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Web Technologies

Lecture Week Four

Getting Started with CSS 3

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This week's agenda

- Pseudo Classes
- Understanding Box Model
- CSS Properties for Layout Designing
- Building layouts for the web

CSS Selectors and its types

CSS Attribute Selector

CSS Element Selector

CSS Id Selector

CSS Class Selector

CSS Universal Selector


:hover

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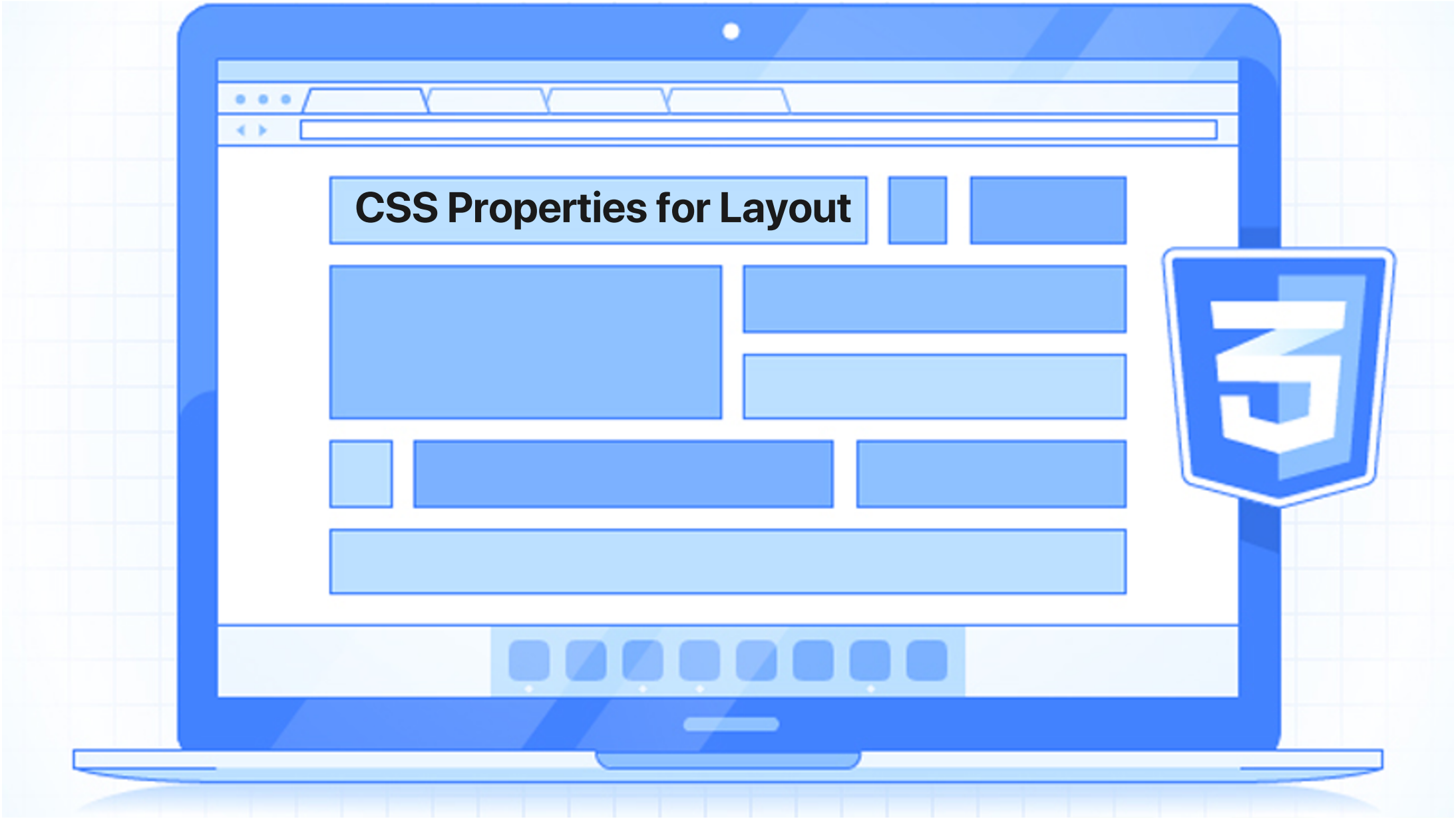
Pseudo Classes

- Pseudo class is what we call a false class. It is denoted by a **colon (:).**
- It is a selector attached to HTML element to specify a special state.
- Pseudo-classes lets you apply a style to an element not only in relation to the content of the document tree, but also in relation to external factors like the history of the navigator (**:visited**, for example), the status of its content (like **:checked** on certain form elements), or the position of the mouse (like **:hover**, which lets you know if the mouse is over an element or not).


CSS Properties for Layout

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CSS Properties for Layout Designing...

- Layout Designing is one of the major aspect of using CSS.
- It has come a long way since using “Table” based design to create page layouts.
- It is more flexible, dynamic and easy to create layouts.
- Layouts using CSS can be done using the combination of one or more CSS properties, each having its own respective domain.
  - Float Property
  - Position Property
  - Display Property

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Layout Designing: Float Property

- The CSS float property specifies how an element should float.
- It is used for positioning and formatting content.

  Eg.: Let an image float left to the text in a container.
- The property can have one of the following values:

  Left: The element floats to the left of its container.

  Right: The element floats to the right of its container.

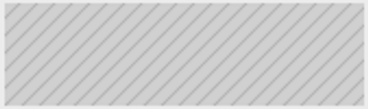
  None: The element does not float. This is default behavior.

  Inherit: The element inherits the float value of its parent.

Layout Designing: Float Left

.container

.float-left



```
.float-left{

        float: left;

}
```

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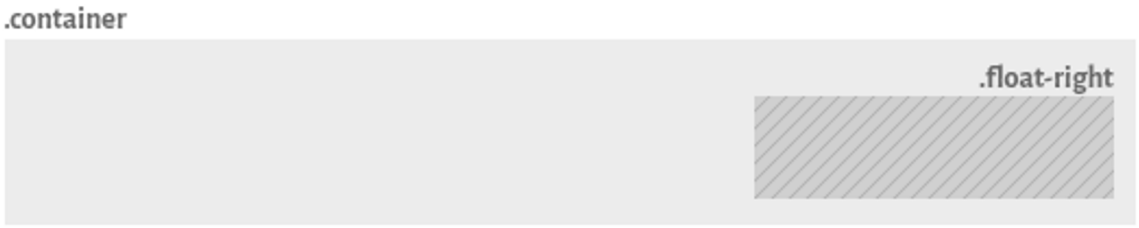
Layout Designing: Float Right




```
.float-right{
        float: right;
}
```

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Layout Designing: Float None

.container

.float-none

```
.float-none{

        float: none; /*Default value*/

}
```

Layout Designing: Clear Property

- The clear property specifies what elements can float beside the cleared element and on which side.
- The property can have one of the following values:

  none: Allows floating on both sides. This is default.

  left: No floating elements allowed on the left side.

  right: No floating elements allowed on the right side.

  both: No floating elements allowed on either sides

  inherit: The element inherits the clear value of its parent.
- The **parent element** of the element with float should have a clear fix hack.

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Layout Designing: Display Property

- Display property is the most important CSS property for controlling layout.
- Any html element can either have a default value of block or inline.
- The property can have one of the following layout values:

  none: Hides the element.

  block: Starts on the new line and takes full width available.

  inline: Starts on the same line and only takes as much width as necessary.

  Inline-block: Similar to inline, but allows to give a width and height.

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Layout Designing: Display Block

.container

.d-block

some content

.d-block

some content

```
.d-block{

        display: block;

}
```

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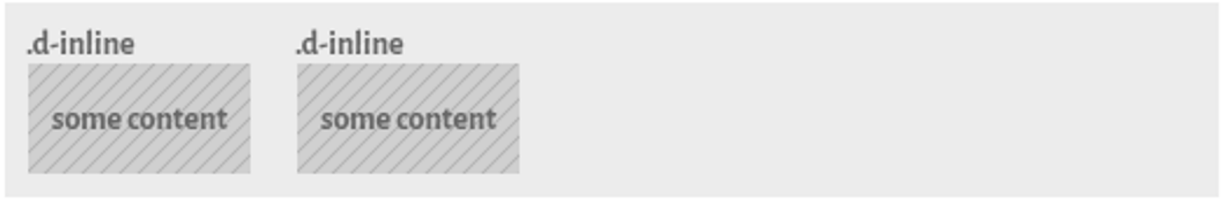
Layout Designing: Display Inline

.container

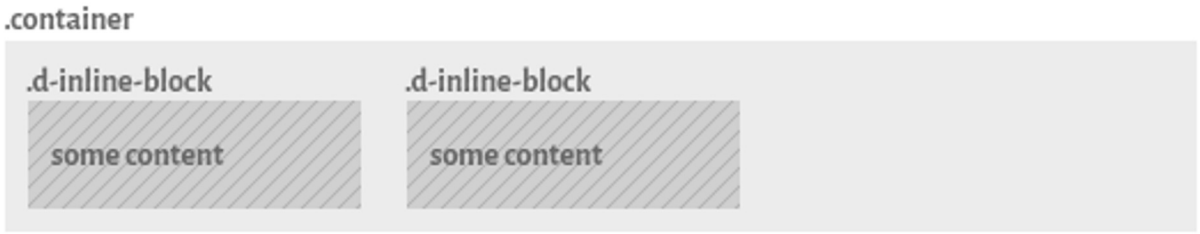



```
.d-inline{

        display: inline;

}
```

Layout Designing: Display Inline Block




```
.d-inline-block{

        display: inline-block;

}
```

Layout Designing: Position Property

- The position property specifies the type of positioning of an element.
- The property can have one of the following values:

  static: This is the default position of any elements. It is not affected by top, left, right, bottom values.

  relative: The element is positioned in relative to its normal position.

  absolute: The element is positioned relative to the nearest positioned ancestor. If the element has no positioned ancestor it uses the document body as its ancestor.

  fixed: The element is positioned relative to the viewport.

  sticky: The element is positioned based on the user's scroll position.

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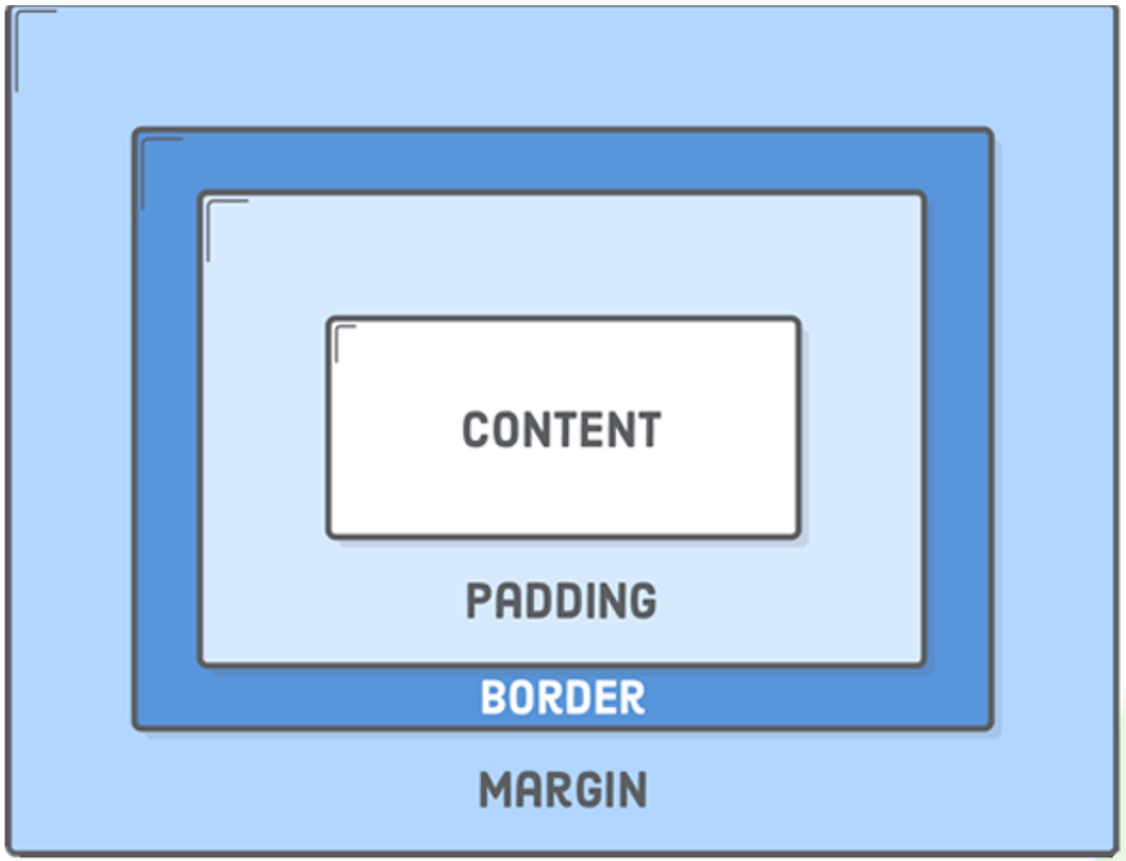
CSS Box Model



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CSS Box Model...

- All HTML elements can be considered as a box. The term box-model is used when talking about design and layout.
- It consists of margin, border, padding and content in the exact order.
- It is essentially a box that wraps around every HTML element.

  Margin: Clears the area outside the border. The margin is transparent.

  Border: A border that goes around the padding and content.

  Padding: Clears an area around the content. The padding is transparent.

  Content: The content of the box, where text, images, etc. appears.

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CSS Box Model

- A simple demonstration of how the box-model css will look like.

```
<div class="box-model"></div>
```

```
<style>
        .box-model{
                width: 300px;
                border: 15px solid
green;
                padding: 50px;
                margin: 20px;
        }
</style>
```

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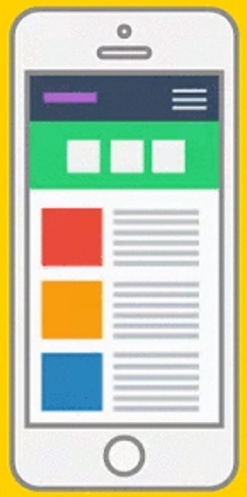
Building Layouts for the web



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Building Layouts...

- So far we have understood that HTML is used to write the structure and CSS is used to give style to it.
- To create a layout we need to work with both structure and style.
- The layouts are not only limited to desktops, but you need to make sure that it looks seamless and have a similar usability throughout multiple devices.
- Making your website compatible with cross devices makes it more accessible for your users.

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Building Layouts...

- It is very important to get your structure right before giving it a style.
- There are certain principle of writing structure for the layouts.
- When creating a layout always focus on the direction of the layout you are building.
- Any website can be made in two directions. LTR (Left to Right) or RTL (Right to Left).
- When creating a website with LTR direction, your layout needs to start from left and go towards right.

Building Layouts (LTR)

```
<div class="logo">
        <img src="image.jpg" alt="Logo">
</div>
<nav class="nav">
        <ul>
                <li>
                        <a
href="index.html">Home</a>
                </li>
                <li>
                        <a
href="about.html">About</a>
                </li>
                ……
        </ul>
</nav>
```

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Building Layouts (RTL)

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```
<nav class="nav">
        <ul>
                <li>
                        <a
href="index.html">Home</a>
                </li>
                <li>
                        <a
href="about.html">About</a>
                </li>
                ……
        </ul>
</nav>
<div class="logo">
        <img src="image.jpg" alt="Logo">
</div>
```

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Building Layouts...

- Always group multiple elements where necessary. Grouping helps you position of multiple elements at one instance.
- As seen earlier when writing structure codes for layout direction is important.
- However, it is not just the horizontal direction that matters. But, the vertical direction matters as well.

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Building Layout...

Building Layout...

Can you tell how many groupings should be done in the layout above?

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Building Layouts...

```
<div class="container">
          <div class="row">
                    <div class="col-3">
                              <figure>
                                        <img src="image.jpg"
alt="Heading" >
                              </figure>
                              <h2>Lorem ipsum dolor</h2>
                              <p> Lorem ipsum dolor sit amet,
                              consectetur adipiscing elit, sed do eiusmod
tempor
                              incididunt ut labore et dolore magna
aliqua. </p>
                    </div>
                    <div class="col-3">...</div>
                    <div class="col-3">...</div>
          </div>
</div>
```

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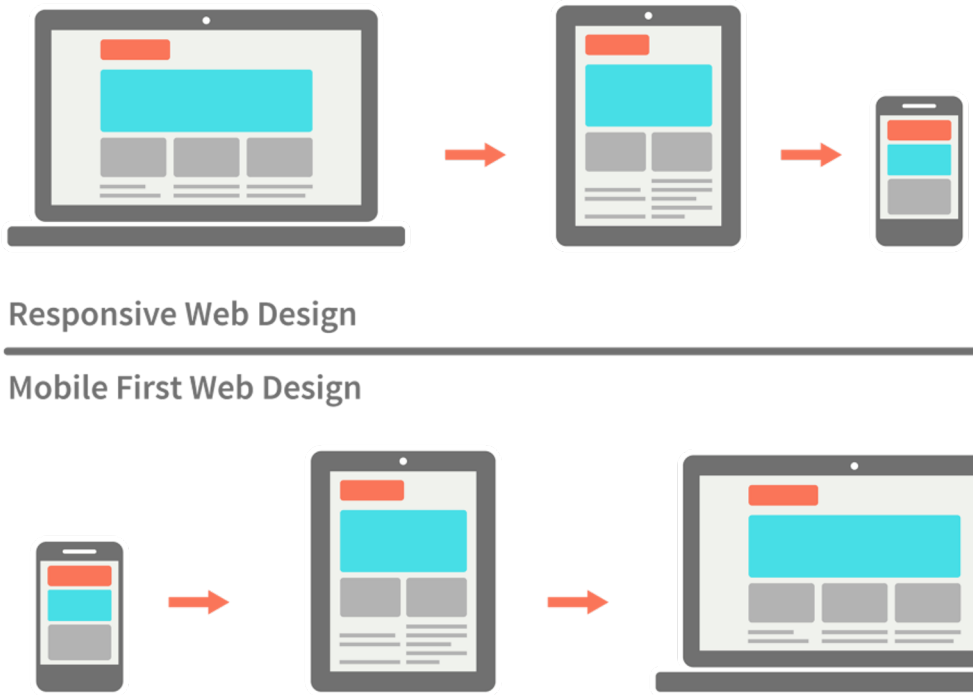
Building Layouts...

- Web layouts can be made in two approach.



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Before you come for Lab, Research!!

- Mozilla Developers Network: CSS
- CSS: W3C Schools
- CSS: Tutorial Points
- CSS3: Tutorial Points
- CSS Pseudo classes

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Before you come for Lab, Research!!

- Mobile First Approach
- Responsive Web Design Breakpoints
- Media Queries

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Thank you!