Review of Front-End Web UI Framework and Tools: Bootstrap 4

Week1:

1. Introduction to Bootstrap

<u>Front-end UI Frameworks</u>: Collection of ready-to-use HTML, CSS and JS templates for UI Components <u>Bootstrap</u>: most popular front-end **framework** for web development

代码中需要导入 CSS Class, jQuery, popper and JS, CSS 用于 render 页面所以开始的时候就导入,JS 导入时间比较长,通常最后导入。

2. Responsive Design and Bootstrap Grid System

Responsive Design: Adapt to the user's "viewport" (one size can't fit all, Grid system/Fluid images /Media queries)

Bootstrap grid: leverage CSS Flexbox Layout



Week2:

1. Navigation and Navigation Bar

Navigation bar & Breadcrumbs

Icon Fonts: Font Awesome & Bootstrap-social

2. User Input: Buttons and Forms

3. Displaying Content: Tables and Cards

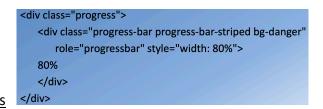
Tables: display tabular data in a web page

Cards: highlight contents

4. Images and Media: Images, Thumbnails, Media Objects

<u>Card</u>: <div class="card">
Media: <div class="media>

5. Alerting Users: Badges, Alerts, Progress Bars



Progress Bars

Week3:

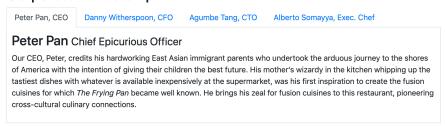
1. Bootstrap JavaScript Components Overview

CSS classes: base class+modifiers

<u>JavaScript support</u>: through JS Plugins, written based on Jquery

2. Tabs and Tabbed Navigation

Corporate Leadership



3. Hide and Seek: Collapse and Accordion



4. Revealing Content: Tooltips, Popovers and Modals





5. Carousel



Week4:

1. Bootstrap and jQuery

<u>jQuery</u>: Lightweight JavaScript library, Bootstrap JS components build upon JQuery

\$(selector).action()

- \$: define/access JQuery
- (selector): to query and find HTML elements
- action(): action to be performed on the element(s)
- e.g., \$("p").hide(), \$("#mycarousel").carousel('pause')

jQuery Syntax:

<u>jQuery Event Methods</u>: e.g.: ready(), click(), dblclick(), mousedown(), on()

2. Less is More!: Less and Sass

<u>CSS</u>: defining styles and repeatedly applying them to various HTML elements, but limited in defining variables, nesting selectors, expressions and functions (this is where the CSS Preprocessors come to help)

<u>CSS Preprocessors</u>: compiled into traditional CSS syntax automatically before use in a web page (Less, Sass (Syntactically Awesome Style Sheets, Scss is a version of Sass, a more popular one), Stylus)

3. Building and Deployment: NPM Scripts

In CSS Tasks and JavaScript Tasks, there are lots of repeated work, so we can use NPM scripts to help us with those work (like watch the changes we've made to our files, and rerender the pages.)

把写的所有程序和用到的所用程序分类放到一个 file 里面,通过 NPM scripts 来完成, 以及自动更新等功能

4.Building and Deployment: Task Runners: Grunt and Gulp

和 3 做的事情一样, 但是调用了外面的两个库