

Lecture # 4

CSC336 Web Technologies

Credit Hours: 3(2, 1)

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MSc University of Leicester, UK

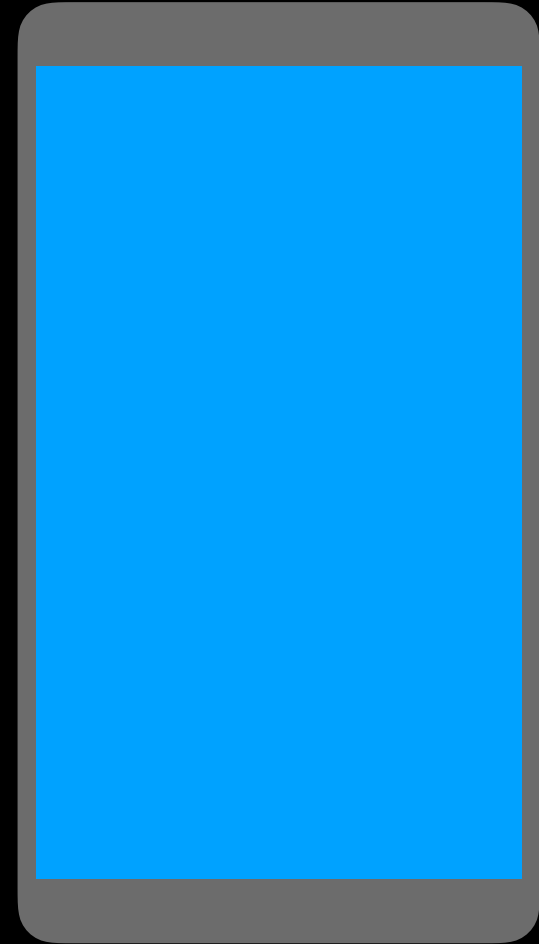
BSc COMSATS University Islamabad

Responsive Design

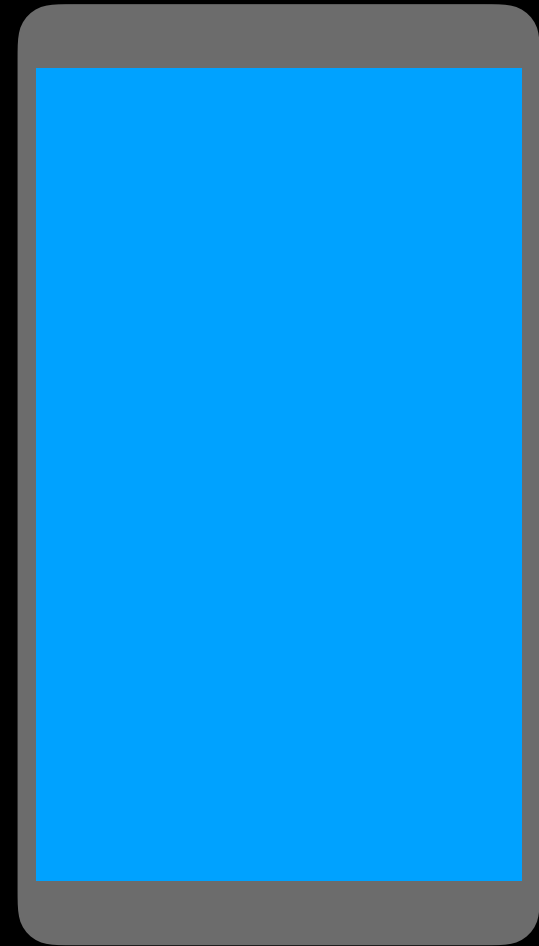
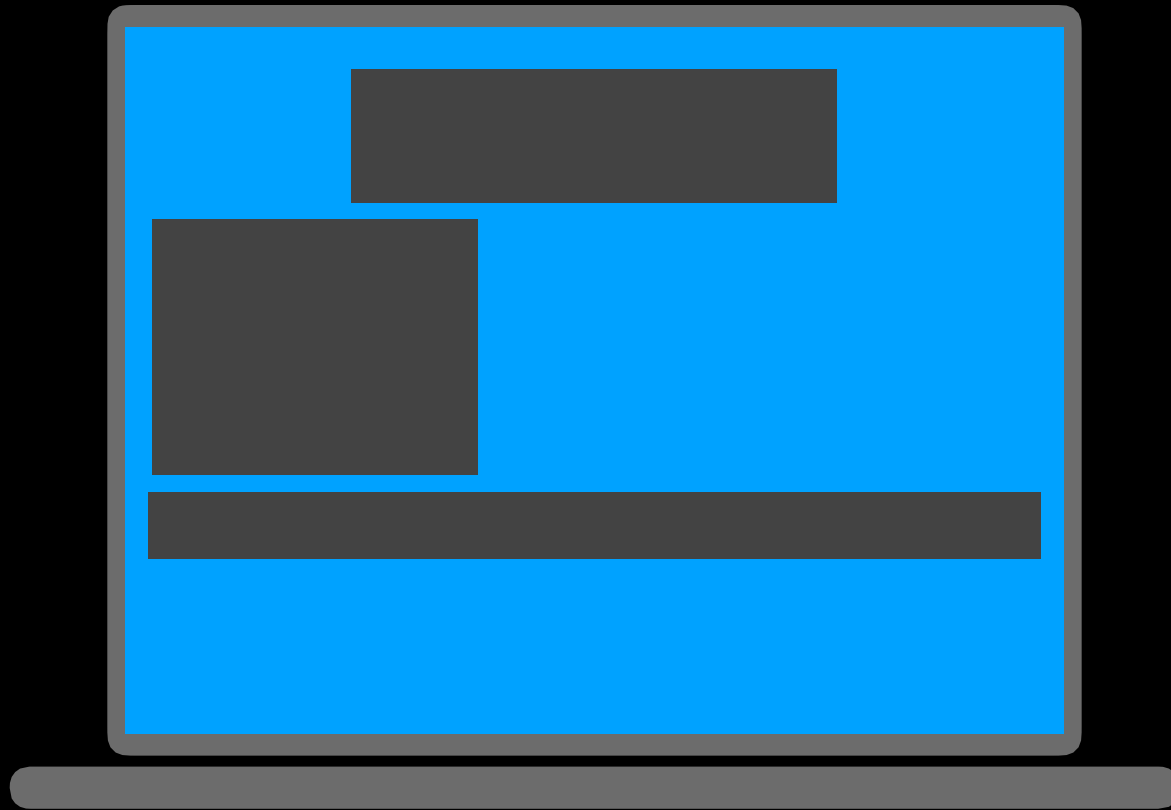
Responsive Design

- viewport
- Media Queries
- Flexbox
- Grids

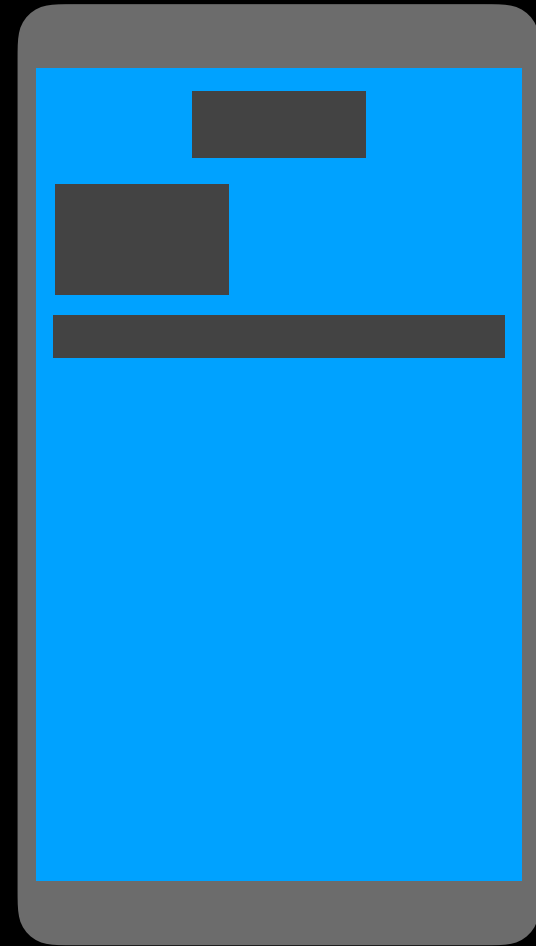
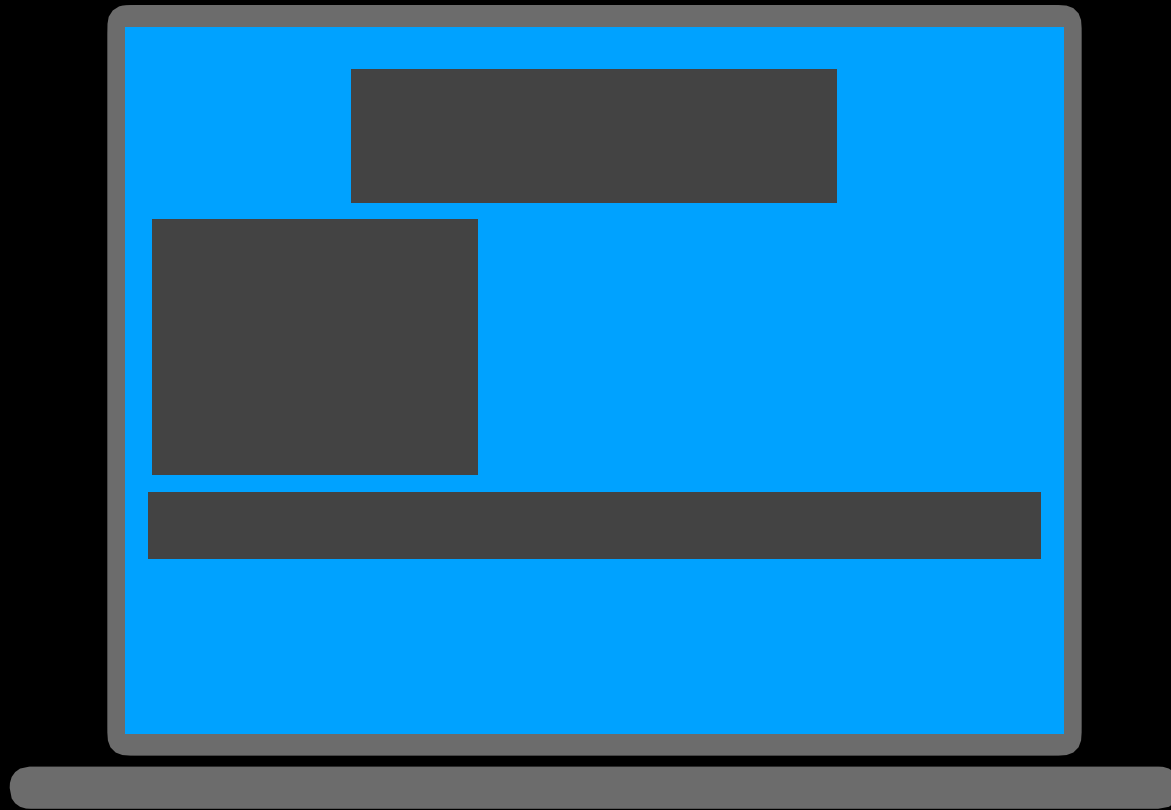
Viewport



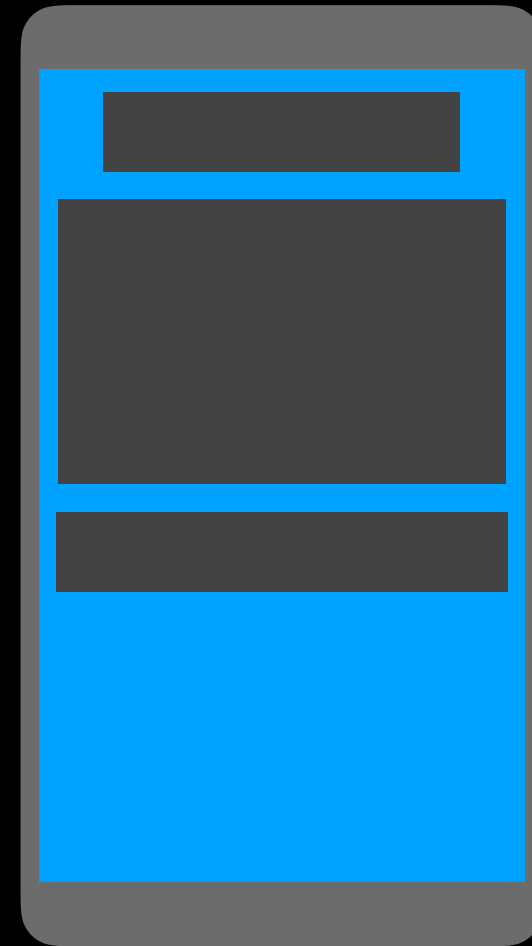
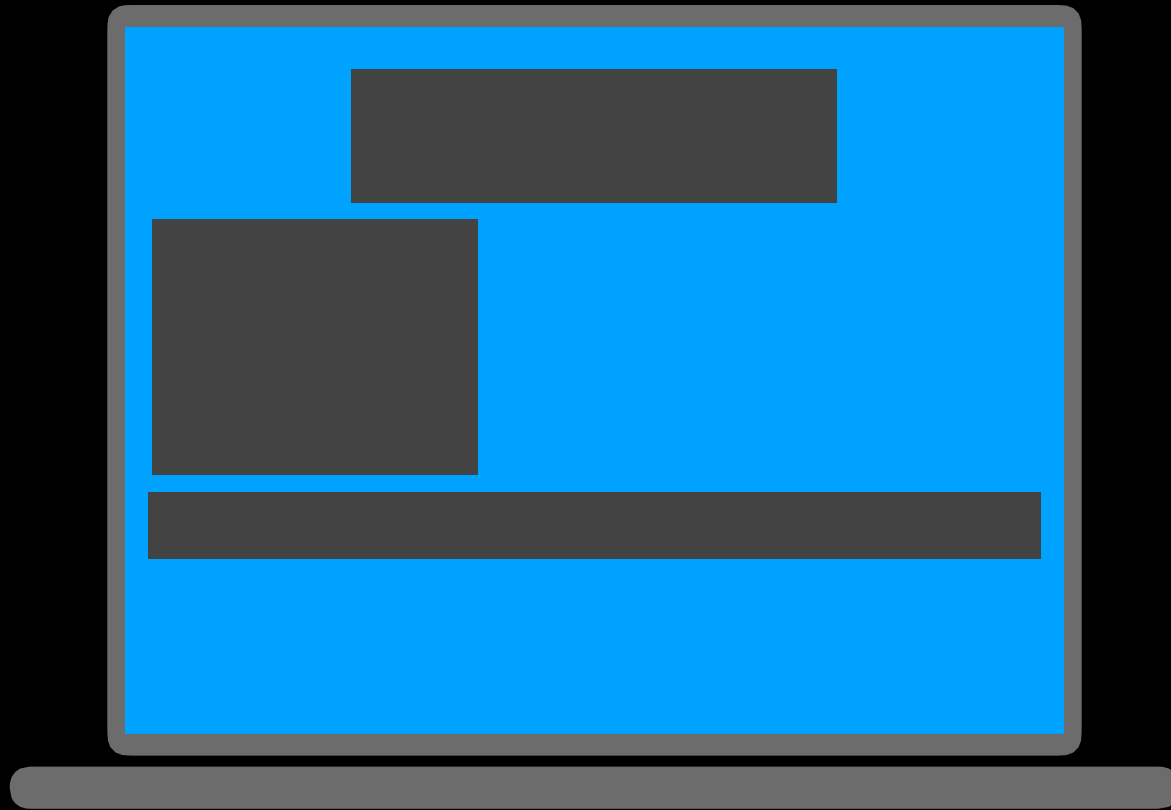
Viewport



Viewport



Viewport



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

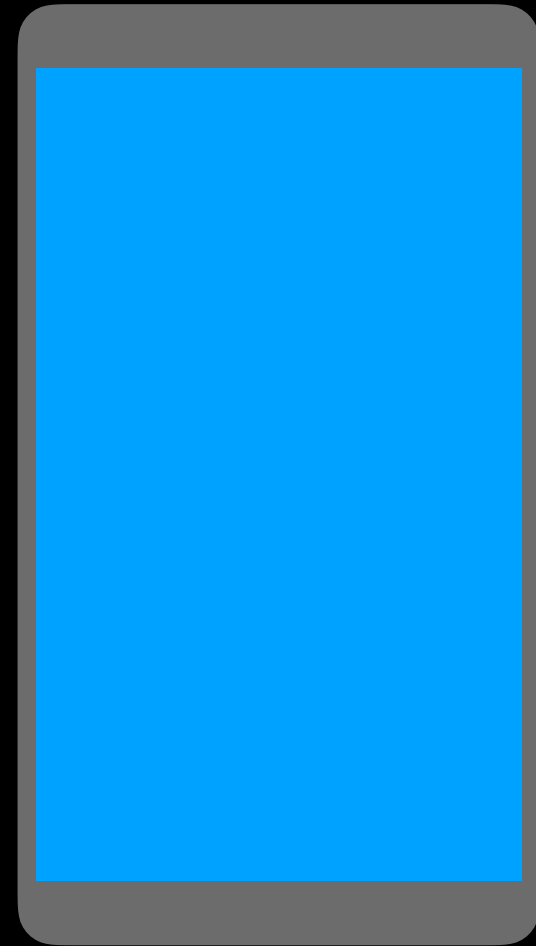
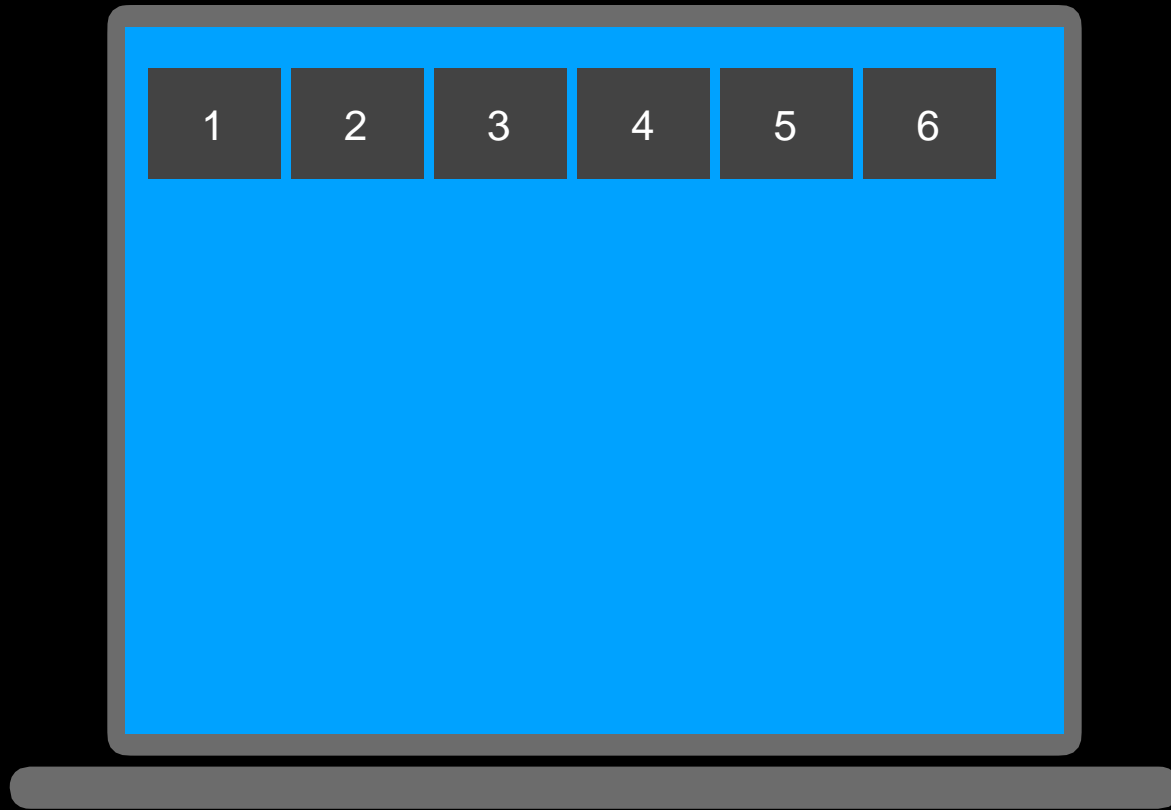

Media Queries

- Media Types: print, screen, ...
- Media Features: height, width, orientation, ...

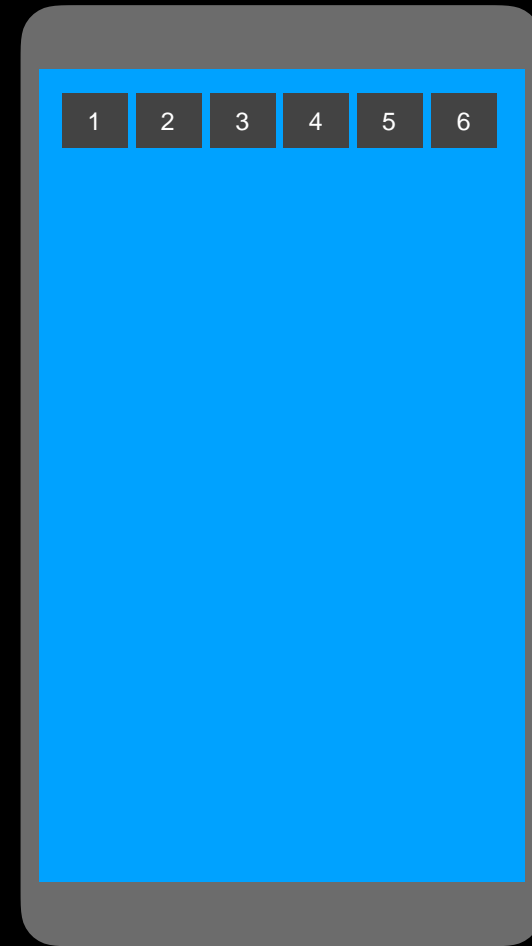
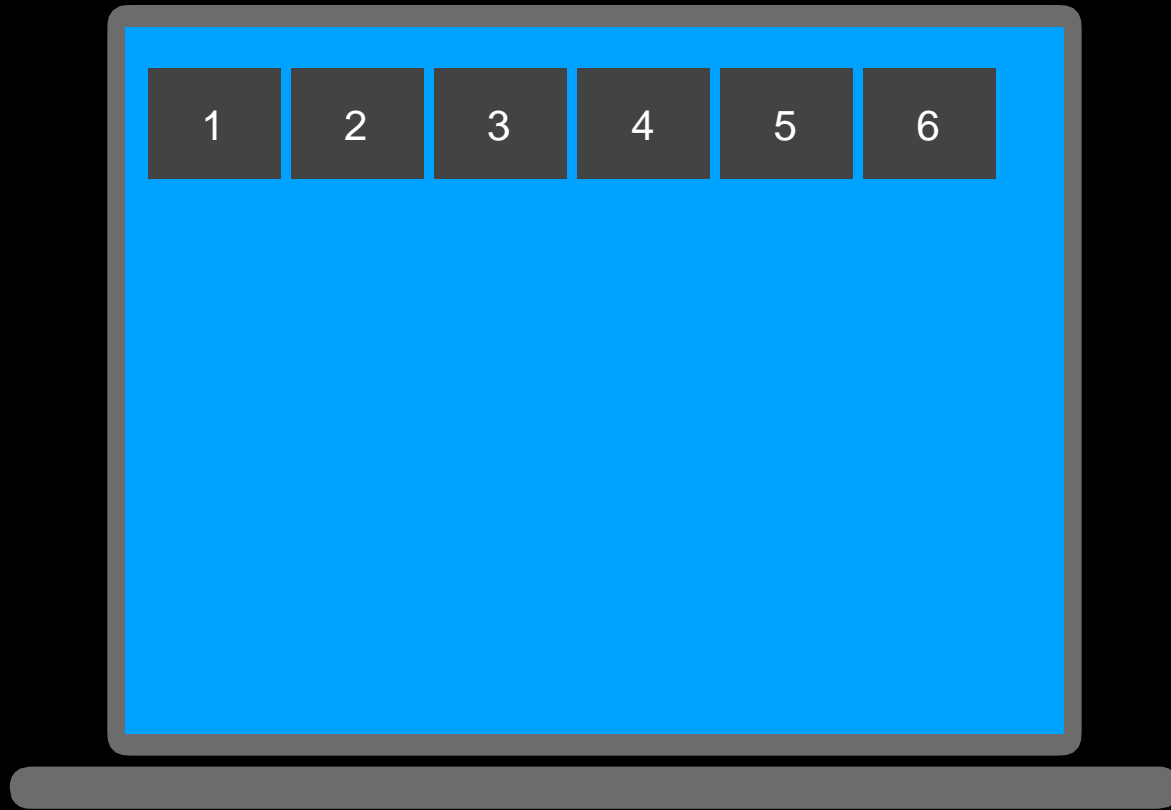
responsive.html

```
@media (min-width: 600px) {  
    body {  
        background-color: red;  
    }  
}  
  
@media (max-width: 599px) {  
    body {  
        background-color: blue;  
    }  
}
```

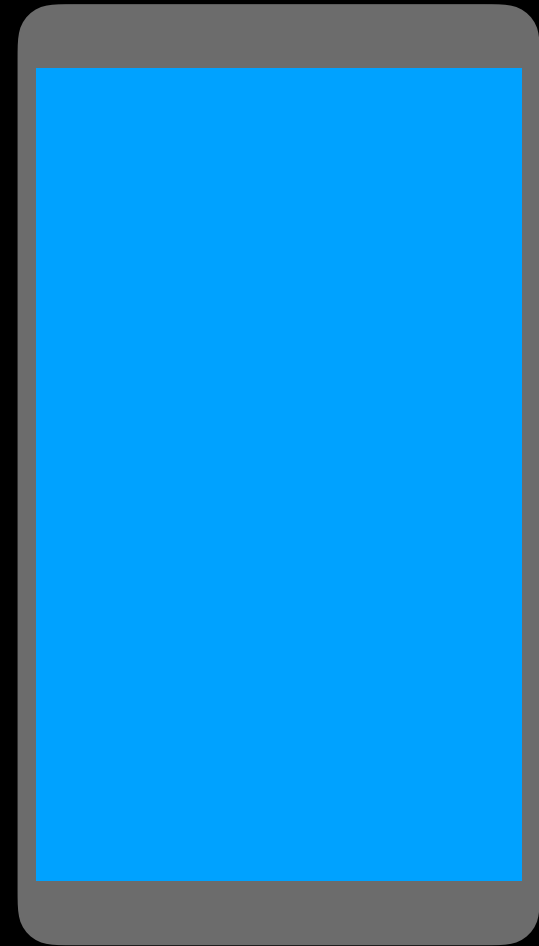
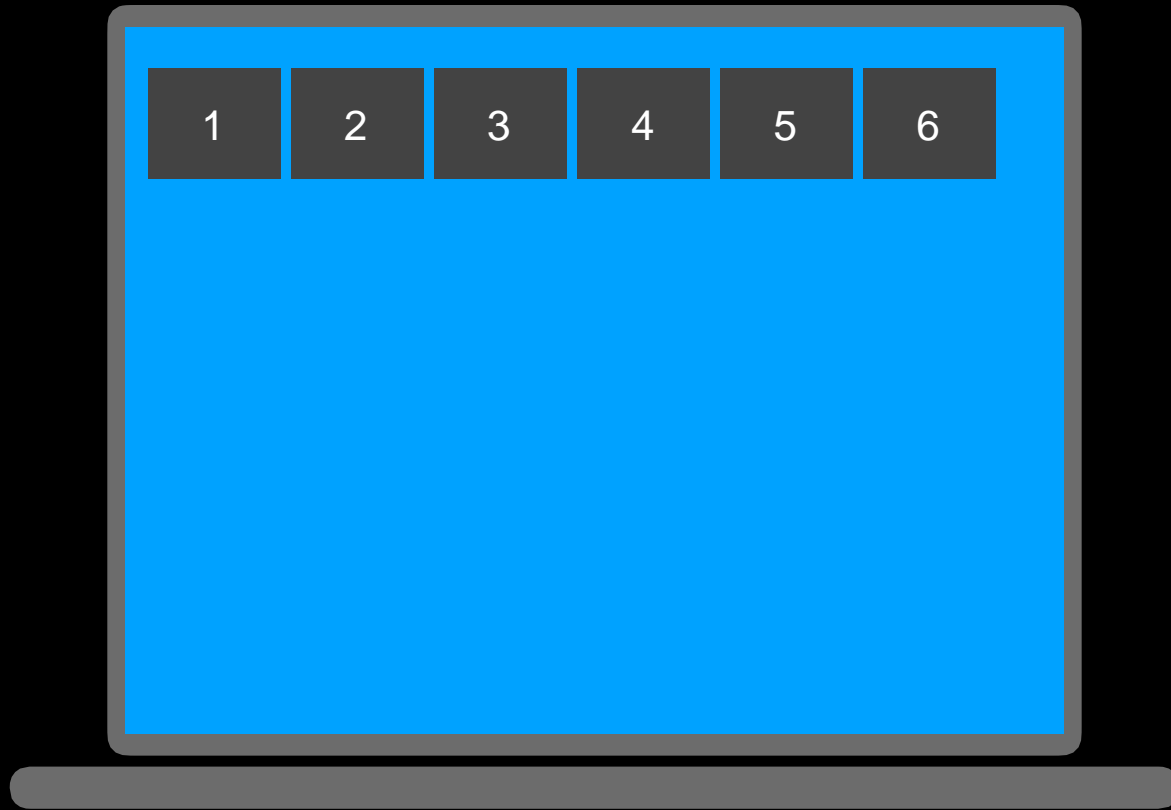
Flexbox



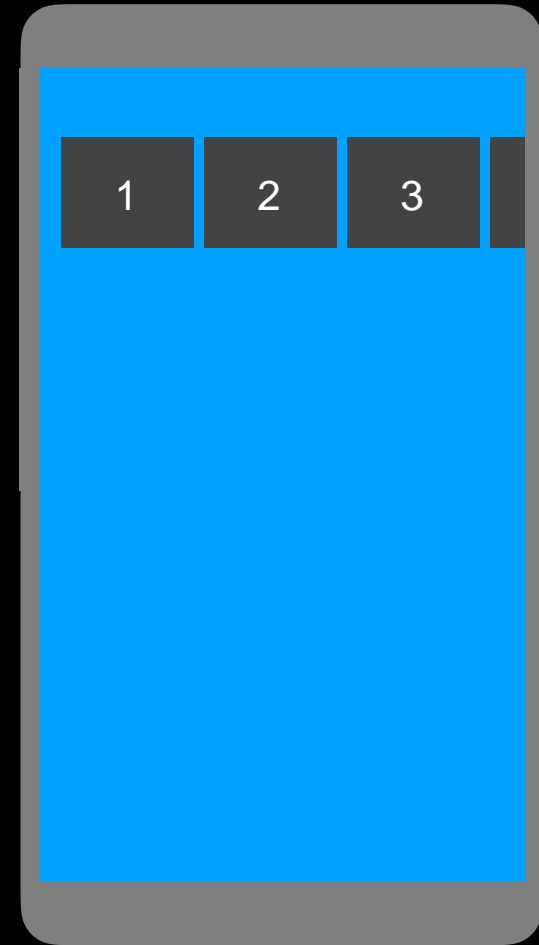
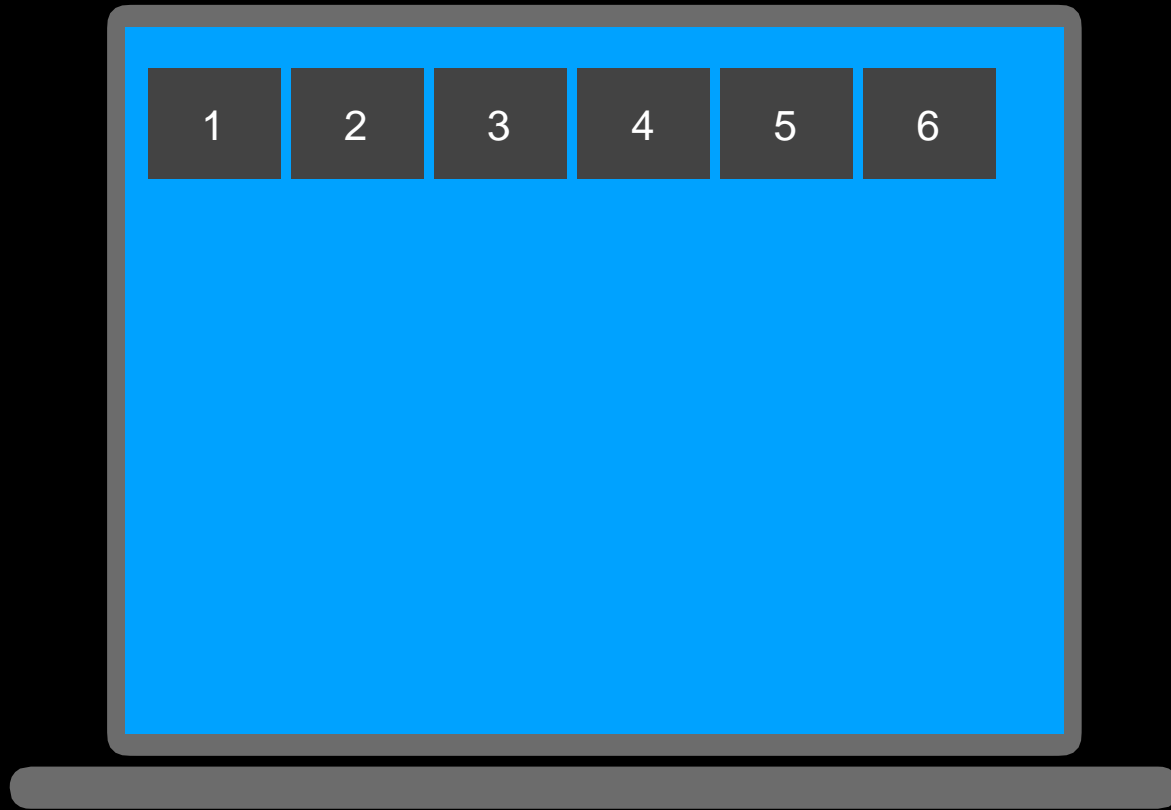
Flexbox



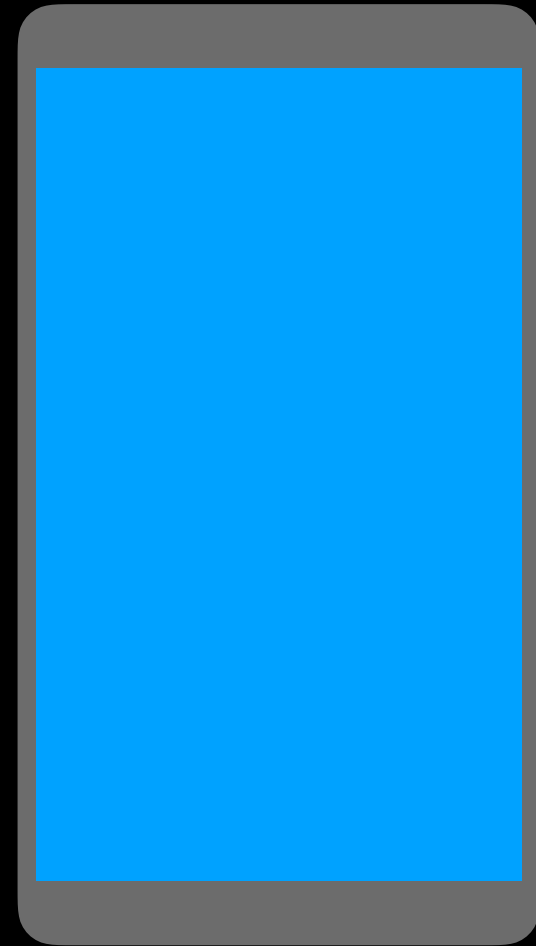
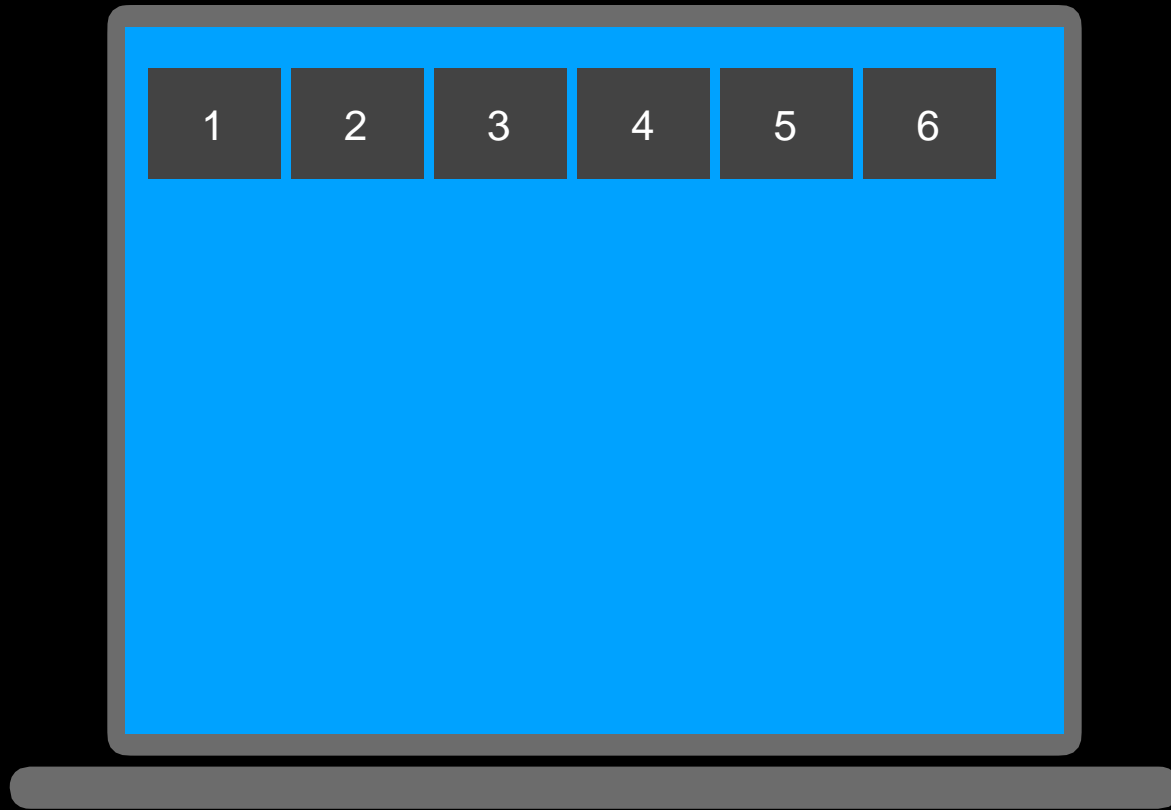
Flexbox



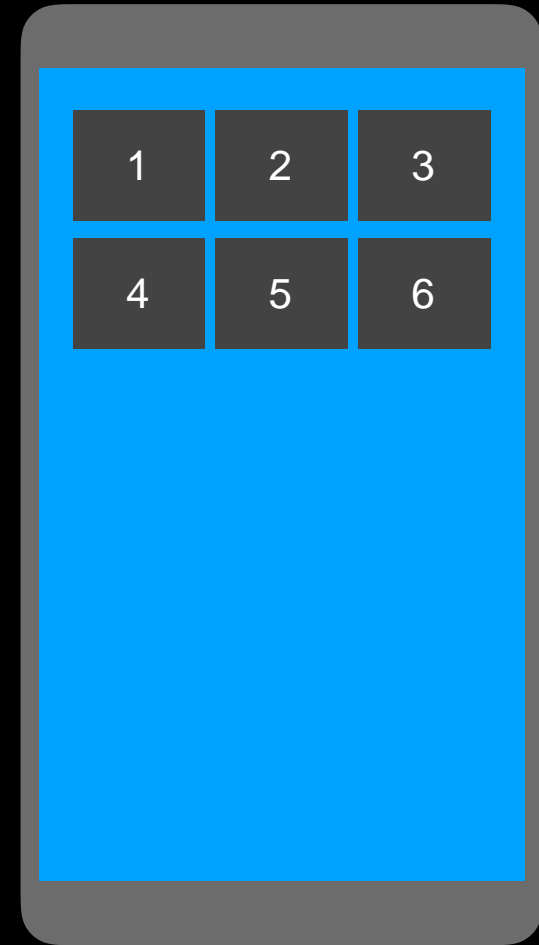
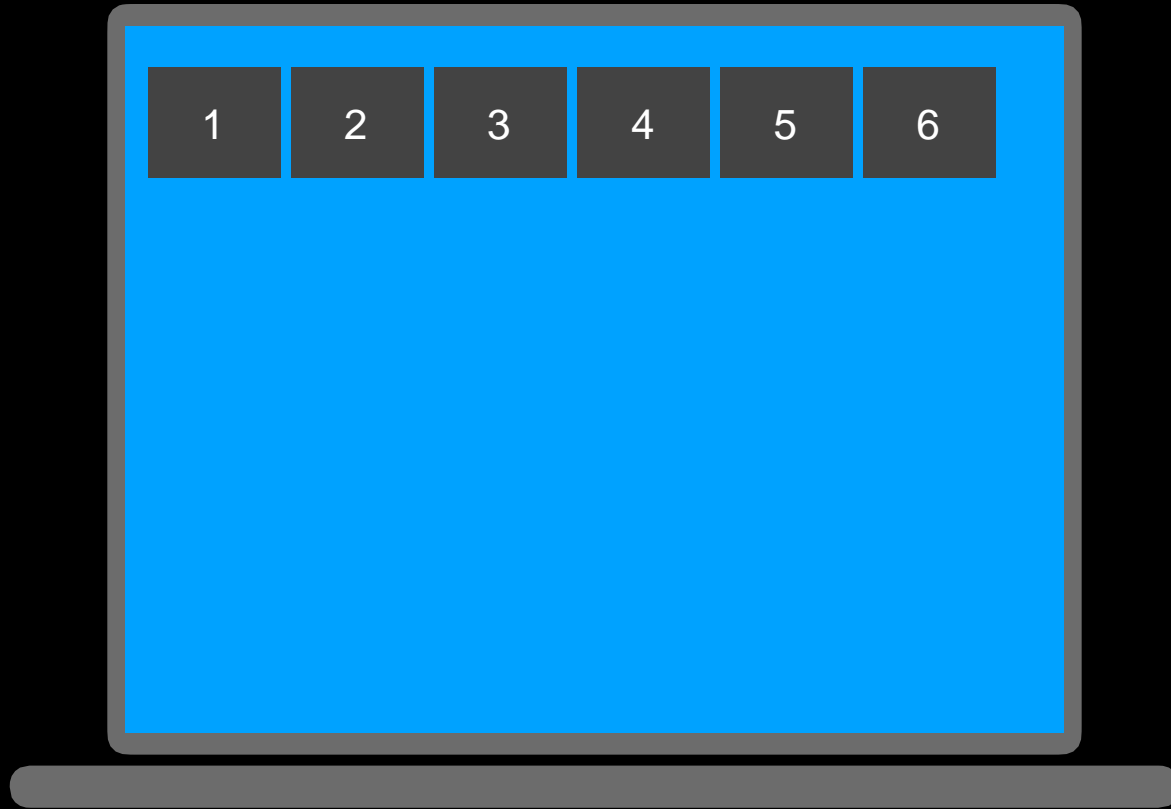
Flexbox



Flexbox



Flexbox



Flexbox.html

```
<div id="container">  
  <div>1. This is some sample text inside of a div to demo Flexbox.</div>  
  <div>2. This is some sample text inside of a div to demo Flexbox.</div>  
  <div>3. This is some sample text inside of a div to demo Flexbox.</div>  
</div id="container">
```

```
#container {  
  display: flex;  
  flex-wrap: wrap;  
}  
#container div {  
  background-color: springgreen;  
  font-size: 20px;  
  margin: 20px;  
  padding: 20px;  
  width: 200px;  
}
```

grid.html

```
<div id="grid">
  <div class="grid-item">1</div>
  <div class="grid-item">2</div>
  <div class="grid-item">3</div>
</div>
```

```
#grid{
  background-color: springgreen;
  display: grid;
  padding: 20px;
  grid-column-gap: 20px;
  grid-row-gap: 10px;
  grid-template-columns: 200px 200px auto;
}

.grid-item{
  background-color: white;
  font-size: 20px;
  padding: 20px;
  text-align: center;
}
```

Bootstrap

Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

Get started

Download



Bootstrap

- <https://getbootstrap.com/>
- >doc>components>Alerts

How to use Bootstrap styling

- `<link href="https://cdn.jsdelivr.net/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sgyTU" crossorigin="anonymous">`

Bootstrap.html

```
<body >  
    <div class="alert alert-danger" role="alert">  
        Here is my alert!  
    </div>  
</body>
```

Column0.html (bootstrap column model)

```
<div class="container">
  <div class="row">
    <div class="col-3">
      This is a section.
    </div>
    <div class="col-3">
      This is another section.
    </div>
    <div class="col-3">
      This is the third section.
    </div>
    <div class="col-3">
      This is the third section.
    </div>
  </div>
</div>
```

```
.row > div {
    border: 1px solid black;
    background-color: springgreen;
    padding: 20px;
}
```


Sass

Variables.html SASS

```
<ul>
  <li>unordered item.</li>
  <li>unordered item.</li>
  <li>unordered item.</li>
</ul>

<ol>
  <li>ordered item.</li>
  <li>ordered item.</li>
  <li>ordered item.</li>
</ol>
```

```
ul{
  font-size:14px;
  color:blue
}
ol{
  font-size:18px;
  color:blue
}
```

Variables.scss

```
$color1 : red;
```

```
ul {  
    font-size: 14px;  
    color: $color1;  
}
```

```
ol {  
    font-size: 18px;  
    color: $color1;  
}
```

Nesting.html

```
<body>
  <div>
    <ul>
      <li>list item one.</li>
      <li>list item two.</li>
      <li>list item three.</li>
    </ul>

    <p>Welcome to my web page.</p>
  </div>
  <ul>
    <li>list item one.</li>
    <li>list item two.</li>
    <li>list item three.</li>
  </ul>

  <p>Welcome to my web page.</p>
</body>
```

Nesting.scss

```
div {
  font-size: 18px;

  p {
    color: blue;
  }

  ul {
    color: green;
  }
}
```

Inheritance.html

```
<body>
  <div class=success>
    This is a success message.
  </div>
  <div class=warning>
    This is a warning message.
  </div>
  <div class=error>
    This is an error message.
  </div>
</body>
```

```
%message {
  font-family: sans-serif;
  font-size: 18px;
  font-weight: bold;
  border: 1px solid black;
  padding: 20px;
  margin: 20px;
}

.success {
  @extend %message;
  background-color: green;
}
```

Q & A