WEB 501/801 Front-End Web Development

Meishen Yin

#246

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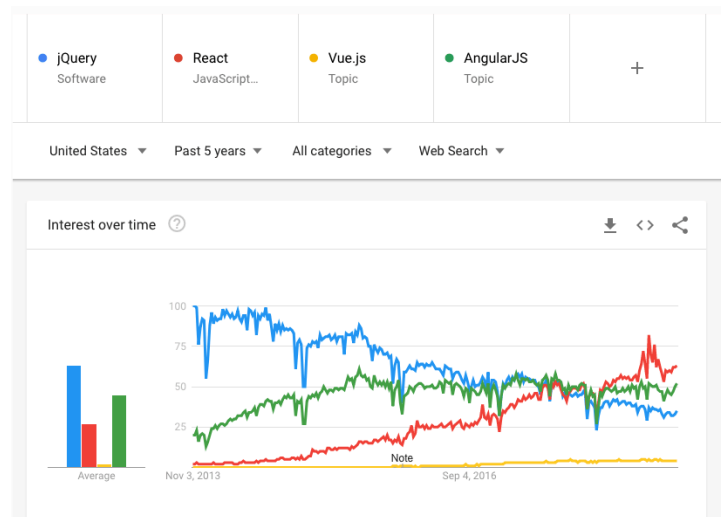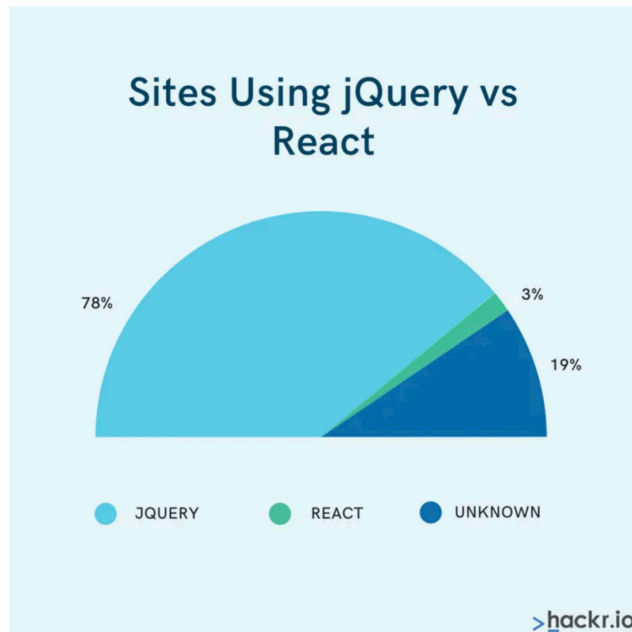
1. Context and Background

I am interested in jQuery because I found it is so easy to use and it flexibly adjusts the content of the HTML. As one of the most popular Javascript libraries, it is used more than 4 times more than other front-end development languages.

There is a lot of business website that adopts jQuery to build their official websites, such as Uber, Udemy, Twitter, Slack, and Reddit. One business website Trello is built based on the jQuery.

Jquery is famous for its simplicity, cross-browser compatibility, and SEO friendly.

2. jQuery Library

HTML/DOM manipulation

Get content method includes text(), html(), val(); methods for set the attribute is attr(). Methods for add new HTML content contains append(), prepend(), after(), before(). Remove elements in HTML by using remove(), empty()

CSS manipulation

Methods include css().

HTML event methods

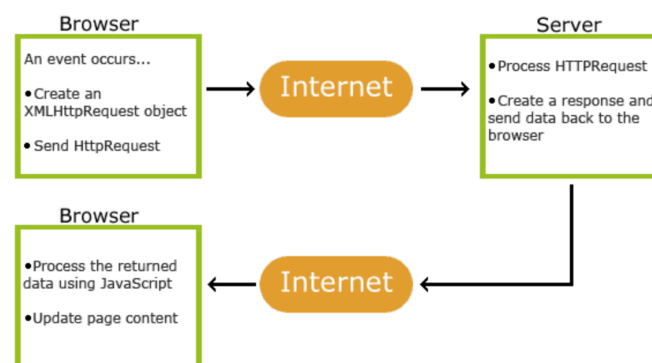The event methods include click,dbclick, mouse enter, mouse leave. Effects and animations

Commonly used method include fadeIn(), fadeOut(), fadeToggle(), fadeTo(), slideDown(), slideUp(), slideToggle(),animate(), stop()

Dimension method include width(), height(), innerWidth(), innerHeight(), outerWidth(), outerHeight()

AJAX

jQuery means the data can be loaded in the background and displayed on the webpage. Gmail, Google maps, Youtube and Facebook are using AJAX. Methods like load().

How AJAX Works

Browser
An event occurs...
- Create an XMLHttpRequest object
- Send HttpRequest

Internet →

Server
- Process HTTPRequest
- Create a response and send data back to the browser

Browser
- Process the returned data using JavaScript
- Update page content

← Internet

3. Case Study
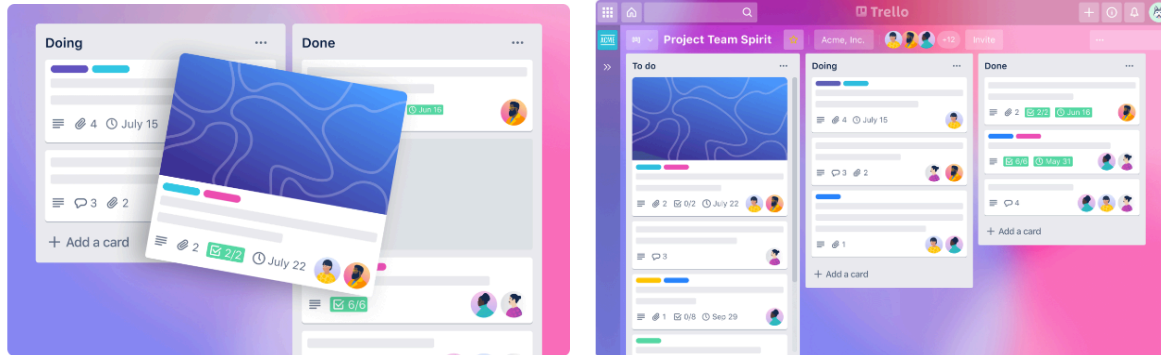
Trello is a useful task management tool that is very popular now. It offers visual tools which help individuals and teams to manage projects, workflow, and work tasks. I have used this tool for a very long time. I am very surprised to find this software product is built upon jQuery.

There are a lot of boards, lists and cards in the product design concept.

Moving card around is an important interaction in Trello product which aims at improving users' task management efficiency by offering convenience in moving task cards around the workspace.

```
</script>
<script src="https://a.trellocdn.com/prgb/dist/br/bootstrap.af8af40….js" crossorigin="anonymous" onerror="_failed(this)"></script>
<script crossorigin="anonymous" src="https://a.trellocdn.com/prgb/dist/locale.en-US.f150e1b….js"></script>
<script src="https://a.trellocdn.com/prgb/dist/br/quickload.f45bfd9….js" crossorigin="anonymous" onerror="_failed(this)"></script>
▼<script>
    (function() {
            var route = window.location.pathname;

            var preload = function(path) {
              // We could be more defensive here, this at least avoid an error thrown
              // due to an invalid path
              if (!path) {
                return;
              }

              var link = document.createElement('link');
              link.rel = 'preload';
              link.href = path;
              link.as = 'script';

                link.setAttribute('crossorigin', 'anonymous');

              document.head.appendChild(link);
            };

            // Preload power-ups things.
            if (route.indexOf('/power-ups') === 0) {
              if (route.indexOf('/power-ups/admin') === 0) {
                preload("https://a.trellocdn.com/prgb/dist/powerup-admin-page.c6548894e05c98d5bd21.js");
              } else if (route.indexOf('/edit') !== -1) {
                preload("https://a.trellocdn.com/prgb/dist/powerup-edit-powerup-page.c2e0cf9b94eb81e96b86.js");
              } else {
                preload("https://a.trellocdn.com/prgb/dist/powerup-public-directory-page.ddb08de817154cdd6adc.js");
              }
            }
```

```
▼<script nonce>
    (function () {
      if (!window.__SCRIPTS_LOADED__['main']) {
        document.getElementById('ScriptLoadFailure').style.display = 'block';
        var criticalScripts = ["polyfills","vendors~main","i18n","main"];
        for (var i = 0; i < criticalScripts.length; i++) {
          var criticalScript = criticalScripts[i];
          if (!window.__SCRIPTS_LOADED__[criticalScript]) {
            document.getElementsByName('failedScript')[0].value = criticalScript;
            break;
          }
        }
      }
    })();
  </script>
```

Trello application is what I used very frequently and it uses jQuery. I look deep into its code. On the

homepage, I found the <script> in the head.

```
▼<div class="_2ffa7ex19Eoxvc">
  ▼<div id="surface" class="_2W6d4IdyPwMlNi"> flex
    ▶<div data-desktop-id="header" data-js-id="header-container" class="_3cDDlVbib-11ls">...</div>
    ▼<main id="popover-boundary" class="_13yPKk9EPKnvGB"> flex
      ▼<div style="display: flex; flex-direction: row; flex: 1 1 0%; position: relative; overflow-y: auto;"> flex
        ▶<div class="js-react-root">...</div>
        ▼<div id="content-wrapper" style="display: flex; flex-direction: column; flex: 1 1 0%; overflow-y: auto; padding-left: 260px;"
          ▶<div>...</div>
          ▼<div id="content" tabindex="-1">
            ▼<div class="board-wrapper">
              ▼<div class="board-main-content"> flex
                ▶<div class="board-header u-clearfix js-board-header">...</div>
                  <div class="board-warnings u-clearfix js-board-warnings hide"></div>
                ▼<div class="board-canvas">
                    <div class="js-board-view-container"></div>
                  ▼<div id="board" class="u-fancy-scrollbar js-no-higher-edits js-list-sortable ui-sortable" dragscrollenabled="true">
                    ▶<div class="is-list list-wrapper">...</div>
```

Also, I do find that it specifies a lot of #ids which is easier for jQuery to select elements.

On the member page, I found these following codes.

Another great example of using jQuery to build a website is Twitter. Twitter is a comminication platfrom

```
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        var link = document.createElement('link');
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        link.href = path;
        link.as = 'script';

        link.setAttribute('crossorigin', 'anonymous');

        document.head.appendChild(link);
      };

      // Preload power-ups things.
      if (route.indexOf('/power-ups') === 0) {
        if (route.indexOf('/power-ups/admin') === 0) {
          preload("https://a.trellocdn.com/prgb/dist/powerup-admin-page.c6548894e05c98d5bd21.js");
        } else if (route.indexOf('/edit') !== -1) {
          preload("https://a.trellocdn.com/prgb/dist/powerup-edit-powerup-page.c2e0cf9b94eb81e96b86.js");
        } else {
          preload("https://a.trellocdn.com/prgb/dist/powerup-public-directory-page.ddb08de817154cdd6adc.js");
```

which contain information from users across sports, politics. This giant media company used jQuery to

build the website. On this feeds page, I found this code

Conclusion

jQuery is not the latest web language used to develop a website. However, it is very convenient and because of its pros, it is still very popular among developers especially if your products require support for older browsers.

Other libraries also have a dependence on jQuery, such as Bootstrap.

Reference

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