Responsive Web Design with Media Queries :

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

A - 1 : Media queries in CSS are a technique used to apply different styles depending on the device characteristics such as screen width, height, resolution, orientation, or media type (screen, print, etc.).

- They allow a website's layout and design to adapt to different screen sizes and devices like mobiles, tablets, laptops, and desktops.

Media Queries in are important for responsive design for these reasons :

- **Adapt to different screen sizes.**
    - Mobile phones
    - Tablets
    - Laptops
    - Desktops
- **Improve user experience.**
    - Text remains readable.
    - Buttons are easier to tap.
    - Layouts don't break on small screens.
- **Control layout changes.**
    - Change Flexbox or Grid layouts.
    - Stack elements vertically on small screens.
    - Hide or show content based on screen size.
- **Performance optimization.**
    - Avoid loading unnecessary styles for small devices.
    - Optimize spacing and font sizes.

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

A - 2 :

```
body {
  font-size: 16px;
}

@media (max-width: 600px) {
  body {
    font-size: 14px;
  }
}
```

Q - 3 : Explain the difference between web-safe fonts and custom web fonts. Why might you use a web-safe font over a custom font?

A - 3 :

Feature	Web-Safe Fonts	Custom Web Fonts
Availability	Already on user's device	Downloaded from the web
Load Speed	Very fast	Slower (extra request)
Design Variety	Very limited	Almost unlimited
Consistency	Depends on OS version	Consistent everywhere
Setup	No setup needed	Requires linking or hosting

You might choose web-safe fonts when :

- **Performance is critical**
  No font files to download = faster website, especially on slow internet.
- **You want maximum compatibility**
  Works on almost every device without issues.

- **It's a simple or text-heavy site**
  Like blogs, documentation, school projects, or dashboards.
- **You want fewer technical complications**
  No font loading errors, no CORS issues, no fallback flashes.

Q - 4 : What is the font-family property in CSS? How do you apply a custom Google Font to a webpage?
A - 4 : The font-family property in CSS is used to set the typeface (font style) for text on a webpage.

for Apply a Custom Google Font to a Webpage:

Step 1: Choose a Font from Google Fonts.

- Go to fonts.google.com and select a font (example: Poppins).

Step 2: Add the Font Link in `<head>`.

```
<head>
 <link rel="preconnect" href="https://fonts.googleapis.com">
 <link rel="preconnect" href="https://fonts.gstatic.com"
crossorigin>
 <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@40
0;600&display=swap" rel="stylesheet">
</head>
```

Step 3: Use the Font in CSS with font-family.

```
body {
 font-family: 'Poppins',
sans-serif;
 }
```