**1. Could you tell me a bit about you and your field?**

I’m an eye doctor specializing in visual impairment and assistive tools, my expertise lies in understanding and addressing visual challenges faced by individuals. I have extensive knowledge of various eye conditions, their impact on vision, and the available technologies and tools that can help improve visual function and quality of life. I work closely with patients who have vision impairments such as low vision, blindness, or specific visual disorders. I diagnose and manage eye conditions, provide vision assessments, and offer recommendations for appropriate assistive tools and technologies that can enhance visual capabilities. I stay up to date with advancements in assistive technologies, such as magnifiers, screen readers, braille devices, electronic glasses, and other specialized tools designed to improve reading, mobility, orientation, and daily living activities for visually impaired individuals.

**2. In your experience, what are the challenges visually impaired users encounter when using websites?**

One major challenge is websites that are not designed with accessibility in mind. If websites lack proper consideration for accessibility standards, visually impaired users may struggle to navigate, access content, or interact with various website features. Elements like poor color contrast (color blindness), inadequate labeling of form fields or buttons (input difficulty), or non-descriptive links (visually impaired people don’t know it’s a link) can pose significant barriers. Also, forms and interactive elements that are not properly labeled or structured can be challenging for visually impaired users. Without clear labels, visually impaired users may have difficulty understanding the purpose of form fields or providing accurate input. Additionally, inaccessible Captcha or verification mechanisms can create barriers for visually impaired users trying to complete online forms or transactions.

**3. Can you give me an example of how you apply different tools, applications, and methods to help users overcome their challenges?**

A. Screen Readers: Screen readers are essential tools for individuals with visual impairments as they convert on-screen text into synthesized speech or Braille output. I educate visually impaired users on different screen reader software options like JAWS, NVDA, or VoiceOver (for Apple devices) and provide training on how to effectively use them for web browsing.

B. Voice Recognition and Dictation Software: For individuals who have difficulty typing or navigating websites with complex interfaces, voice recognition, and dictation software can be valuable. These tools allow users to control their devices and interact with websites using voice commands. I introduce users to applications like Dragon Naturally Speaking or the built-in voice recognition features on mobile devices, enabling them to navigate websites, compose emails, and perform other tasks using voice input.

C. Braille Displays and Refreshable Braille Devices: For visually impaired individuals who read Braille, I assist in setting up and integrating Braille displays or refreshable Braille devices with their computers or mobile devices. These devices provide tactile output, allowing users to read website content in Braille, access online documents, and navigate web pages more effectively.

D. Accessibility Browser Extensions and Plugins: I recommend and help users install browser extensions or plugins designed to enhance web accessibility. These tools can modify the appearance of web pages, adjust color contrasts, highlight links, or add additional keyboard shortcuts. Examples include extensions like Web Developer, Color Enhancer, or High Contrast.

**4. What aspects of creating accessible content is most challenging, why are they challenging? and how have you overcome these challenges? Can you tell me about your process when you make these changes?**

One of the biggest challenges is catering to the diverse needs of individuals with different types and levels of visual impairments. Visual impairments can range from low vision to complete blindness, and each person may require different accommodations. It can be challenging to anticipate and address the specific needs of a wide range of users. Another challenge is ensuring that content meets accessibility standards requires technical knowledge and familiarity with accessibility guidelines, such as WCAG. It can be challenging to understand the technical aspects of web accessibility, including proper markup, semantic structure, alternative text, keyboard navigation, and other accessibility features. Also, the balance between visually impaired people and normal people is a challenge. Certain design elements, such as complex layouts, non-standard controls, or visual effects, can hinder accessibility for visually impaired users. Balancing aesthetics and accessibility can be a challenge, as modifications may be needed to prioritize usability for all users.

I continuously update my knowledge of accessibility guidelines, techniques, and best practices. I stay informed about the latest developments in assistive technologies, browser support, and accessibility standards. This ongoing learning process helps me understand and address diverse needs effectively. I conduct accessibility audits and tests to identify potential barriers or issues within content or websites. This involves using tools like screen readers, browser extensions, and automated accessibility testing tools to assess the accessibility of the content. Manual testing is also crucial to evaluate the user experience and ensure that the content is perceivable, operable, understandable, and robust for all users. User feedback is invaluable in ensuring accessibility. I actively seek feedback from visually impaired individuals, conduct usability testing with assistive technology users, and incorporate their perspectives into the accessibility improvements. This iterative process allows me to refine and enhance the content based on the actual needs and experiences of users.

**5. Can you share any experiences where you modified content? What changes were made?**

I was approached by a publishing company to make their digital books accessible to individuals with visual impairments. The books were primarily in eBook formats, such as ePub or PDF. We made alternative texts for images. Many eBooks contained images, illustrations, charts, or graphs that conveyed important information visually. To make them accessible, we added descriptive alternative text to images, allowing individuals using screen readers to understand the content and context of the visuals, and ensured that the alternative text was concise, clear, and accurately conveyed the meaning of the images. The eBooks included hyperlinks to external websites or internal references. To enhance accessibility, we made sure that hyperlinks had descriptive and meaningful text rather than generic phrases like "click here" or "read more.”, and ensured that hyperlinks were distinguishable from regular text, using proper formatting or color contrast.

**Follow up: Did you ever work with college students? How about their course materials?**

The lecture slides initially contained a lot of text-heavy slides with small fonts and poor color contrast. To improve accessibility, we simplified slide layouts and reduced the amount of text per slide, increased font sizes to ensure readability, ensured proper color contrast between text and background, and added descriptive alternative text to images and graphs.

The documents and online readings were primarily in PDF format, which posed accessibility challenges. We converted the PDFs to accessible formats, such as HTML or tagged PDFs that support screen reader compatibility.

Also, we hope to properly structure the content using headings, lists, and other semantic elements to improve navigation, add alternative text to images, charts, and diagrams, and ensure that hyperlinks had meaningful text and were distinguishable from regular text.

A more convenient point is that college courses always have multimedia content. The courses included videos and audio recordings. We only need to ensure that multimedia players are compatible with screen readers and keyboard navigation.

The university's Learning Management System (LMS) had some accessibility issues. We worked closely with the IT department to ensure compatibility with screen readers and other assistive technologies and provided guidance to instructors on creating accessible content within the LMS, such as properly formatted discussion forums and accessible quiz formats.

**6. What aspects of creating accessible content is most challenging, why are they challenging? and how have you overcome these challenges? Can you tell me about your process when you make these changes?**

Many content creators work within Content Management Systems (CMS) platforms that may have limitations or accessibility issues. These limitations can make it challenging to implement certain accessibility features or modify the code directly. Content creators may need to find workarounds or collaborate with web developers to overcome these limitations. It’s difficult to ensure that content meets accessibility standards and the requirement and technical knowledge and familiarity with accessibility guidelines, such as WCAG. It’s hard in the technical implementation of web accessibility, including proper markup, alternative text, keyboard navigation, color contrast, and other accessibility features.