Step by step on making a Responsive Website:

What is responsive design?

Responsive web design, or RWD, is a design approach that addresses the range of devices and device sizes, enabling automatic adaption to the screen, whether the content is viewed on a tablet, phone, television, or watch. Responsive web design isn't a separate technology — it is an approach.

Step 1: Introduction to Responsive Web Design

In this tutorial, we'll learn the basics of creating a fully responsive web design. Responsive design ensures that your website looks great and functions well on various devices and screen sizes.

Step 2: Mobile-First Approach

- Understanding Viewports

Start by adding a viewport meta tag to your HTML document. This tag controls the width and initial scale of the viewport, essential for a responsive layout.

Example:

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

- Designing for Mobile

Adopt a mobile-first approach by designing and styling your website for smaller screens first. This ensures a solid foundation for scalability.

Step 3: Flexible Images and Media

- Image Responsiveness

Make your images responsive by setting the max-width property to 100%. This prevents images from exceeding their parent containers on smaller screens.

Example:

```html
<img src="image.jpg" alt="Description" style="max-width: 100%;">
```

- Using Responsive Image Techniques

Explore techniques like the picture element and 'srcset' attribute to provide different image sizes based on the user's device.

Step 4: Responsive Layouts with CSS Grid and Flexbox

- Introduction to CSS Grid and Flexbox

Learn how to use CSS Grid for two-dimensional layouts and Flexbox for one-dimensional layouts. These tools are essential for creating flexible and responsive designs.

- Mobile-First Layout Design

Design your layout with a mobile-first mindset using Flexbox and CSS Grid. Use media queries to enhance the layout for larger screens.

Example:

```css
.container {

  display: flex;

  flex-direction: column;

}
```

Step 5: Testing Across Devices and Browsers

- Regular Testing

Ensure your website's responsiveness by regularly testing it on different devices and browsers. Use browser developer tools to simulate various screen sizes during development.

- Cross-Browser Testing Tools

You could watch more tutorials on Youtube or CrossBrowserTesting for comprehensive cross-browser testing. This helps identify and address any issues across different browsers.

By following these steps, you'll be on your way to creating a fully responsive web design that provides an optimal user experience across a variety of devices and screen sizes.