

Responsive Design

Module 4 Week 10

Notes Repo: <https://github.com/C-Shi/lhl-flex-lecture>



Learning Objectives

Responsive Design

Relative CSS Unit

Media Query

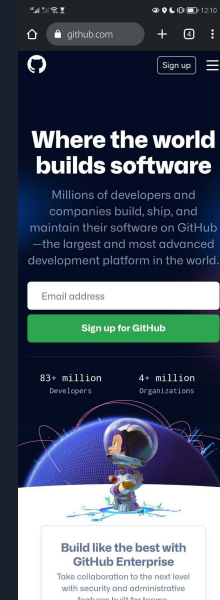
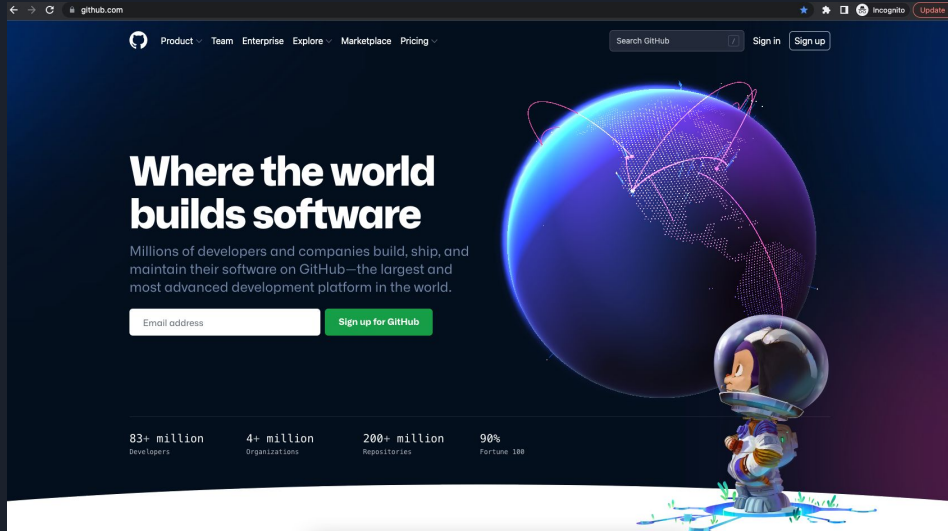
Concept of Viewport

Pre-processor and SASS

Responsive Design

Responsive Design aims to make web page render well in all different screen size

Responsive Design use one set of rules for all different device





Relative CSS unit

Unit	Description
%	Relative to the dimension of parent
em	Relative to parent's font-size
rem	Relative to root font-size (em of <html>)
vh	1% of the viewport height
vw	1% of the viewport weight

Quiz

```
<html>
  <body>
    <main>
      <article>This is article</article>

      <footer>This is Footer</footer>
    </main>
  </body>
</html>
```

```
main {
  width: 1000px;
  font-size: 24px;
}

article {
  width: 50%;
  height: 10em;
}

footer {
  font-size: 2rem;
}
```

Knowing that the default font-size for html is 16px:

1. What is the <article> width in px
2. What is the <article> height in px
3. What is the <footer> font-size in px



Media Query

```
@media screen only and (min-width: 500px) and (orientation: landscape) {  
  div {  
    background-color: #FFF;  
  }  
}
```

	Syntax	Description
Symbol	@media	Signaling media query
Media Types	all, screen, print	Category of device
Media Features	orientation, min-width, max-width, etc	Output characteristic
Logical Operators	and, not, only	Compose complex condition



What is Viewport

From Mozilla:

What is a viewport?

A viewport represents the area in computer graphics being currently viewed. In web browser terms, it is generally the same as the browser window, excluding the UI, menu bar, etc. That is the part of the document you are viewing.

In web browser, viewport is generally the same as the browser window

Mobile browser's viewport is usually wider than the screen

```
<head>  
  <meta name="viewport" content="width=device-width, initial-scale=1.0">  
</head>
```

CSS preprocessor and SASS

A **CSS preprocessor** is a program that lets you generate CSS from the preprocessor's own unique syntax.

There are many CSS preprocessors to choose from, however most CSS preprocessors will add some features that don't exist in pure CSS, such as mixin, nesting selector, inheritance selector, and so on. These features make the CSS structure more readable and easier to maintain.

To use a CSS preprocessor, **you must install a CSS compiler** on your web server; Or use the CSS preprocessor to compile on the development environment, and then upload compiled CSS file to the web server.

Sass is a stylesheet language that's compiled to CSS. It allows you to use variables, nested rules, mixins, functions, and more, all with a fully CSS-compatible syntax. Sass helps keep large stylesheets well-organized and makes it easy to share design within and across projects.