**Important Frontend Development Topics**

**HTML**

* Structure
* Document Type, Head, Body
* Elements:
* Check all tags references used in the structure of a webpage (<https://way2tutorial.com/html/tag/index.php>, <https://www.w3schools.com/TAGS/default.ASP> )
* block vs inline elements
* How to create Table structure in HTML. What are the tags used in this structure?
* Attributes ? Id, name, any custom attribute
* Sections, main, footer, nav, article, blockquote,
* Heading tags, Paragraph, Label, span (Inline)
* Container: Div (block)
* Table Structure: thread, tbody, rows, tfoot
* Img for showing picture, Video
* Deploying new images format on the webpage (<https://www.igvita.com/2012/12/18/deploying-new-image-formats-on-the-web/>)
* How to show tooltips on elements?
* HTML Forms
* Input: how many types (button, radio button, checkbox, text, email, phone, URL/website)
* Textarea (multi-line input control)
* Button, diff between input type=button vs Button element
* Drop Down List, how to make any option selected by default
* Events
* Mouse events, key events?
* Iframe
* embed youtube video on Html page
* SVG element, Canvas

**CSS**

* CSS References
* [CSS Properties Reference](https://www.w3schools.com/cssref/default.asp)
* [CSS Selectors Reference](https://www.w3schools.com/cssref/css_selectors.asp)
* [CSS Functions Reference](https://www.w3schools.com/cssref/css_functions.asp)
* [CSS Animatable Reference](https://www.w3schools.com/cssref/css_animatable.asp)
* [CSS Units](https://www.w3schools.com/cssref/css_units.asp)
* [CSS Default Values](https://www.w3schools.com/cssref/css_default_values.asp)
* [CSS Browser Support](https://www.w3schools.com/cssref/css3_browsersupport.asp)
* How to add CSS in HTML document in 3 ways:
* **Inline** - by using the style attribute inside HTML elements
* **Internal or Embedded CSS** - by using a <style> element in the <head> section
* **External** - by using a <link> element to link to an external CSS file
* Create a separate CSS file and add a reference in an HTML page and start working on it
* CSS Units?
* px vs em vs rem? see what are the differences
* Typography for Web Layouts
* <https://careerfoundry.com/en/blog/ui-design/beginners-guide-to-typography/>
* <https://www.element84.com/blog/responsive-typography>
* <https://medium.com/eightshapes-llc/typography-in-design-systems-6ed771432f1e>
* CSS selectors? How many types of selectors. How to access an element in DOM at the nth position
* Root selector
* pseudo-classes
* Important Properties
* Position: absolute, relative, fixed, etc. see what are the differences
* Display: inline, block, etc. see what are the differences
* float: apply float on div container. observe the behavior. how to clear the effect of float.
* margin, padding (how to center align div container using margin)
* transitions and animation effects
* Grid vs flexbox structure?
* See where Grid structure is best and where Flexbox should be used
* <https://dev.to/nadayousry/grid-vs-flexbox-3fbh>
* <https://css-tricks.com/quick-whats-the-difference-between-flexbox-and-grid/>
* Background property. how we can use images in the div background. see different values of this property.
* What is the root selector? What is the use of this selector? How to apply font? See how to set the base font in the root selector.
* border properties, alignment properties (vertical and horizontal),
* display, and visibility difference?
* z-index?
* Understanding :root and var()

:root {

--bg-color: #000;

--text-color: #fff;

}

div {

color: var(--text-color);

background-color: var(--bg-color);

}

**Bootstrap Framework**

* What is bootstrap and how to Install it?
* <https://getbootstrap.com/docs/3.4/getting-started/>
* <https://getbootstrap.com/docs/5.0/getting-started/introduction/>
* <https://www.toptal.com/front-end/what-is-bootstrap-a-short-tutorial-on-the-what-why-and-how>
* Bootstrap Concepts:
* What is Bootstrap Grid System and Breakpoints
* Layout
* Content
* Forms
* Components
* Helpers
* Utilities
* See all examples of Snippets
* <https://getbootstrap.com/docs/5.0/examples/>
* Bootstrap Navigation Menu Solutions
* <https://bootstrap-menu.com/>

**Responsive Web design**

* Basic responsive web design Concepts
* <https://www.w3schools.com/html/html_responsive.asp>
* Media Queries and what is **min-width** and **max-width?**
* <https://css-tricks.com/a-complete-guide-to-css-media-queries/>
* Common Breakpoints in web Layout and how it works:
* <https://www.freecodecamp.org/news/css-media-queries-breakpoints-media-types-standard-resolutions-and-more/>
* Responsive design tutorials series:
* [https://www.youtube.com/watch?v=3tLb3i7GB38 HYPERLINK "https://www.youtube.com/watch?v=3tLb3i7GB38&list=PL4cUxeGkcC9g9Vh9MAA-XKnfJsWZnPZFw"& HYPERLINK "https://www.youtube.com/watch?v=3tLb3i7GB38&list=PL4cUxeGkcC9g9Vh9MAA-XKnfJsWZnPZFw"list=PL4cUxeGkcC9g9Vh9MAA-XKnfJsWZnPZFw](https://www.youtube.com/watch?v=3tLb3i7GB38&list=PL4cUxeGkcC9g9Vh9MAA-XKnfJsWZnPZFw)

* Common breakpoints for widths of devices:
* 320px — 480px: Mobile devices
* 481px — 768px: iPads, Tablets
* 769px — 1024px: Small screens, laptops
* 1025px — 1200px: Desktops, large screens
* 1201px and more —  Extra large screens, TV

**Mobile-First Design**

* Difference between Web Responsive and Mobile First Design
* <https://ugem.design/blog/mobile-first-or-responsive-web-design>
* <https://www.finalsite.com/blog/p/~board/b/post/rresponsive-vs-mobile-first-difference>
* Mobile-First design with CSS:
* [https://zellwk.com/blog/how-to-write-mobile-first-css/#:~:text=A%20mobile%2Dfirst%20approach%20to,uses%20min%2Dwidth%20media%20queries. HYPERLINK "https://zellwk.com/blog/how-to-write-mobile-first-css/#:~:text=A%20mobile-first%20approach%20to,uses%20min-width%20media%20queries.&text=In%20the%20example%20above%2C%20%3Cbody,a%20red%20background%20below%20600px"& HYPERLINK "https://zellwk.com/blog/how-to-write-mobile-first-css/#:~:text=A%20mobile-first%20approach%20to,uses%20min-width%20media%20queries.&text=In%20the%20example%20above%2C%20%3Cbody,a%20red%20background%20below%20600px"text=In%20the%20example%20above%2C%20%3Cbody,a%20red%20background%20below%20600px](https://zellwk.com/blog/how-to-write-mobile-first-css/#:~:text=A%20mobile-first%20approach%20to,uses%20min-width%20media%20queries.&text=In%20the%20example%20above%2C%20%3Cbody,a%20red%20background%20below%20600px).
* How to write mobile-first CSS
* <https://www.youtube.com/playlist?list=PL4cUxeGkcC9hH1tAjyUPZPjbj-7s200a4>

**Progressive Web App (PWA)**

* Introduction to PWA:
* <https://developer.mozilla.org/en-US/docs/Web/Progressive_web_apps/Introduction>

* Advantages and Disadvantages of PWA:
* <https://stackoverflow.com/questions/47055893/what-is-a-progressive-web-app-in-laymans-terms>