1) What are media queries in CSS, and why are they important for responsive design?

→Media queries in CSS are a way to apply different styles to a webpage based on specific conditions, such as the screen size, resolution, or orientation of the device.

→For example, you can have a layout that looks one way on a large screen and a completely different way on a small screen.

→Media queries allow you to write CSS rules that apply only when certain conditions are met.
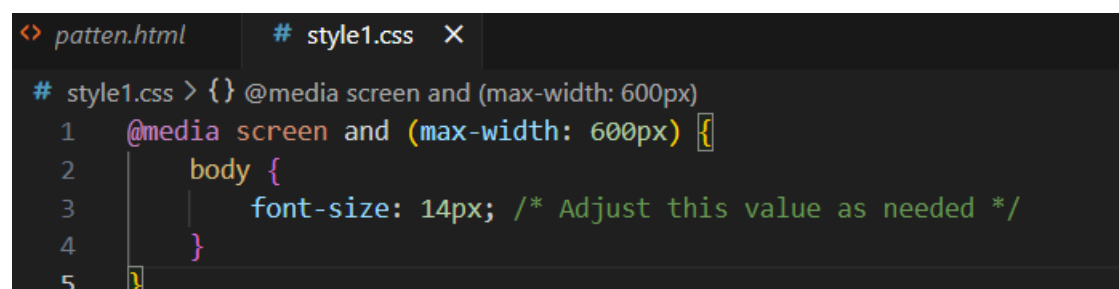
Why are they important for responsive design?

→**Adaptability**: Media queries allow your website to adapt to various screen sizes and devices.

→**Improved User Experience**: They ensure your content is readable and accessible, no matter the device.

→**Better Performance**: You can load specific styles for different devices, which can improve website performance.

2) Write a basic media query that adjusts the font size of a webpage for screens smaller than 600px

→You can use the following basic media query to adjust the font size for screens smaller than 600px:

```
# style1.css > {} @media screen and (max-width: 600px)
1  @media screen and (max-width: 600px) {
2      body {
3          font-size: 14px; /* Adjust this value as needed */
4      }
5  }
```

→This CSS rule will apply to screens with a width of 600px or less and will change the font size of the body to 14px.

→You can modify the font size as per your preference!

❖ **LAB EXERCISE:**

3) Task: Build a responsive webpage that includes:

```html
<> html1.html > ◈ html > ◈ body > ◈ main > ◈ section.content > ◈ div.left-column
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <title>Responsive Webpage</title>
7       <link rel="stylesheet" href="style3.css">
8   </head>
9   <body>
10      <header>
11          <nav>
12              <ul>
13                  <li><a href="#">Home</a></li>
14                  <li><a href="#">About</a></li>
15                  <li><a href="#">Services</a></li>
16                  <li><a href="#">Contact</a></li>
17              </ul>
18          </nav>
19      </header>
20
21      <main>
22          <section class="content">
23              <div class="left-column">
24                  <h2>Left Column</h2>
25                  <p>This is the left column content.</p>
26              </div>
27              <div class="right-column">
28                  <h2>Right Column</h2>
29                  <p>This is the right column content.</p>
30              </div>
31          </section>
32      </main>
33
34      <footer>
35          <p>&copy; 2025 Your Website. All rights reserved.</p>
36      </footer>
37  </body>
```

Create by: Krisha

```
# style3.css > ...
 1   /* Base styles */
 2   body {
 3       font-family: Arial, sans-serif;
 4       margin: 0;
 5       padding: 0;
 6   }
 7
 8   header {
 9       background-color: ☐#333;
10       color: ■white;
11       padding: 15px;
12   }
13
14   header nav ul {
15       list-style-type: none;
16       padding: 0;
17       text-align: center;
18   }
19
20   header nav ul li {
21       display: inline;
22       margin: 0 15px;
23   }
24
25   header nav ul li a {
26       color: ■white;
27       text-decoration: none;
28       font-size: 16px;
29   }
30
31   main {
32       padding: 20px;
33   }
34
```

Create by: Krisha

```
# style3.css > ...
35    .content {
36        display: flex;
37        justify-content: space-between;
38    }
39
40    .left-column, .right-column {
41        width: 48%;
42        padding: 15px;
43        box-sizing: border-box;
44    }
45
46    footer {
47        background-color: ☐#333;
48        color: ■white;
49        text-align: center;
50        padding: 10px 0;
51    }
52
53    /* Media Query for screens smaller than 768px */
54    @media screen and (max-width: 768px) {
55        header nav ul li {
56            display: block;
57            margin: 10px 0;
58        }
59
60        .content {
61            flex-direction: column;
62        }
63
64        .left-column, .right-column {
65            width: 100%;
66            padding: 10px;
67        }
68
69        body {
70            font-size: 14px;
71            padding: 10px;
72        }
73
74        header, footer {
75            padding: 10px;
76        }
77    }
78
```

Create by: Krisha

4) Explain the difference between web-safe fonts and custom web fonts.

Web-Safe Fonts:

→ These are fonts that are already installed on most computers, phones, and devices.

→ They are basic fonts like **Arial**, **Times New Roman**, and **Courier New**.

→ Since these fonts are common, you don't have to worry about whether they will display correctly on someone else's device. They work everywhere.

Custom Web Fonts:

→ These are fonts you can choose that aren't usually installed on devices.

→ They could be fonts like **Google Fonts** or other special designs. To use them on your website, you need to load them from the web.

→ They look unique but might take longer to load, and sometimes they might not appear if the user's internet connection is slow or if the font is blocked.

5) Why might you use a web-safe font over a custom font?

→ **Faster Loading:** Web-safe fonts are already on most devices, so they don't need to be downloaded, making your website load faster.

→ **Reliability:** Since everyone has the same fonts installed, they will always look the same on all devices, so you don't risk the text being unreadable or messy.

→ **Simple and Clean:** Sometimes you just want a simple, straightforward look without worrying about fancy fonts.

6) What is the font-family property in CSS? How do you apply a custom Google Font to a webpage?

Font-family Property in CSS:

→ The font-family property in CSS is used to specify which font you want to use for text on your webpage.

→ You can set it to a specific font or even a list of fonts.

Example:

body { font-family: Arial, sans-serif;}

How to Apply a Custom Google Font:

→ To use a custom Google Font, you need to follow these steps:

1. **Choose a Google Font:** Go to Google Fonts, pick a font, and copy the provided <link> tag or CSS @import rule.

2. Add the font to your HTML:

→ Paste the <link> tag inside the <head> of your HTML file.

Example:

```
<link href="https://fonts.googleapis.com/css2?family=Roboto&display=swap" rel="stylesheet">
```

3. Use the font CSS:

→ Now, use the font in your CSS by setting the font-family to the Google Font name.

Example:

body {

  font-family: 'Roboto', sans-serif;

}

❖ LAB EXERCISE:

7) Task: Create a blog post layout

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Blog Post Layout</title>

    <!-- Link to Google Fonts for custom fonts -->
    <link href="https://fonts.googleapis.com/css2?family=Roboto:wght@400;700&family=Open+Sans:wght@400;600&display=swap" rel="stylesheet

    <!-- Link to external CSS file -->
    <link rel="stylesheet" href="styles2.css">
</head>
<body>
    <div class="container">
        <!-- Blog Post -->
        <article class="blog-post">
            <h1 class="title">The Future of Web Design</h1>
            <h2 class="subtitle">Exploring trends, tools, and technologies</h2>
            <div class="content">
                <p>
                    Web design is constantly evolving, and staying on top of trends and technologies is essential for web designers. In
                </p>
                <p>
                    Designers will need to embrace new technologies and approaches to stay ahead of the curve. At the same time, user-ce
                </p>
            </div>
        </article>
    </div>
</body>
</html>
```

Create by: Krisha

```css
/* Apply Google Fonts */
body {
    font-family: 'Open Sans', sans-serif; /* Body font */
    margin: 0;
    padding: 0;
    background-color: #f4f4f4;
}

.container {
    max-width: 900px;
    margin: 0 auto;
    padding: 20px;
    background-color: #fff;
}

.blog-post {
    line-height: 1.6; /* Better line spacing for readability */
}

.title {
    font-family: 'Roboto', sans-serif; /* Heading font */
    font-size: 2.5rem; /* Large title size */
    font-weight: 700;
    color: #333;
    margin-bottom: 10px;
}

.subtitle {
    font-family: 'Roboto', sans-serif; /* Heading font */
    font-size: 1.5rem; /* Subtitle size */
    font-weight: 600;
    color: #666;
    margin-bottom: 20px;
}
```

Create by: Krisha

```css
.content {
    font-size: 1.125rem; /* Body text size */
    color: #444;
}

p {
    margin-bottom: 20px;
}

/* Responsive Design */
@media (max-width: 768px) {
    .title {
        font-size: 2rem; /* Smaller title on mobile */
    }

    .subtitle {
        font-size: 1.25rem; /* Smaller subtitle on mobile */
    }

    .content {
        font-size: 1rem; /* Smaller body text on mobile */
    }
}
```