Media queries

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Advanced CSS3

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6-1. Media queries

Graceful Degradation vs Progressive Enhancement

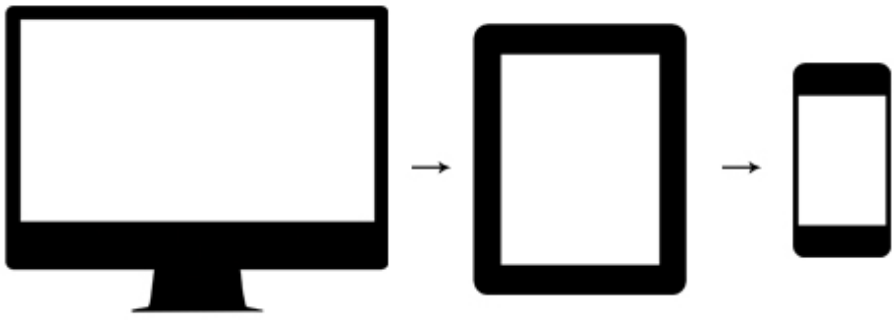
6-1-1

Graceful Degradation

6-1-2

A methodology with the aim of making web pages accessible to a variety of browsers, by developing from a baseline of **full features**, and then **removing layers of features** throughout the **regression** to **less capable** browsers.

6-1-3



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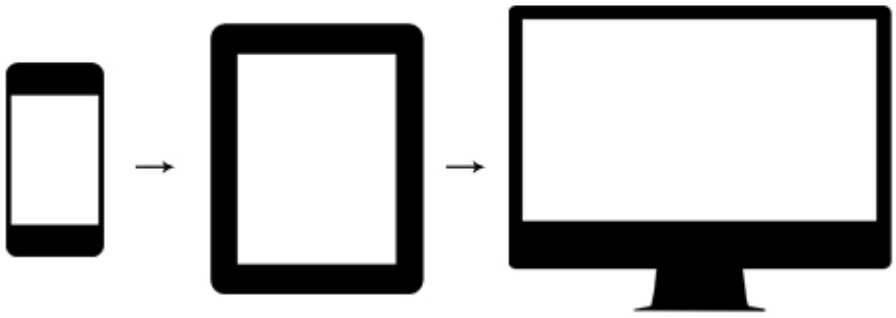
Progressive Enhancement

6-1-4

A methodology with the aim of making web pages accessible to a variety of browsers, by developing from a baseline of **compatible features**, and then **layering enhanced features** throughout **progression** to **more capable** browsers.

6-1-5



Basically, both methodologies have the same goal, just different approaches.

6-1-6

Mobile first

6-1-7

Mobile first is the process of designing an online experience for mobile devices **before** designing it for the desktop web or any other device.

6-1-8

Mobile first predates another design pattern, called **Responsive Web Design(RWD)**, but they are often brought up alongside each other.

6-1-9

RWD is an approach to web design across a wide range of devices, from desktop computers monitors to mobile phones, whereas **mobile first** targets the most basic mobile devices first, only to add features and complexity later.

6-1-10

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This is an example of **progressive enhancement**. The majority of users today access pages using mobile devices, so generally this is the favored approach. *6-1-11*

According to the latest statistics, there are over **1.2 billion** mobile web users worldwide. This means that many users will only see the **mobile version** of your site. *6-1-12*

As with everything, there are of course **exceptions**. Some layouts are not made to be accessed by small mobile devices, simply by screens and larger tablets. It is also a questions of what the users need and how they use the app or web page. *6-1-13*

To implement a responsive or mobile first design, we need to use **media queries**. *6-1-14*

These are used to adapt web pages to different devices. Most commonly the width of the page, but often also positioning, or number of columns etc. *6-1-15*

They allow us to specify sections that apply only to certain media types, for example certain devices: *6-1-16*

```
@media screen {
    main {
    width: 75%;
    display: flex;
    }
}
@media (max-width: 768px) {
    main {
    width: 100%;
    display: flex;
    flex-direction: column;
    }
}
```

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The previous example contained two **breakpoints**: `@media screen` and `@media (max-width: 768px)`. These are used to apply the CSS for the size of the screen found. They consist of: 6-1-17

- a media query
- a condition, or breakpoint
- a style rule to be applied if the condition is met

For example, the second query above is saying: 6-1-18

1. `@media` - a media query is about to happen
2. `(max-width: 768px)` - if the screen is less than 768px wide, the style rule should be applied
3. `main { width: 100%; display: flex; flex-direction: column }` - the style rule to apply

There are some general breakpoints for different devices: 6-1-19

- phones < 768px (default)
- tablets >= 768px
- desktops >= 992px
- larger desktops >= 1200px

Media queries can also be used to alter the style of the printed version of a page also: 6-1-20

```
@media print {
    body {
        color: black;
        background-color: white;
    }
}
```

It is common to set the font color to black, and the background color to white, and to limit the number of elements to be printed.

CSS-tricks has a list of media queries for standard devices: CSS-tricks Media Queries for standard devices 6-1-21

And as per usual, the details can be found on MDN: MDN Media Queries 6-1-22

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