**Theory Assignment**

**1. What is Responsive Design?**

**Responsive design** is an approach to web development where a website's layout, content, and functionality automatically adjust to different screen sizes and devices (e.g., mobile phones, tablets, laptops, desktops).

**🔹 Importance:**

* Ensures usability across all devices.
* Improves user experience.
* Reduces the need for separate mobile websites.
* Helps with SEO (Google favors mobile-friendly sites).

**2. Role of Media Queries**

**Media queries** are CSS rules that apply styles based on the characteristics of the user's device, such as screen width, height, resolution, or orientation.

css

@media (max-width: 768px) {

body {

font-size: 14px;

}

}

**🔹 Use cases:**

* Adjust font sizes, layouts, and navigation for smaller screens.
* Hide or show content based on screen size.
* Enable mobile-first or desktop-first design approaches.

**3. Viewport Settings and Mobile Displays**

The **viewport** is the visible area of a webpage on a device.

To ensure proper scaling and layout on mobile devices, include this line in the <head> of your HTML:

html

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

**🔹 Effects:**

* Ensures content fits within screen width.
* Prevents zoomed-out default behavior on mobile.
* Makes media queries work as expected on mobile.