

Rule #1 – viewport

```
<head>
```

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

```
</head>
```

Without "viewport" on mobile



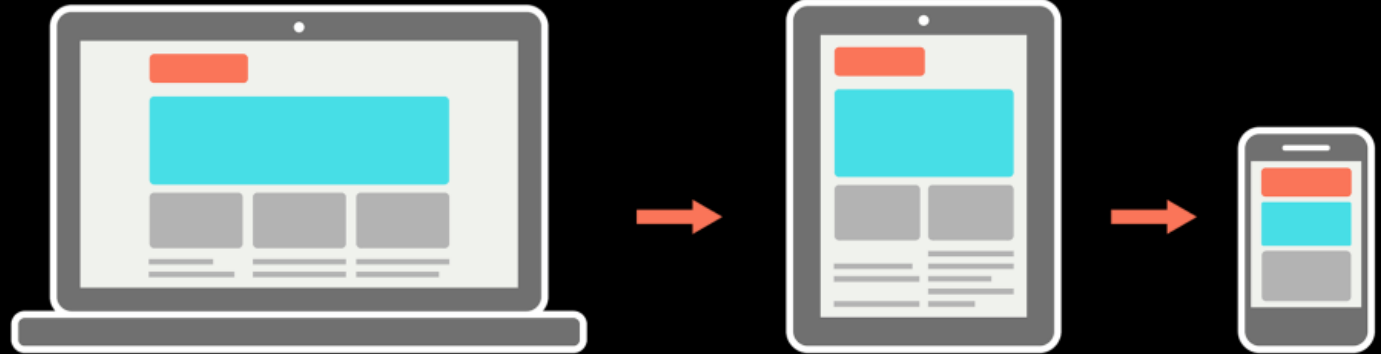
With "viewport" on mobile



Rule #2 – Create Mobile First

Desktop first

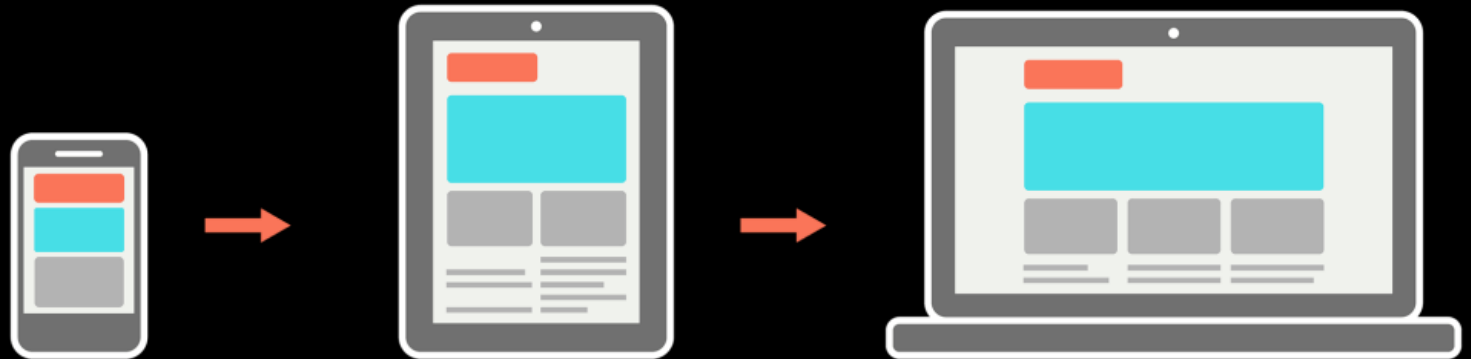
```
/* Example */  
/* from 0px until 720px */  
@media (max-width: 720px) {  
  body {  
    background-color: green;  
  }  
}
```



Responsive Web Design

Mobile first

```
/* Example */  
/* from 420px until next @media */  
@media (min-width: 420px) {  
  body {  
    background-color: green;  
  }  
}
```

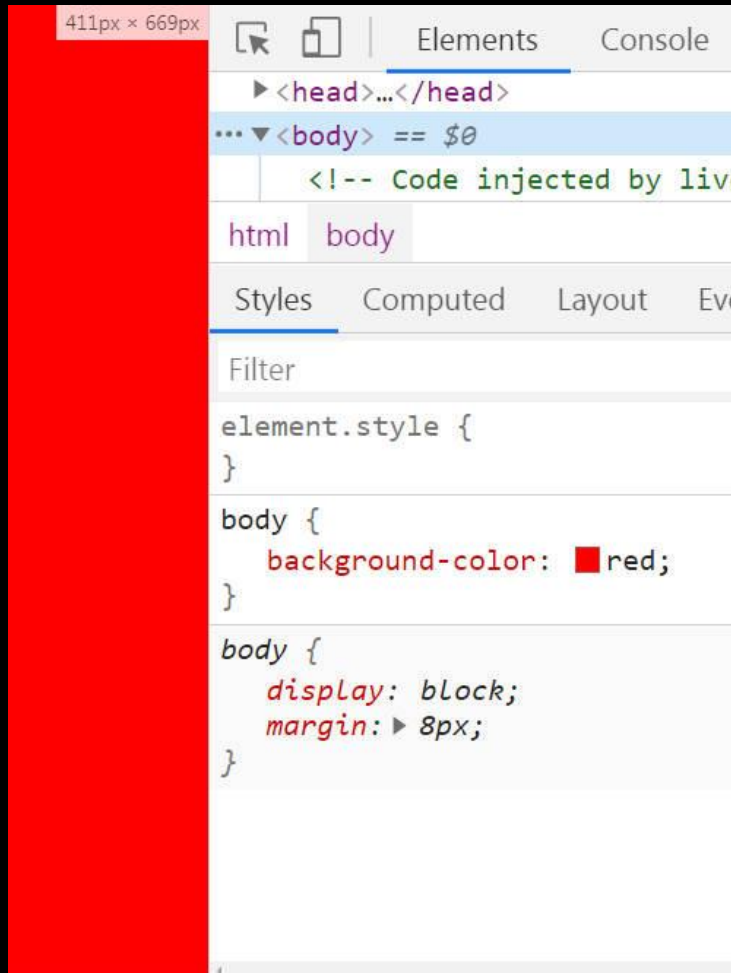


Mobile First Web Design

Rule #3 – use @media queries

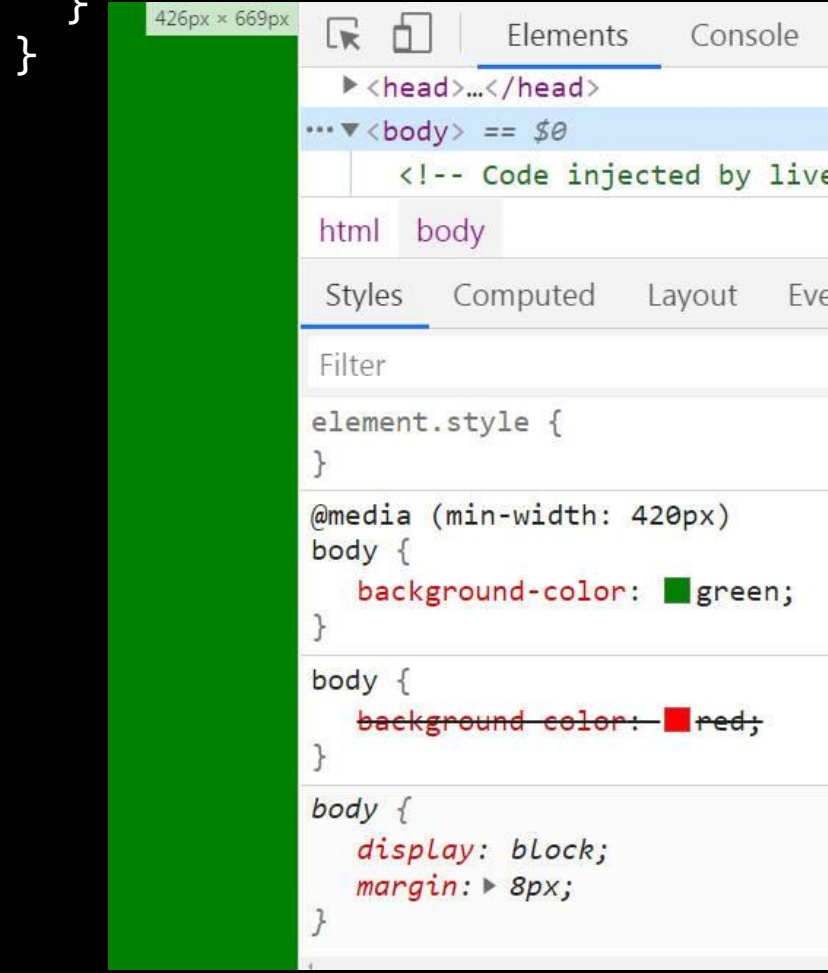
/* Mobile styles */

```
body {  
  background-color: red;  
}
```



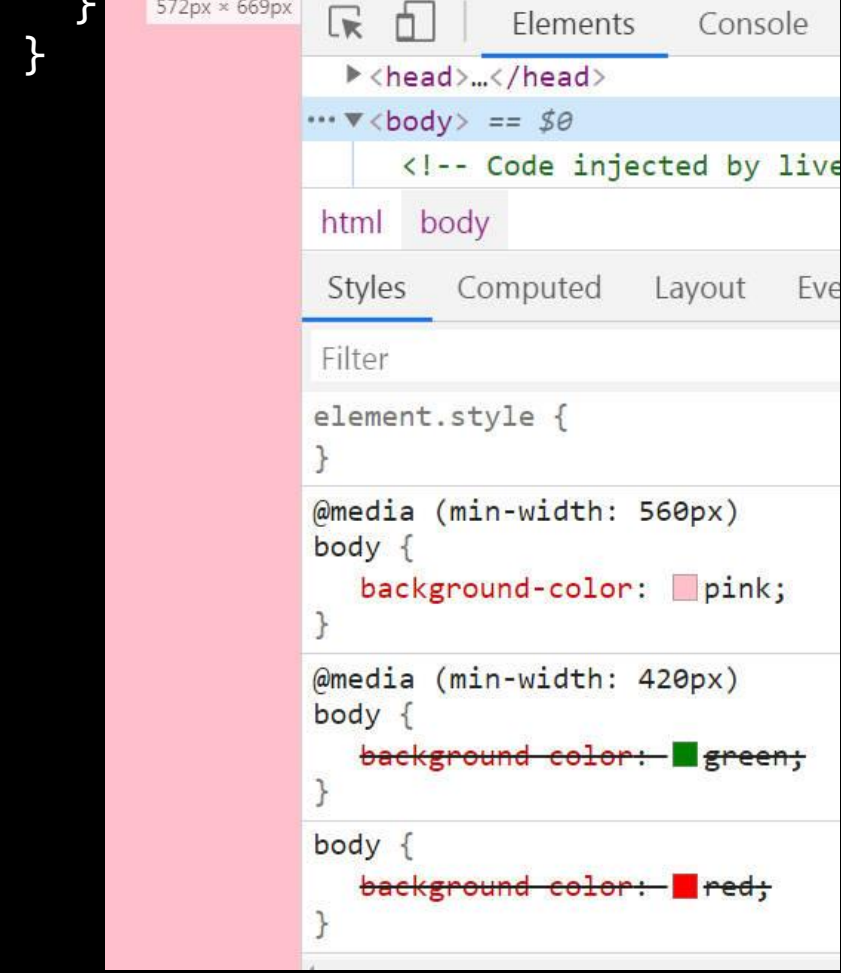
/* Tablet styles */

```
@media (min-width: 420px) {  
  body {  
    background-color: green;  
  }  
}
```

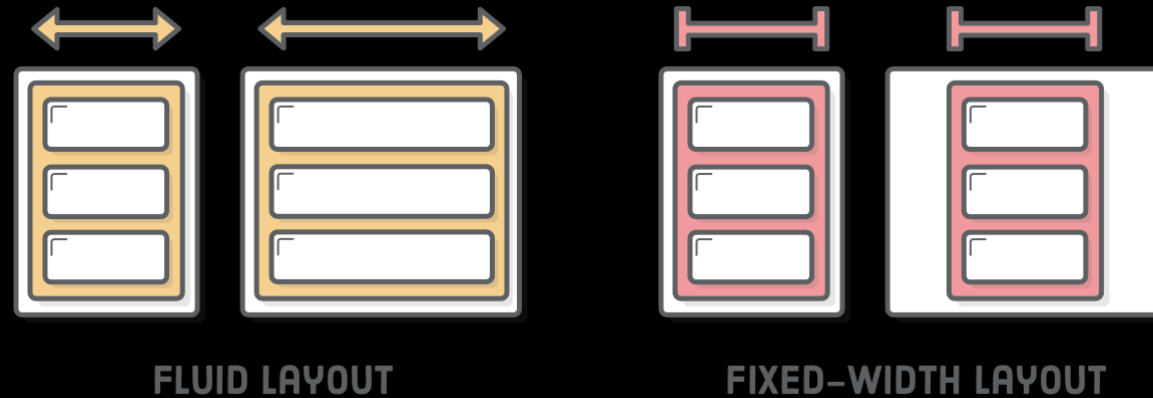


/* Desktop styles */

```
@media (min-width: 560px) {  
  body {  
    background-color: pink;  
  }  
}
```



Rule #4 – Responsive layout



FLUID LAYOUT

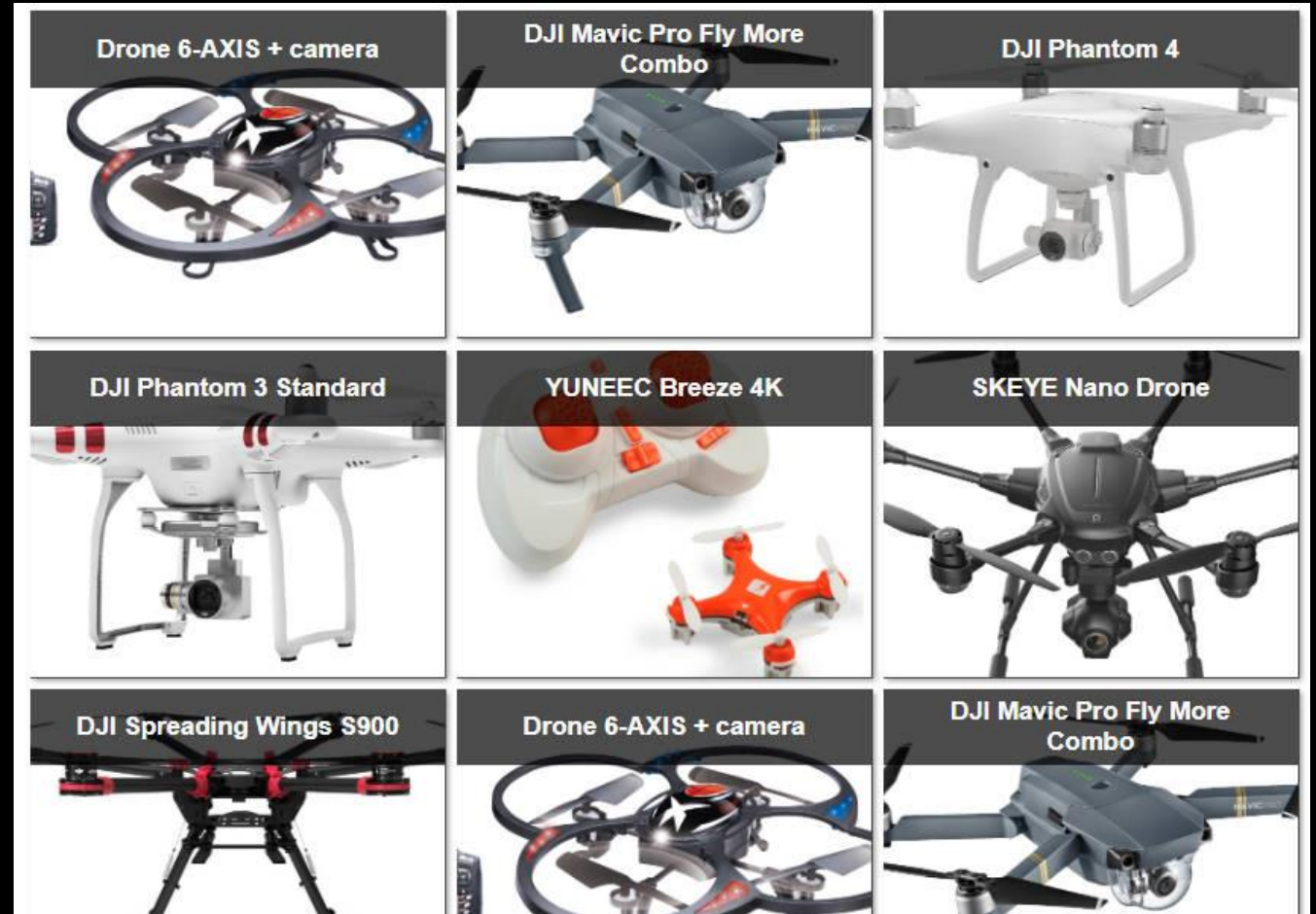
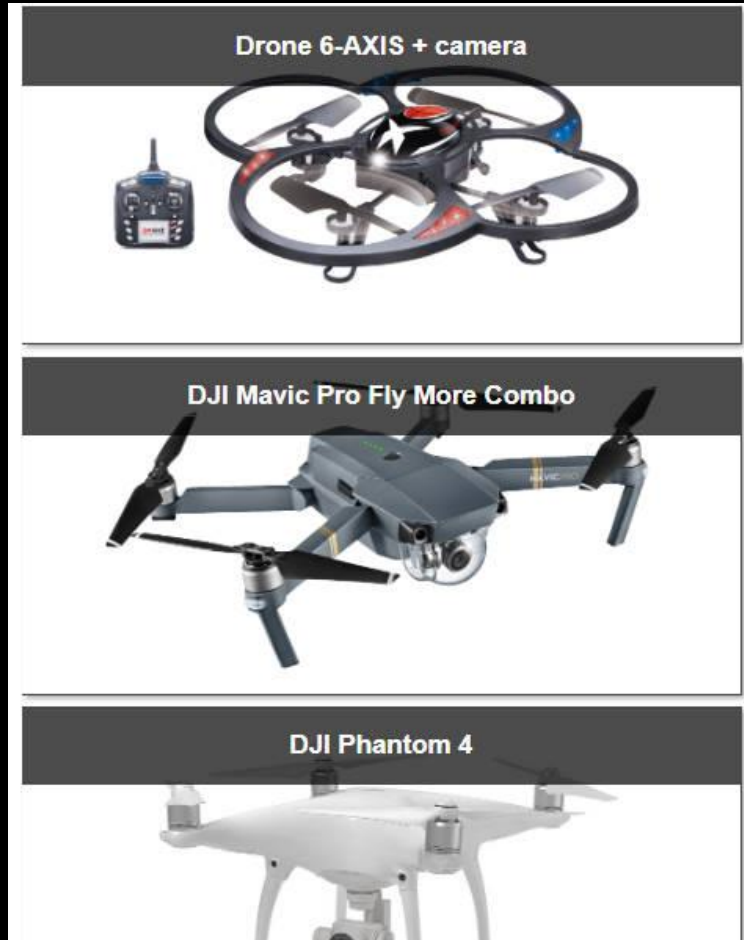
```
.container {  
  width: 100%;  
}
```

FIXED-WIDTH LAYOUT

```
/* Mobile styles */  
.container {  
  max-width: 100%;  
}
```

```
/* Tablet styles */  
@media (min-width: 576px) {  
  .container {  
    max-width: 540px;  
  }  
}
```

Rule #5 – CSS Flexbox Layout



```

23 |
24 |     <div class="container">
25 |         <ul class="cards">
26 |             <li class="cards__item">...
32 |         </li>
33 |             <li class="cards__item">...
39 |         </li>
40 |             <li class="cards__item">...
46 |         </li>
47 |     </ul>
48 | </div>
49 |

```

/* Mobile styles */

```

.container {
  max-width: 100%;
}
.cards {
  display: flex;
  flex-direction: column;
}
.cards__item {
  width: 100%;
}

```

/* Tablet styles */

```

@media (min-width: 576px) {
  .container {
    max-width: 540px;
  }
  .cards {
    flex-direction: row;
    flex-wrap: wrap;
  }
  .cards__item {
    width: 50%;
  }
}

```

/* Desktop styles */

```

@media (min-width: 768px) {
  .container {
    max-width: 720px;
  }
  .cards__item {
    width: 33.33%;
  }
}

```


Rule #5 – box-sizing: border-box



div.box 500 × 400

500 x 400

Elements Console Sources Network >> | ⚙️ ⋮ ✕

```
▶ <head>...</head>
▼ <body>
... <div class="box"></div> == $0
    <!-- Code injected by live-server -->
    ▶ <script type="text/javascript">...</script>
```

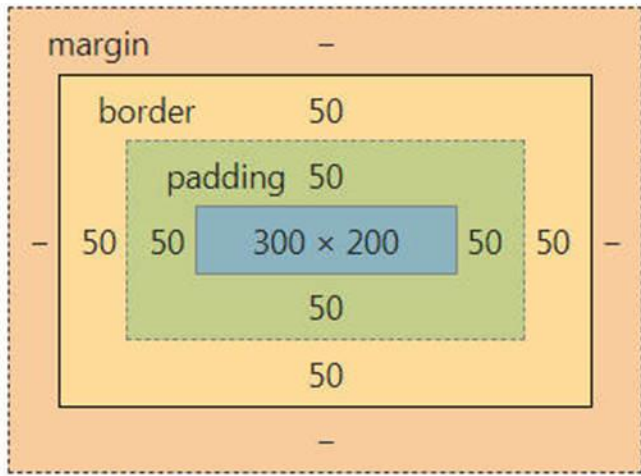
html body div.box

Styles Computed Layout Event Listeners DOM Breakpoints >>

Filter :hov .cls + ▢

```
element.style {
}

.box { style.css? ...766576781:1
  width: 300px;
  height: 200px;
  padding: ▶ 50px;
  border: ▶ 50px solid
    ■ yellowgreen;
  background-color: ■ tomato;
  box-sizing: content-box;
}
```



margin —

border 50

padding 50

50 50 300 × 200 50 50

50 50

—

```
* {  
  box-sizing: border-box;  
}
```



div.box 300 x 200

300 x 200

OK

Elements Console Sources Network >> ⚙️ ⋮ ✕

▶ <head>...</head>
▼ <body>
... <div class="box"></div> == \$0
 <!-- Code injected by live-server -->
 ▶ <script type="text/javascript">...</script>

html body div.box

Styles Computed Layout Event Listeners DOM Breakpoints >>

Filter :hov .cls + 📏

element.style {
}

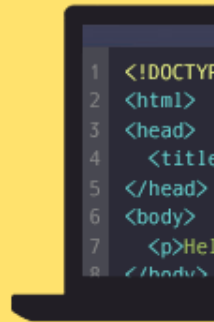
.box { style.css? ...766686774:1
 width: 300px;
 height: 200px;
 padding: ▶ 50px;
 border: ▶ 50px solid
 ■ yellowgreen;
 background-color: ■ tomato;
 box-sizing: border-box;
}

margin -
border 50
padding 50
50 50 100 x 0 50 50
50
50
-

Rule #5 – responsive images



HTML5



Elements Console Sources >> | ⚙️ ⋮ ✕

▶ <head>...</head>
▼ <body>
... == \$0
<!-- Code injected by live-server -->

html body **img.image**

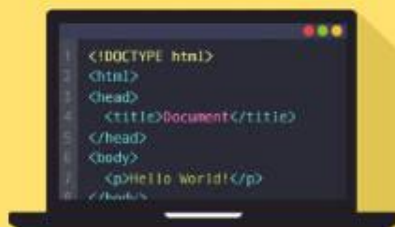
Styles Computed Layout Event Listeners DOM Breakpoints >>

Filter :hov .cls + ▢

```
element.style {  
}  
  
.image {  
  max width: 100%;  
}
```

margin -
border -
padding -
800 × 300

```
img {  
  max-width: 100%;  
}
```



Elements Console Sources >> | ⚙️ ⋮ ✕

```
▶ <head>...</head>  
▼ <body>  
...  == $0  
  <!-- Code injected by live-server -->
```

html body **img.image**

Styles Computed Layout Event Listeners DOM Breakpoints >>

Filter :hov .cls + [▶]

```
element.style {  
}  
  
.image { style.css? ...768949003:1  
  max-width: 100%;  
}
```

margin -
border -
padding -
561 × 210.375