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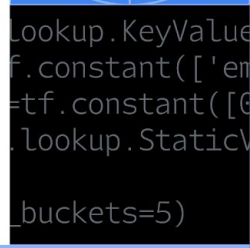
Session starting soon



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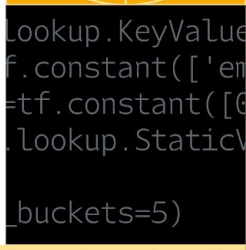
Welcome To Day <2/>

<TECH WINTER BREAK/>

Level up your skills during winter chillllsss



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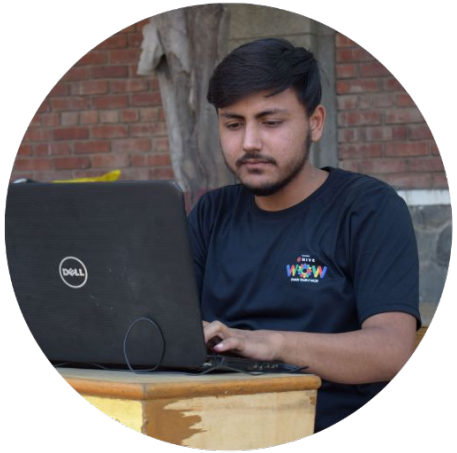
About the Mentor



Sagar Kumar Jha is an accomplished professional with diverse experience across **high-impact organizations.**

- Interned at **DRDO**, focusing on **APK & API Security**.
- Interned at the **Special Protection Groups(SPG)**, specializing in **Radar Communication Systems**.
- Interned at **NITI Aayog**, contributing to **Software Engineering projects**.

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About the Instructor

Divyansh Raj is a skilled professional currently serving as the Technical Lead of GDGC and an intern at Delhi Government University, showcasing his expertise in technical leadership and project execution.

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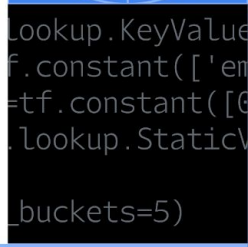
Connect With Us !

Sagar Kumar Jha
(Mentor)

Divyansh Raj
(Instructor)



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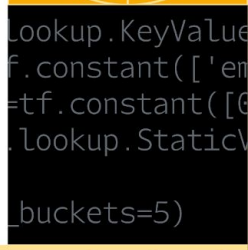
Day 2: CSS

All about Cascading Style Sheets.



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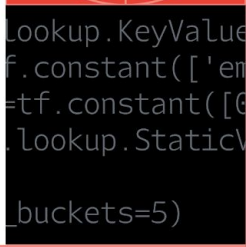
Let's Start!

CSS: Where Style Meets Structure!

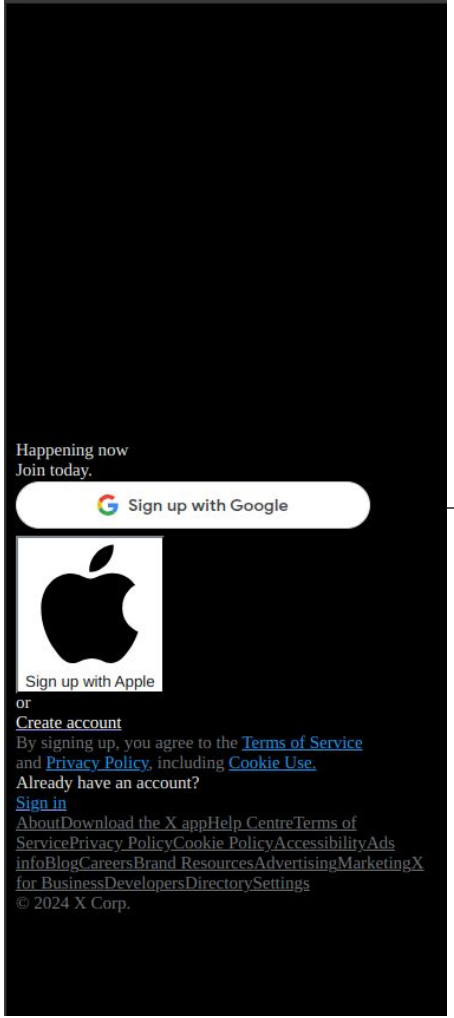
CSS lets you add style(s) to websites (colors, font-size, background color etc.)

Used for positioning tags on the website.

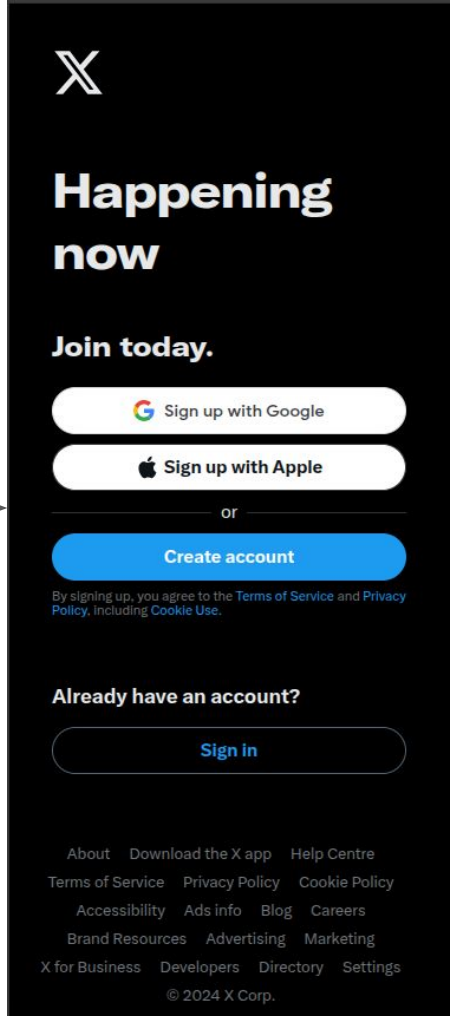


How CSS Works in the Browser:

1. **HTML Parsing**:
   The browser parses the HTML to create the DOM (Document Object Model), which is a tree representation of the content.
2. **CSS Parsing**:
   The browser parses CSS files or <style> blocks to create the CSSOM (CSS Object Model), which is a tree of styles.
3. **DOM + CSSOM**:
   The DOM and CSSOM are combined to create the Render Tree, which represents what the user will see, including styles.
4. **Layout and Painting**:
   The browser calculates the layout (position, size) of elements and "paints" them on the screen.



WITHOUT CSS



WITH CSS

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1. CSS Basics

CSS can be added using three methods: Inline, external, and External Styles.

Inline :

```
<p style="color: red;">This is inline CSS</p>
```

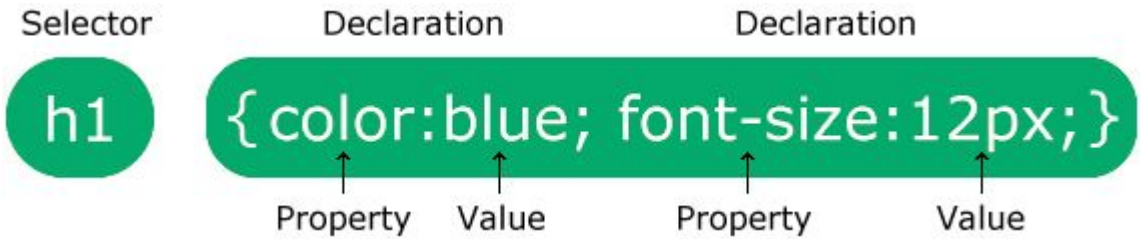
Internal :

```
<style>
  h1 {
    color: green;
  }
</style>
```

External :

```
<link rel="stylesheet" href="styles.css">
```

2. Syntax



- The selector points to the HTML element you want to style.
- The declaration block contains one or more declarations separated by semicolons. Each declaration includes a CSS property name and a value, separated by a colon.
- Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

3. Important Styling Properties

I. Border and Border-Radius
II. Padding and Margin
III. Box-Shadow
IV. Typography (Font-Size and Font-Weight)
V. Positioning in CSS
VI. Float Property

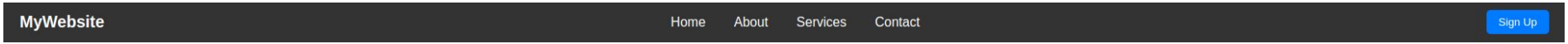
4 . Responsiveness

Responsiveness is how a website looks in different screen sizes

How is responsiveness achieved:

- Flex Box
- Grid
- Media Queries

4 . Flex Box



- display: flex; makes the container a flexbox.
- justify-content: space-between; distributes items across the available width with space between them.
- align-items: center; aligns items vertically in the center.

Justify Content & Align Items

1. justify-content

- Purpose: Aligns items horizontally (along the main axis by default) inside a container.
- Common Values:
  - flex-start: Align items to the start of the container.
  - flex-end: Align items to the end of the container.
  - center: Center items within the container.
  - space-between: Distribute items with space between them.
  - space-around: Distribute items with space around them.
  - space-evenly: Distribute items with equal space between, before, and after.

2. align-items

- Purpose: Aligns items vertically (along the cross axis by default) inside a container.
- Common Values:
  - flex-start: Align items to the top of the container.
  - flex-end: Align items to the bottom of the container.
  - center: Center items vertically.
  - stretch: Stretch items to fill the container (default for block-level elements).
  - baseline: Align items' baselines.

Justify Content & Align Items

5. Grid

Designed to handle the creation of 2D layouts in web development.

1. Grid Container:
    - To start using Grid, set the display property of the parent container to grid or inline-grid.
    - The grid container defines rows, columns, and gaps between grid items.

2. Grid Items:
    - Direct children of the grid container automatically become grid items.
    - You can position them explicitly using grid properties.

6. Media Queries

Allows developers to apply different styles to a website based on the characteristics of the device or viewport (like screen size, resolution, or orientation). This helps create responsive designs that adapt to various devices (e.g., mobile, tablet, desktop).

Basic Syntax

```
@media (condition) {
    /* CSS rules */
}
```

Max-width & Min-width

max-width:

1. max-width is used in media queries to apply styles when the screen width is less than or equal to the specified value.
2. It's commonly used for targeting smaller devices, such as applying styles for mobile screens.

min-width:

1. min-width is used in media queries to apply styles when the screen width is greater than or equal to the specified value.
2. It's useful for implementing styles for larger screens, such as tablets and desktops.

8. Best Practices

Always Start Mobile first

1. Mobile-First Approach:
- Define styles for smaller screens first, then add styles for larger screens using min-width.

2. Avoid Overusing Media Queries:
- Use responsive units (like em, rem, %) where possible to reduce reliance on media queries.

3. Test on Real Devices:
- Always test the responsiveness on different devices and screen sizes.

9. Ending Notes & Assignment

Extra things you can learn:

1. Grid Advanced
2. Use of units like em, rem, %, vh, vw
3. Advanced Media query
4. PRACTICE, PRACTICE & PRACTICE

Make the navbar responsive and as useful as it can be

https://github.com/GDG-ADGIPS/GDGC-WINTER-BOOTCAMP-WEBDEV

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Thank You!

That’s all for today!

I would love to connect with all of you guys :)