Report Week2 Day 2

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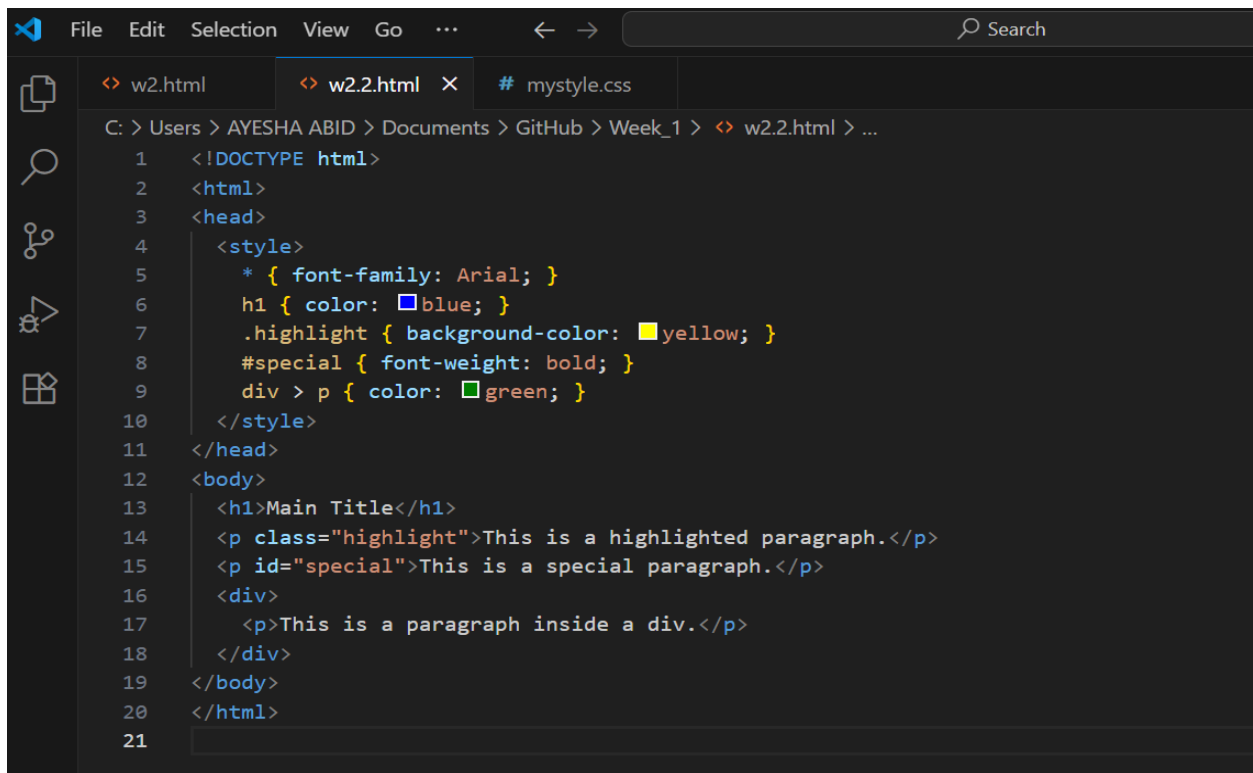
Dated: 01/07/25

Task: Learning Selectors, Colors, Typography, Units

Selectors:

CSS selectors are used to find or select the HTML elements we want to style.

Categories:

- Simple selectors (select elements based on name, id, class)

- Combinator selectors (select elements based on a specific relationship between them)

- Pseudo-class selectors (select elements based on a certain state)

- Pseudo-elements selectors (select and style a part of an element)

- Attribute selectors (select elements based on an attribute or attribute value)

```html
<!DOCTYPE html>
<html>
<head>
  <style>
    * { font-family: Arial; }
    h1 { color: blue; }
    .highlight { background-color: yellow; }
    #special { font-weight: bold; }
    div > p { color: green; }
  </style>
</head>
<body>
  <h1>Main Title</h1>
  <p class="highlight">This is a highlighted paragraph.</p>
  <p id="special">This is a special paragraph.</p>
  <div>
    <p>This is a paragraph inside a div.</p>
  </div>
</body>
</html>
```

Colors:

1.Named Colors

- Predefined names like red, blue, green, purple, etc.

- Easy to remember but limited in variety.

- Example: color: red;

2.Hexadecimal Colors

- A 6-digit code starting with #.

- Represents **Red**, **Green**, and **Blue** using hex (00–FF = 0–255).

- Example:

  #FF5733 means:

  - Red = FF (255)

  - Green = 57 (87)

  - Blue = 33 (51)

  Bright reddish-orange color.

3.RGB (Red, Green, Blue)

- Written as: rgb(R, G, B)

- Values range from **0 to 255** for each color.

- Example: rgb(255, 0, 0) is pure red

4. RGBA (Red, Green, Blue, Alpha)

- Same as RGB but includes **Alpha** (opacity).

- Alpha value ranges from **0** (fully transparent) to **1** (fully opaque).

- Example: rgba(255, 0, 0, 0.5) = semi-transparent red

5. HSL (Hue, Saturation, Lightness)

- hsl(H, S%, L%)

  Hue: Angle on the color wheel (0–360)

  0 = red, 120 = green, 240 = blue

  Saturation: Color intensity (0% = gray, 100% = full color)

  Lightness: Brightness (0% = black, 100% = white)

```
w2.html          w2.2.html  ●        # mystyle.css

C: > Users > AYESHA ABID > Documents > GitHub > Week_1 > <> w2.2.html > ⊘ html > ⊘ body > ⊘ p.rgb
  1    <!DOCTYPE html>
  2    <html>
  3    <head>
  4      <style>
  5        h1 { color: ■#3498db; }
  6        p.name { color: ■red; }
  7        p.rgb { color: ■rgb(0, 128, 0); }
  8        p.rgba { background-color: □rgba(255, 0, 0, 0.2); }
  9        p.hsl { color: ■hsl(120, 100%, 25%); }
 10      </style>
 11    </head>
 12    <body>
 13      <h1>Color Examples</h1>
 14      <p class="name">Named color</p>
 15      <p class="rgb">RGB color</p>
 16      <p class="rgba">RGBA with transparency</p>
 17      <p class="hsl">HSL color</p>
 18    </body>
 19    </html>
 20
```

Units:

Units define measurements for size, spacing, etc.

Absolute units:

- px (pixels), pt (points), cm, in

Relative units:

- em (relative to parent font size)

- rem (relative to root font size)

- % (relative to parent)

- vw, vh (relative to viewport width/height)

```
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<> w2.html          <> w2.2.html  ●     #  mystyle.css

C: > Users > AYESHA ABID > Documents > GitHub > Week_1 > <> w2.2.html > ...
    1    <!DOCTYPE html>
    2    <html>
    3    <head>
    4      <style>
    5        .px { font-size: 20px; }
    6        .em { font-size: 2em; }
    7        .rem { font-size: 1.5rem; }
    8        .percent { width: 80%; background: ■lightgray; }
    9        .vw { font-size: 5vw; }
   10      </style>
   11    </head>
   12    <body>
   13      <p class="px">This is 20px</p>
   14      <p class="em">This is 2em</p>
   15      <p class="rem">This is 1.5rem</p>
   16      <div class="percent">80% width</div>
   17      <p class="vw">Font size is 5vw</p>
   18    </body>
   19    </html>
   20    |
```
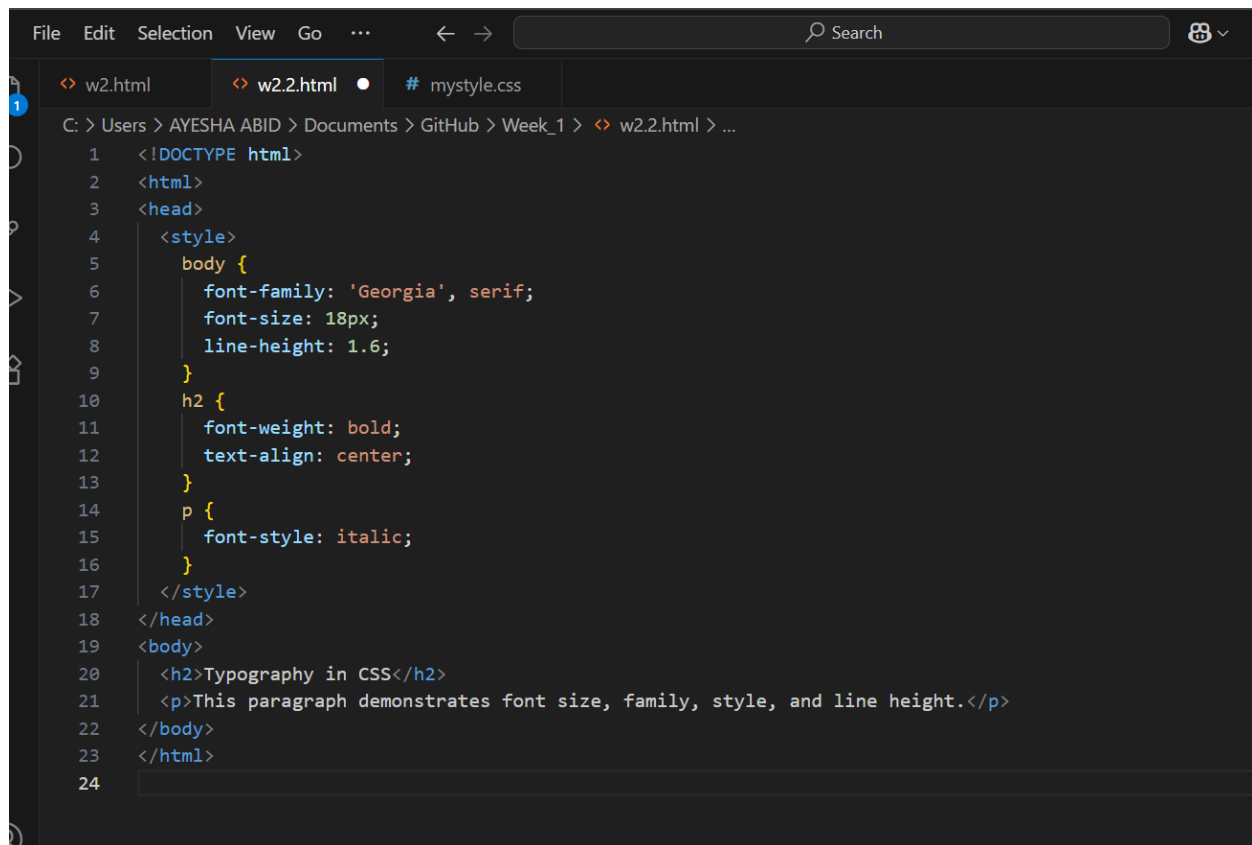
Typography:

font-family: Font style (Arial, Georgia)

font-size: Size of text (16px, 1em)

font-weight: Thickness (normal, bold, 100–900)

font-style: Italic or normal

text-align: Alignment (left, center, right)

line-height: Line spacing

```
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  <> w2.html              <> w2.2.html  ●      # mystyle.css

      C: > Users > AYESHA ABID > Documents > GitHub > Week_1 > <> w2.2.html > ...
       1    <!DOCTYPE html>
       2    <html>
       3    <head>
       4      <style>
       5        body {
       6          font-family: 'Georgia', serif;
       7          font-size: 18px;
       8          line-height: 1.6;
       9        }
      10        h2 {
      11          font-weight: bold;
      12          text-align: center;
      13        }
      14        p {
      15          font-style: italic;
      16        }
      17      </style>
      18    </head>
      19    <body>
      20      <h2>Typography in CSS</h2>
      21      <p>This paragraph demonstrates font size, family, style, and line height.</p>
      22    </body>
      23    </html>
      24
```

Conclusion:

CSS provides powerful tools to control the style and layout of web pages through selectors, color formats, typography, and measurement units. I have learned these concepts through w3schools, scrimba and youtube tutorials and mastery of each helps create visually engaging, accessible, and consistent user interfaces.