



Responsive Design

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What is Web Design ??

Why is it important?



- Web design is the process of creating websites.
- It's the presentation of content on web pages which can be accessed on a web browser.
- Elements of Web Design:
 - ◆ **Layout:** Arrangement of ads, graphics, text, etc.
 - ◆ **Color:** Choice of colors. Depends on purpose and clientele.
 - ◆ **Graphics:** Include logos, photos, icons, etc.
 - ◆ **Fonts:** Enhance the design. Make text appealing and readable.
 - ◆ **Content:** Quality content to retain the users. SEO friendly.
- The layout, structure and appearance of the webpage are created using HTML and CSS.
- HTML tags define content of each page.
- CSS defines the look and feel of the page.

Importance of Web Design

- Attract more customers.
- Improve the customer conversion to business.
- Improve the brand awareness and uniformity.



Types of Web Designs

There are 4 major types of Web designs:

1. Static or Fixed
2. Fluid or Liquid
3. Adaptive
4. Responsive



Static or Fixed Design

- Fixed web pages have a set width (in pixels) that won't alter when the browser is resized.
- The 'container' of the website is programmed to not move.
- The width of 960px is the most widely used size for fixed-layout websites.
- Drawbacks:-
 - The content is hard to view on smaller devices due to:
 - ◆ The need of scrolling horizontally.
 - ◆ Or pinch and expand to zoom, etc.
- Having a static website is a risk to lose a big part of the audience.



Fluid or Liquid Design

- The layout here resizes as the window size is changed.
- Fluid pages keeps the same proportions of the page regardless of the device it is open on.
- The columns containing the content are built using percentages rather than fixed widths.
- The columns increase or decrease in size relative to each other.
- Drawbacks:-
 - A multi-column layout on a small screen could be too crowded for the content.
 - If the browser is very wide, some content might be stretched too far.



Adaptive Design

- Adaptive design uses multiple fixed layouts.
- Several versions of the layout are displayed based on the screen size of the viewer.
- The system detects the browser size and selects the most appropriate layout through media queries
- Such websites should load pretty fast as there are no adjustments in terms of size and position.
- Every layout should be designed with care, and that takes time and effort which makes it expensive.



What exactly is Responsive Design ??

Why is it required?



Why??

- Because it's Trending!
- Mobile traffic accounts for more than half of the internet traffic.
- So, everyone requires a mobile version of their sites. Isn't it?
- We want our content to be like water. It should flow from one device to another. Without breaking of course!



What is Responsive Web Design?

- A web page that “responds to” or resizes itself depending on the type of device.
- It’s like having one site that responds differently on different devices.
- It uses both relative units and media queries, combining the ideas of a liquid layout and an adaptive layout.
- This approach uses flexible layouts, flexible images and media queries.
- The goal is to detect user’s screen size and orientation, and change the layout accordingly.



Let's see some examples!

[Example Link](#)



Media Queries

- Media Query is a CSS3 module that allows the content of the web page to adapt to the type of media, it is rendered in.
- It consists of media type along with one or more expressions. The logical expressions can be true or false.
- It uses the `@media` rule to include a block of CSS properties only if a certain condition is true.
- Media types:
 - all
 - screen
 - print
 - speech
- Used to check:
 - Width and height of viewport
 - Width and height of device
 - Orientation (landscape or portrait)
 - Resolution

Syntax

Reverts the meaning of media query



Combines media feature with media types or other media features.



```
@media not|only mediatype and (mediafeature and|or|not mediafeature)
{
  CSS-Code;
}
```

CSS-Code;

Prevents older browsers (which does not support media queries) to apply the media features. Doesn't affect modern browsers.

Rule used to add different styles for different media types/devices.

Comma separated. Treated like two separate media queries



Breakpoint

- It's the point at which your sites' content will respond to provide the user with the best possible layout to consume the information.
- Major breakpoint in web design is kept to a minimum.
- It should be required only when the number of columns in the layout needs to change.
- Commonly used device breakpoints:
 - ◆ 320px
 - ◆ 480px
 - ◆ 768px
 - ◆ 1024px



Exercise

Implement the given design and make it responsive.



Thank You !!!

