

Training Day 9

Day 9 – 3rd July 2025

Responsive Design and Media Queries

Detailed Description:

Today's session introduced me to **Responsive Web Design (RWD)**, a modern approach in web designing that ensures web pages **adapt automatically** to different screen sizes and devices.

The instructor explained that with the increasing use of **smartphones and tablets**, it is crucial that websites **display correctly on all devices**. Responsive design eliminates the need for separate mobile sites and improves user experience.

◆ 1. Principles of Responsive Design

We learned the key principles of responsive design:

- **Flexible Layouts:** Using percentage-based widths instead of fixed pixel widths.
- **Flexible Images and Media:** Images and videos scale with the screen size.
- **Media Queries:** CSS rules that apply only when certain conditions (like screen width) are met.

The instructor emphasized the use of **relative units** like %, em, and rem instead of absolute units (px) for better responsiveness.

◆ 2. Introduction to Media Queries

Media queries allow developers to define **different CSS rules** for different screen sizes.

Syntax:

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

Example practiced:

```
body {  
  
    background-color: lightblue;  
  
}
```

```
@media (max-width: 768px) {  
  
    body {  
  
        background-color: lightcoral;  
  
    }  
  
}
```

- Here, the background color changes when the **screen width is 768px or less** (common for tablets).
- Media queries can target **width, height, orientation, resolution**, etc.

◆ **3. Responsive Navigation Menu**

By : Malika

URN : 2302600

CRN :2315145

We practiced creating a simple **navigation bar** that adjusts for mobile screens. On large screens, menu items appear horizontally; on small screens, they stack vertically.

Example concept:

```
nav ul {  
  
    display: flex;  
  
    justify-content: space-around;  
  
}
```

```
@media (max-width: 600px) {  
  
    nav ul {  
  
        flex-direction: column;  
  
        text-align: center;  
  
    }  
  
}
```

This exercise showed how **flexbox** combined with **media queries** creates adaptable layouts.

◆ 4. Flexible Images and Videos

The instructor demonstrated how to make images scale automatically:

```
img {
```

```
max-width: 100%;  
  
height: auto;  
  
}
```

This ensures that images **do not overflow** their container on smaller screens, maintaining a clean and professional design.

◆ 5. Testing Responsiveness

We tested our webpages on different devices and browser resizing tools.
I observed how elements like **text, images, and buttons** adjust according to screen width.
This practical helped me **visualize and understand the importance of responsive design** in real-world websites.

Learning Outcomes:

- Understood the concept and importance of **Responsive Web Design**.
- Learned how to create **flexible layouts** using relative units.
- Practiced **media queries** to apply CSS rules for different screen sizes.
- Learned to make images and videos **scale automatically** for mobile devices.
- Developed a simple **responsive navigation menu** using flexbox and media queries.
- Gained skills to test and verify **website responsiveness** across devices.