**Google vitals**

**Core Web Vitals include:**

**1. Largest Contentful Paint (LCP):**

1. LCP measures the loading performance of a webpage, focusing on the time it takes for the largest content element (such as an image or a block of text) within the viewport to be rendered.
2. It provides insights into how quickly users can see the main content of a webpage, which is crucial for delivering a good user experience.
3. Google recommends aiming for an LCP of 2.5 seconds or faster for optimal performance.

**2. First Input Delay (FID):**

1. FID assesses a webpage's interactivity by measuring the time between when a user first interacts with the page (such as clicking a button or tapping a link) and when the browser can respond to that interaction.
2. It quantifies the delay users experience when trying to interact with the page for the first time.
3. FID is essential for ensuring that websites respond quickly to user input, enhancing overall usability.
4. To provide a good user experience, websites should strive for an FID of less than 100 milliseconds.

**3. Cumulative Layout Shift (CLS):**

1. CLS measures the visual stability of a webpage by quantifying the amount of unexpected layout shifts of visible page content during the loading process.
2. It addresses situations where page elements (such as images or ads) unexpectedly move, causing users to click on the wrong elements or lose their place on the page.
3. CLS is essential for preventing user frustration and ensuring a smooth browsing experience.
4. Google suggests that websites aim for a CLS score of less than 0.1 to provide a stable visual experience.

These metrics help website owners and developers understand the user experience of their sites better and make improvements where necessary.

**To optimize website for both mobile and desktop views**

1. **Choose a Responsive Design Framework or Theme:** select a responsive theme or framework. These themes are designed to adapt to different screen sizes automatically.
2. **Use Fluid Grids:** Design your layout using fluid grids that resize proportionally based on the user's screen size. This allows your website to adapt seamlessly from desktop to mobile and everything in between.
3. **Media Queries:** Implement CSS media queries to apply different styles based on the device's screen width. Define breakpoints where your layout will change to accommodate smaller or larger screens.
4. **Flexible Images and Media:** Set max-width properties for images and other media elements to ensure they scale down proportionally on smaller screens. This prevents images from overflowing or becoming distorted on mobile devices.
5. **Mobile-First Approach:** Start by designing your website for mobile devices first, then add enhancements for larger screens using media queries. This ensures a fast and efficient user experience on smaller devices.
6. **Optimize Navigation:** Simplify your navigation menu for mobile devices by using collapsible menus, hamburger icons, or other mobile-friendly navigation patterns. Keep the most important links easily accessible, and consider using sticky navigation for desktop views.
7. **Touch-Friendly Elements:** Ensure that buttons, links, and interactive elements are large enough and spaced out properly to accommodate touch gestures on mobile devices. Aim for a minimum touch target size of 44x44 pixels.
8. **Performance Optimization:** Optimize your website's performance by minimizing file sizes, leveraging browser caching, and prioritizing critical content for faster loading on mobile devices. Use tools like Google PageSpeed Insights to identify and fix performance issues.
9. **Test Across Devices and Browsers:** Test your website on various devices (smartphones, tablets, desktops) and popular browsers (Chrome, Safari, Firefox, Edge) to ensure compatibility and consistency across different platforms.
10. **Accessibility:** Ensure your website is accessible to all users, including those with disabilities. Use semantic HTML markup, provide alternative text for images, and test your website with accessibility tools to identify and address any barriers.

By following these steps, website that provides an optimal user experience on both mobile and desktop devices