Responsive Web Design with Media Queries :-

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

Ans :- **Media queries** in CSS allow you to apply different styles depending on the device's characteristics, such as screen size, resolution, or orientation. They are essential for making websites responsive, meaning they adjust to different screen sizes, ensuring a better user experience on mobile, tablet, and desktop devices.

Key Use Cases for Media Queries:

1. **Adjusting layout for different screen sizes** (mobile, tablet, desktop).
2. **Changing font size** for readability on smaller devices.
3. **Hiding or displaying elements** based on the screen width.

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Responsive Example</title>

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

</head>

<body>

  <div class="container">

    <h1>Responsive Web Design</h1>
```

```html
        <p>This layout changes depending on the screen size!</p>

    </div>

</body>

</html>
```

```css
/* Default styles for larger screens */

.container {

    width: 80%;

    margin: 0 auto;

    background-color: lightblue;

}



h1 {

    font-size: 36px;

}



/* Media query for devices with a max-width of 600px (e.g., mobile) */

@media (max-width: 600px) {

    .container {

        width: 100%;

        background-color: lightgreen;
```

```
  }



  h1 {

    font-size: 24px;

  }

}



/* Media query for devices with a max-width of 900px (e.g., tablets) */

@media (max-width: 900px) {

  .container {

    width: 90%;

  }



  h1 {

    font-size: 30px;

  }

}
```

How It Works:

1. **Default Styles**: The .container is set to 80% width with a light blue background and large text for larger screens (desktops).

2. **For Mobile (max-width: 600px)**: The container width is set to 100%, the background color changes to light green, and the heading font size reduces for smaller screens.

3. **For Tablets (max-width: 900px)**: The container width is set to 90%, and the heading size is adjusted.

Why Media Queries Are Important:

- They make websites **responsive**, adjusting to different screen sizes and devices.
- Provide a **better user experience**, ensuring content is accessible and readable on all devices.

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

```
body {

    font-size: 16px;

}

@media (max-width: 600px) {

    body {

        font-size: 14px;

    }

}
```

- **Default Font Size**: The body text has a default font size of 16px for larger screens.
- **Media Query**: When the screen width is **smaller than 600px**, the font size adjusts to 14px to improve readability on smaller devices like smartphones.