

IDA Digital Design

Responsive Designs

Lecture

- 2 Exercises
- 2 Discussions
- 10 min. Break
- Ask questions any time

Topics

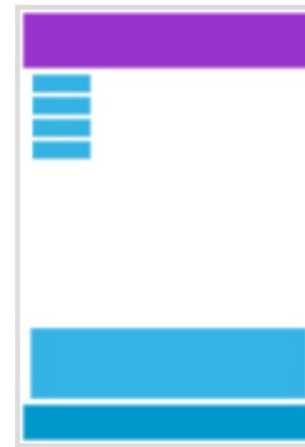
- Viewport
- Media Queries
- Flexbox (Flex-basis, Flex-grow and Flex-shrink)
- Images
- CSS Frameworks

Intro

It is called responsive web design when you use CSS and HTML to resize, hide, shrink, enlarge, or move the content to make it look good on any screen.



Desktop



Tablet



Phone

Viewport

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

This gives the browser instructions on how to control the page's dimensions and scaling.

```
<!DOCTYPE HTML>  
<html>  
  <head>  
    <meta name="viewport" content="width=device-width, initial-scale=1">  
    <title>Website</title>  
  </head>  
  <body></body>  
</html>
```

Media Queries

- @media Rule
- Breakpoints
- Orientation: Portrait/Landscape
- Hide Elements
- Change Font Size
- max-width vs max-device-width
- @media Reference

https://www.w3schools.com/cssref/css3_pr_mediaquery.asp

Media Queries - @media Rule

```
@media not|only mediatype  
    and [mediafeature]  
    and|or|not [mediafeature]  
{  
    CSS-Code;  
}
```

Ex:

```
@media only screen  
    and (min-width:601px)  
    and (max-width:1024px)  
{ ...  
}
```

Media Queries - @media Rule

Or you can use different stylesheets for different media, like this:

```
<link rel="stylesheet" media="screen and (min-width: 900px)"  
      href="widescreen.css">
```

```
<link rel="stylesheet" media="max-width: 600px" href="smallscreen.css">
```

....

https://www.w3schools.com/cssref/css3_pr_mediaquery.asp

Media Queries - Breakpoints

```
/* Extra small devices [phones, 600px and down] */  
@media screen and [max-width: 600px] {...}
```

```
/* Small devices [portrait tablets and large phones, 600px and up] */  
@media screen and [min-width: 600px] {...}
```

```
/* Medium devices [landscape tablets, 768px and up] */  
@media screen and [min-width: 768px] {...}
```

```
/* Large devices [laptops/desktops, 992px and up] */  
@media screen and [min-width: 992px] {...}
```

```
/* Extra large devices [large laptops and desktops, 1200px and up] */  
@media screen and [min-width: 1200px] {...}
```

<http://cssmediaqueries.com/>

Media Queries - Orientation

```
@media screen and [orientation: landscape]{  
    /* some CSS here */  
}
```

```
@media screen and [max-width: 640px] and [orientation: landscape]{  
    /* some CSS here */  
}
```

https://www.w3schools.com/css/tryit.asp?filename=tryresponsive_mediaquery_orientation

Media Queries – Hide Elements

```
/* If the screen size is 600px wide or less, hide the element */  
@media screen and [max-width: 600px] {  
  div.example {  
    display: none;  
  }  
}
```

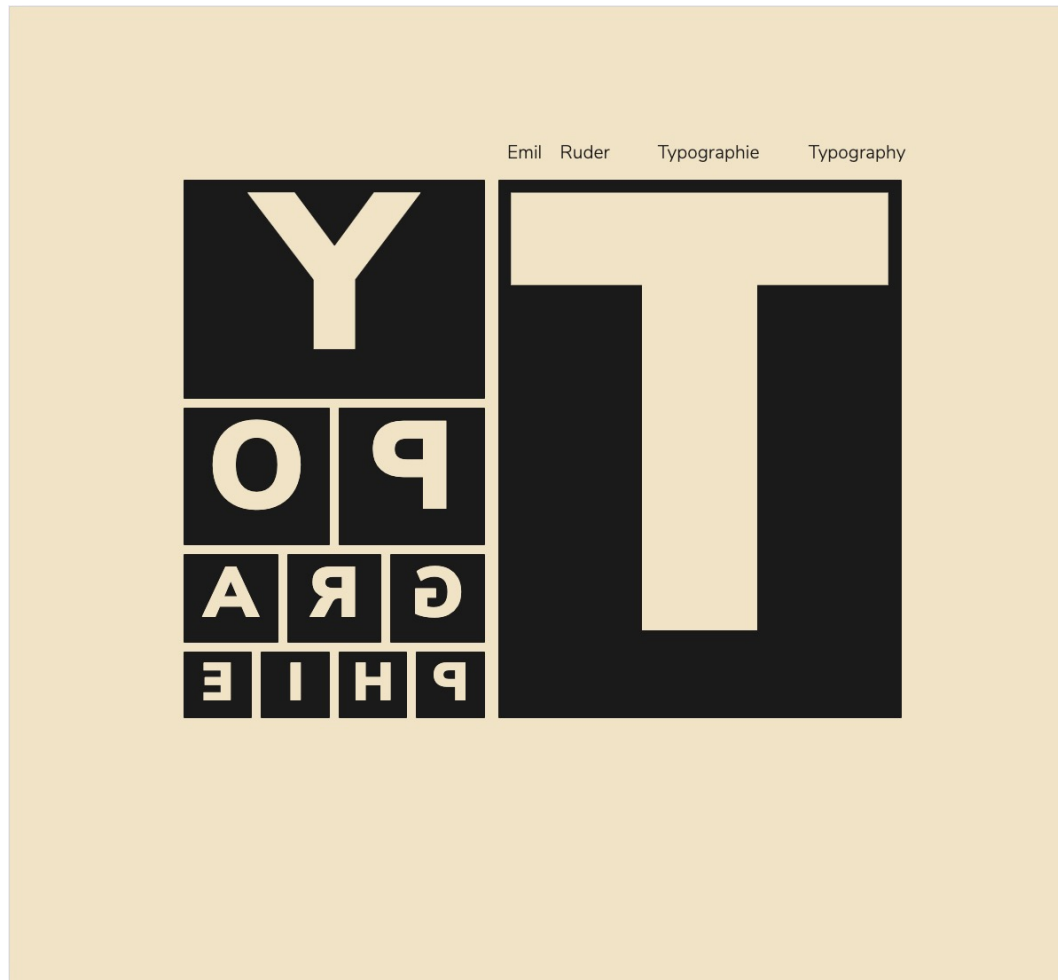
Media Queries – Change Font Size

```
/* If the screen size is 601px or more, set the font-size of <div> to 80px */  
@media screen and [min-width: 601px] {  
  div.example {  
    font-size: 80px;  
  }  
}
```

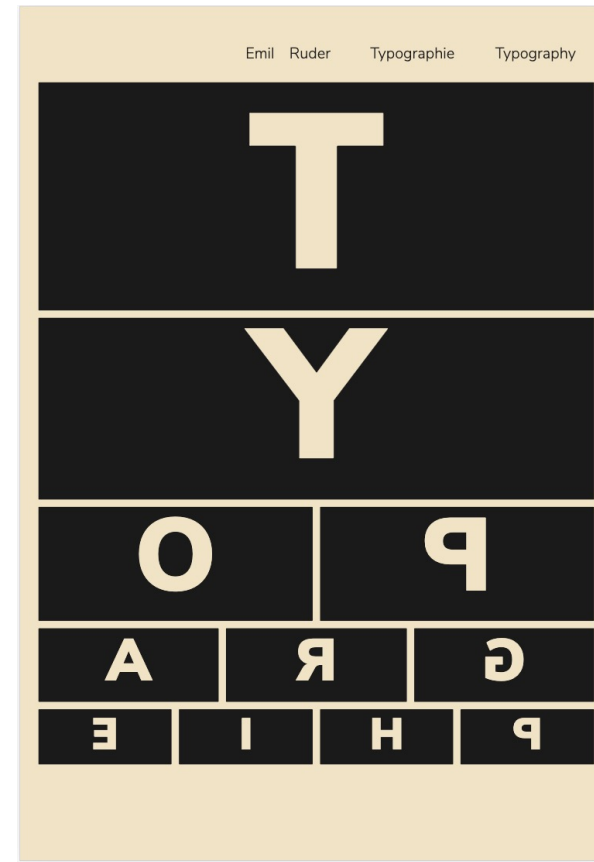
```
/* If the screen size is 600px or less, set the font-size of <div> to 30px */  
@media screen and [max-width: 600px] {  
  div.example {  
    font-size: 30px;  
  }  
}
```

Media Queries – Change Layout

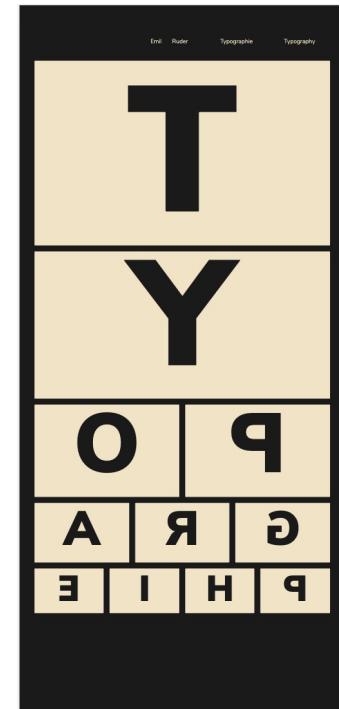
Desktop



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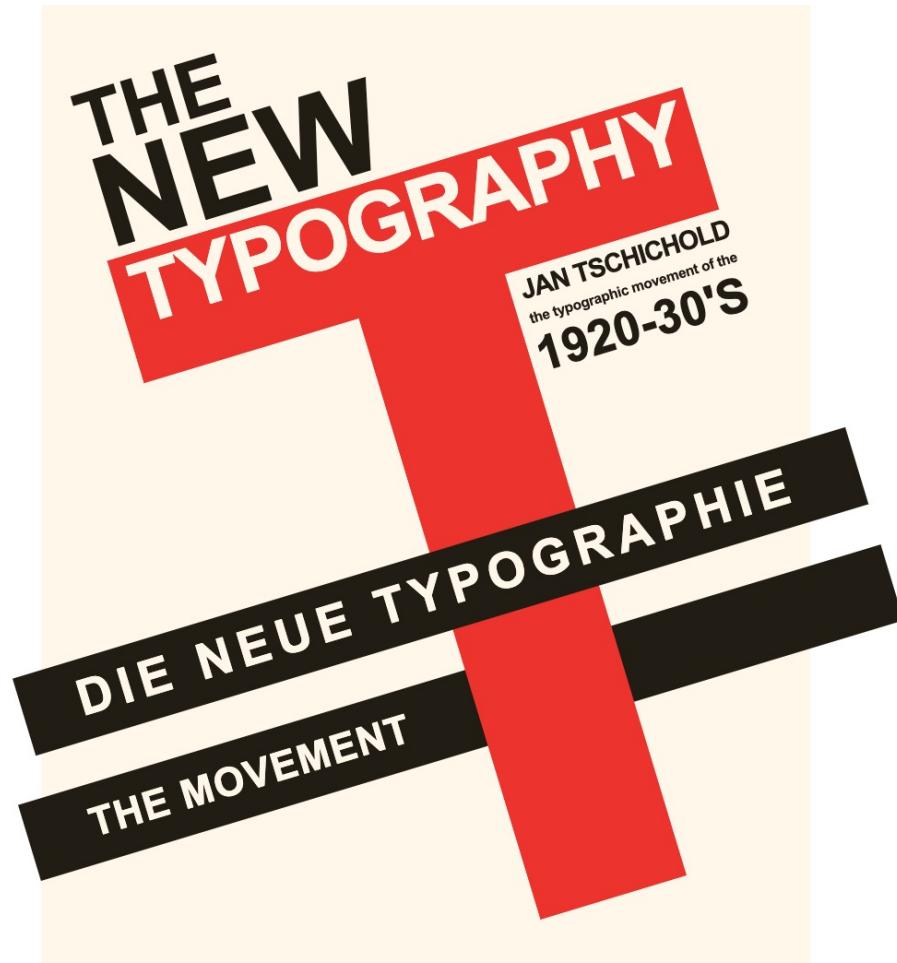


Phone

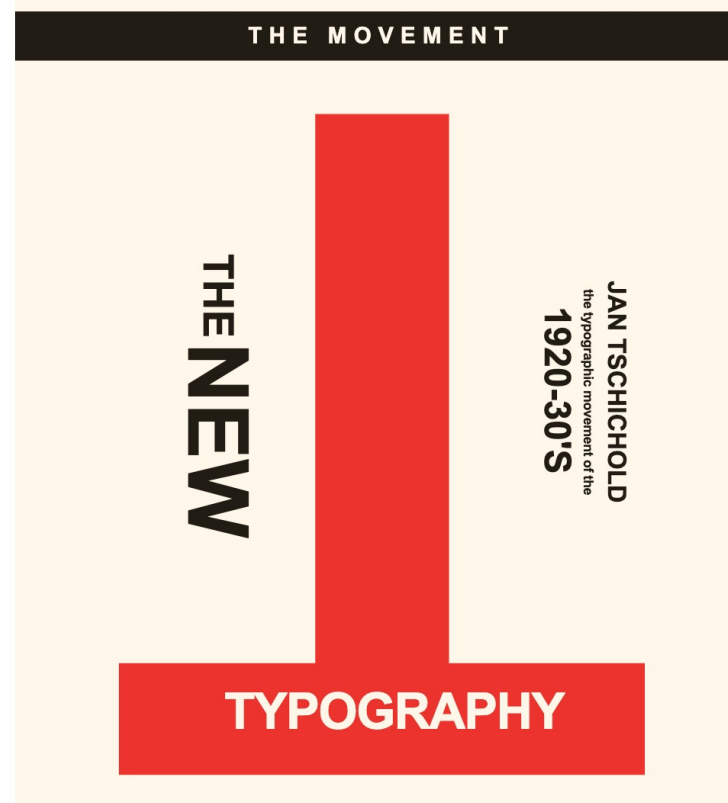


Media Queries – Change Layout

Desktop



Tablet



Phone

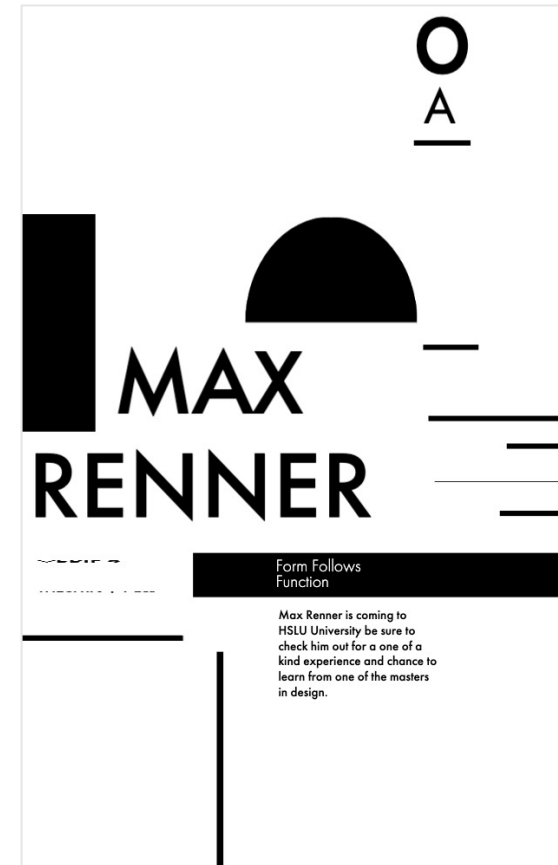


Media Queries – Change Layout

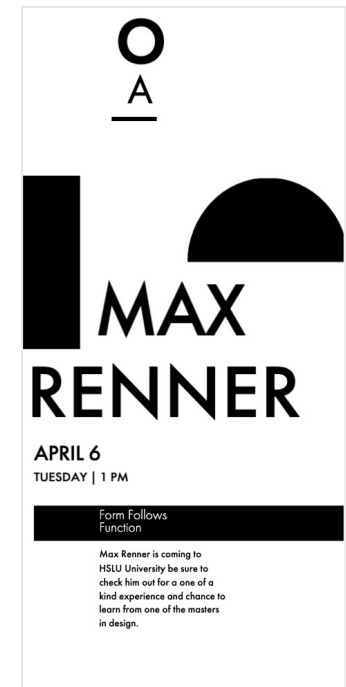
Desktop



Tablet



Phone



Exercise

Desktop

Soooo Cute

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Welcome!



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Cat Body Types

- Oriental
- Foreign
- Semi-Foreign
- Semi-Cobby
- Cobby

Print

Welcome!



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10 min. Break

max-device-width vs max-width

max-device-width is the device rendering width

```
@media all and (max-device-width: 400px) {  
    /* styles for devices with a maximum width of 400px and less  
    Changes only on device orientation */  
}
```

max-width is the width of the target display area means the current size of browser

```
@media all and (max-width: 400px) {  
    /* styles for target area with a maximum width of 400px and less  
    Changes on device orientation , browser resize */  
}
```

Images

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

```
<picture>  
  <source srcset="img_smallflower.jpg" media="(max-width: 400px)">  
  <source srcset="img_flowers.jpg">  
    
</picture>
```

https://www.w3schools.com/css/css_rwd_images.asp

Flexbox

HTML

```
<div class="parent">  
  <div class="child">Child</div>  
  <div class="child">Child</div>  
  <div class="child">Child</div>  
</div>
```

CSS

```
.parent { display: flex; }  
.child { flex: 0 1 auto; } /* Default flex value */
```

flex-grow, flex-shrink, flex-basis

```
.child { flex: 0 1 auto; } /*shorthand*/
```

flex: *[max] [min] [ideal size]*

```
.child {  
    flex-grow: 0;  
    flex-shrink: 1;  
    flex-basis: auto;  
}
```

<https://css-tricks.com/understanding-flex-grow-flex-shrink-and-flex-basis/>

https://www.w3schools.com/css/css3_flexbox.asp

Flex Responsive

```
.flex-container {  
  display: flex;  
  flex-direction: row;  
}
```

/* Responsive layout - makes a one column layout instead of a two-column layout */

```
@media [max-width: 800px] {  
  .flex-container {  
    flex-direction: column;  
  }  
}
```

CSS Frameworks

- Bootstrap
- Foundation
- Materialize
- Tailwind CSS
- Bulma

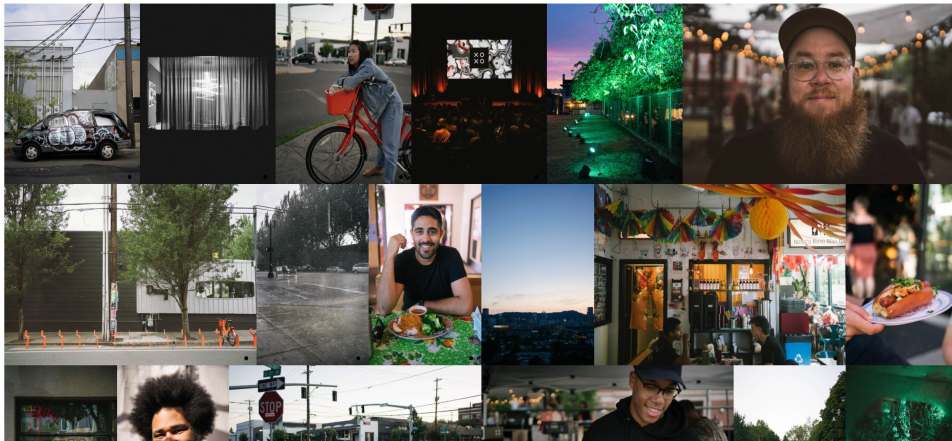
<https://hackr.io/blog/best-css-frameworks>

Tips

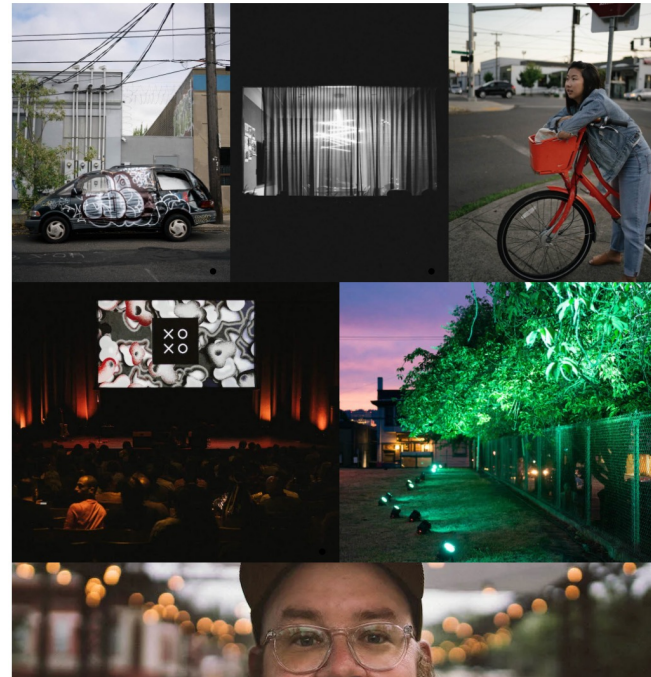
- Content first
- Use relative values, ex: „em“ or „%“, instead of pixels.
- Don't use large fixed width elements. Content must fit within the width of the viewport to avoid horizontal scrolling.

Exercise

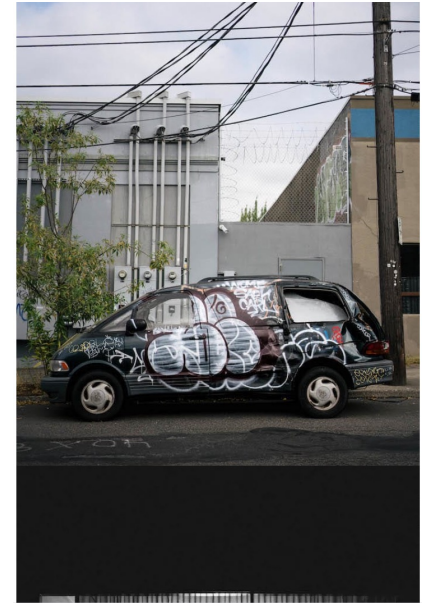
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Thanks