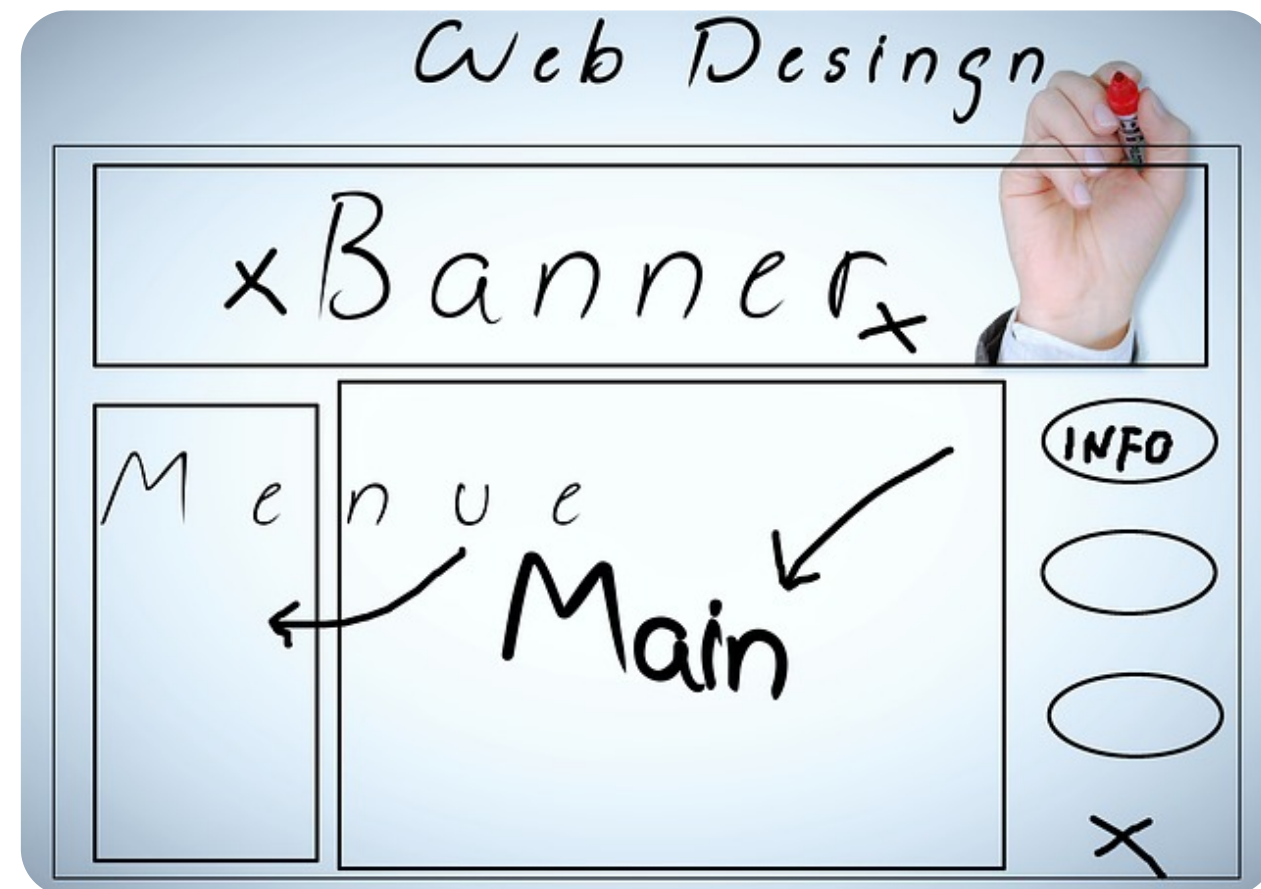
ES6 模块与 CommonJS 模块、AMD 模块、CMD 模块、ES6 Module 模块



- JS 模块 CommonJS AMD CMD ES6 Module
- CSS 模块 Sass Less Stylus BEM CSS Modules 模块 BEM 模块 CSS Modules 模块
- JS 模块 CSS 模块 Vue 模块 style scoped
- CSS 模块 JS 模块

[illegible]

- [illegible]



A horizontal number line with arrows at both ends, ranging from 0 to 100. Major tick marks are labeled every 10 units: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. A blue arrow starts at the 50 mark and points to the 80 mark.

[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;

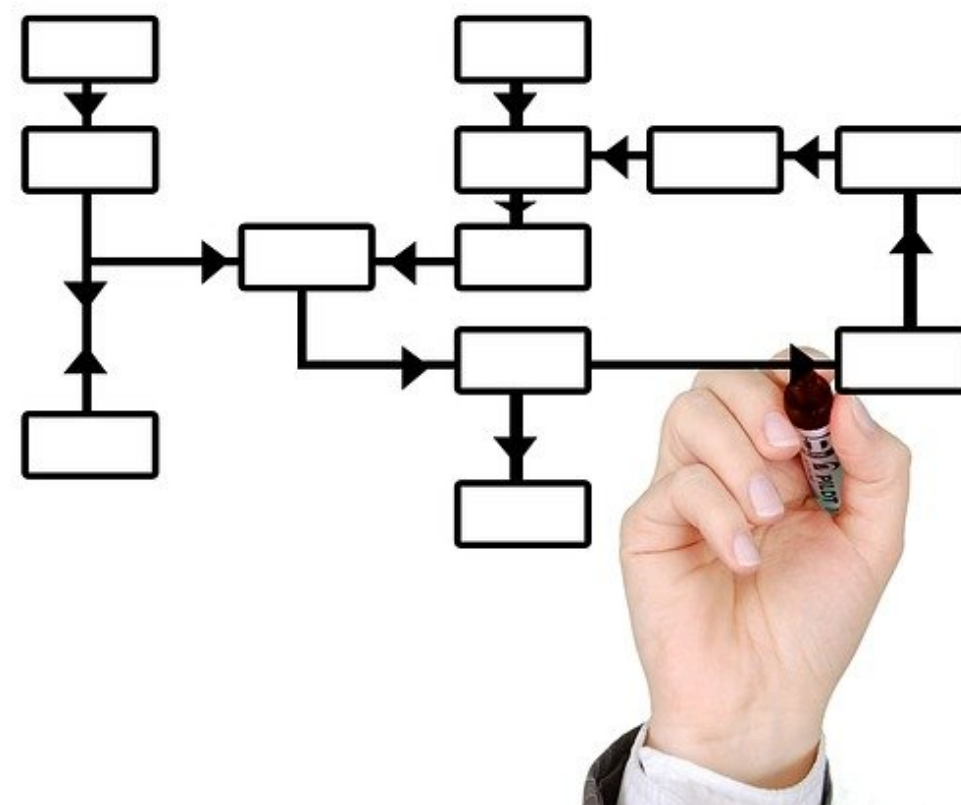
- ESLint & StyleLint

- □ □ □ ;

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

- git flow

- code review;

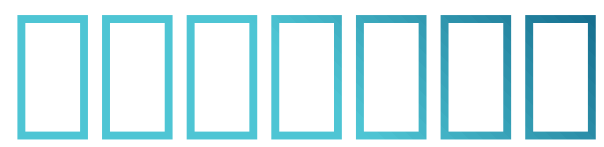


前端工程化-部署

前端工程化-部署

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





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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 onMouseWheel 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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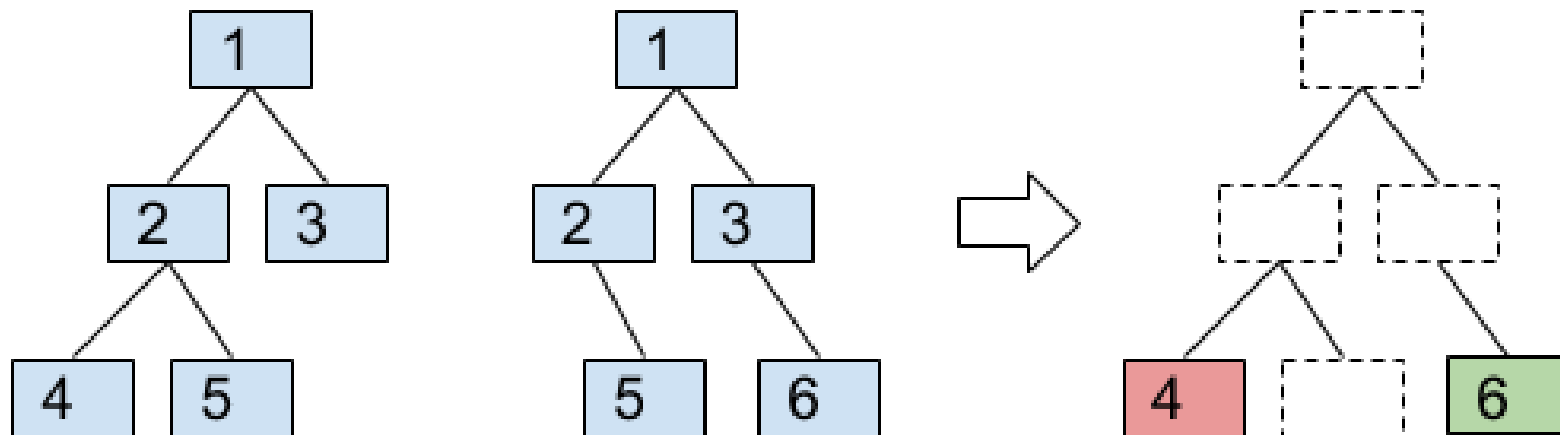


DOM DOM web
ReactNative Weex.



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 入門 - 変数

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jQuery

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Github

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Angular

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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 📁📁📁📁

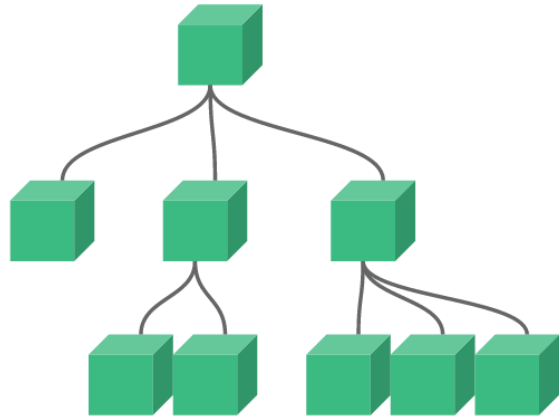
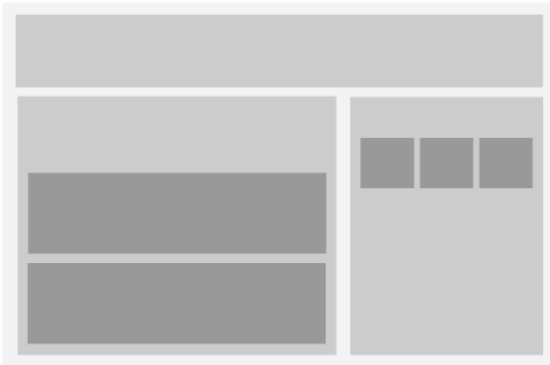
■ 📁📁📁📁

```
├─ 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 Process Vue.js

Table - Table2

Table - Table2

Table - Table2

Table - Table2

```
/**
 * TablePage.vue
 * Table - Table2
 * this.$emit('myEvent')
 */
onSelectChange(selectedRowKeys, selectedRows) {
  this.$emit('ON_SELECTED_DATA', this.selectedData);
}
```

Table - Table2

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

Table - Table2

- Table - Table2 prop "Table2" Table - Table2
- Table - Table2 update:myPropName Table - Table2

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

```
/* 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□□□□□□□□□□

2. □□□□□□□□□□□□□□□□

3. □□□□□□□□□□□□□□□□□□□□;

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

Where to Go From Here?

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

Flutter

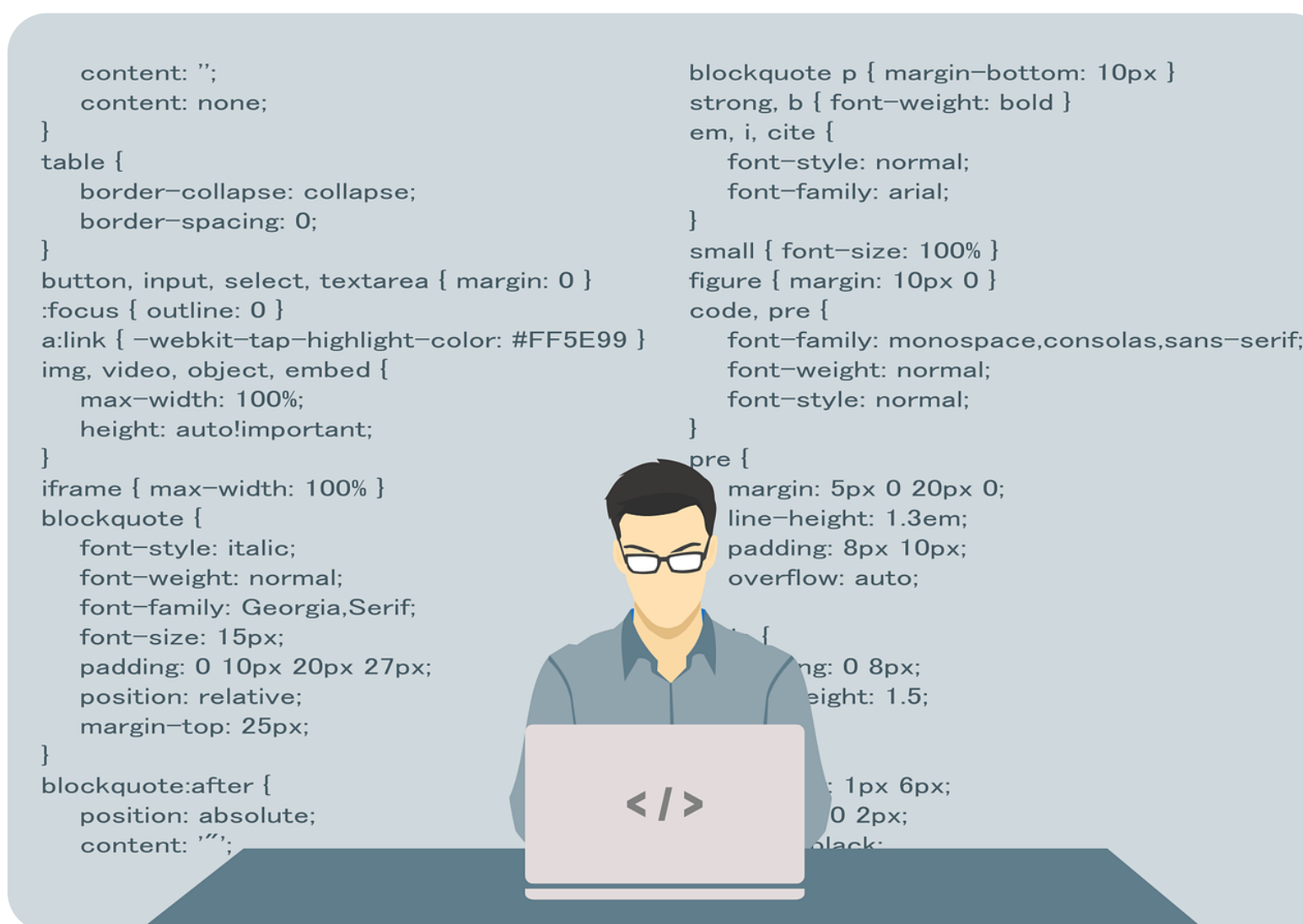
.....

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>