THEME-HEALTHCARE

Geeks for Geeks

Binary Brains

The web app-based Bangor Dyslexia Test (BDT) project aims to develop a digital version of the BDT, a widely used and validated assessment tool for identifying dyslexia in individuals. The web app is designed to provide an accessible and convenient means for individuals to take the BDT test remotely. The goal of the project is to provide a reliable and effective tool for identifying dyslexia to support early intervention and improved outcomes for those with dyslexia.

PROBLEM STATEMENT

Detection of Dyslexia in young children:

Dyslexia is a neurodevelopmental disorder characterized by difficulties with word decoding, or the ability to understand how a word's appearance relates to what it sounds like. Regardless of their vision or intellect, people with dyslexia can have trouble reading, spelling, and speaking. What it's like to live with dyslexia? Dyslexic individuals often report that they see letters "jump around" when trying to read. If that seems challenging as an adult, imagine what it must feel like for boys and girls entering school.

The importance of early detection of learning disabilities like dyslexia can't be overstated. Dyslexia can have a profound impact on a student's ability to read and write. Without these invaluable language skills, students with dyslexia can experience avoidable and lifelong educational, social, and economic problems.

SOLUTION

We have designed a **Dyslexia quiz test** which consist of 10 questions, 1 point each. Based on the score of these test results, we are determining whether the child has dyslexia or not. Also, what is the probability of being dyslexic.

We have designed the tests keeping in mind the following factors:

- Difficulty with letter recognition: Children with dyslexia may struggle with recognizing and naming letters, both uppercase and lowercase, even after repeated exposure and practice.

- Difficulty with reading: Dyslexia often affects reading skills. Children with dyslexia may have difficulty decoding words, reading fluently, and comprehending what they read.

- Difficulty with spelling: Dyslexia can also impact spelling ability. Children with dyslexia may struggle with spelling common words, have difficulty remembering spelling patterns, and make frequent spelling errors.

- Difficulty with phonics: Phonics is the ability to connect sounds with their corresponding letter(s) or letter combinations. Children with dyslexia may have difficulty understanding and applying phonics rules.

- Difficulty with memory: Dyslexia can affect working memory, which is the ability to hold and manipulate information in the mind while performing tasks. Children with dyslexia may struggle with remembering instructions, sequences, or details.

- Difficulty with phonological awareness: Phonological awareness is the ability to identify and manipulate individual sounds in words. Children with dyslexia may have

difficulty with tasks such as rhyming, blending sounds together to make words, or identifying the first or last sound in a word.

TECHNOLOGY USED

The web-app based Bangor Dyslexia Test project I worked on involved creating a digital version of the Bangor Dyslexia Test that could be taken remotely through a web application.

To create the user interface and structure of the web app, I used HTML. HTML provided the basic framework for the web page and allowed me to define the structure of the different sections and elements on the page, such as the header, footer, and main content area. I also used HTML to create the form that users would use to take the test, including the different sections and questions.

To style the web app, I used CSS. CSS allowed me to customize the appearance of the web app by specifying the fonts, colors, layout, and other visual elements. I also used CSS to make the web app more accessible, including using color contrast to improve readability and making sure that the web app was optimized for screen readers.

To make the web app more interactive, I used JavaScript. JavaScript allowed me to add real-time feedback to the web app, so users could see their progress as they completed the test. It also enabled me to add form validation, so users would be prompted to correct any errors before submitting their results. I also used JavaScript to improve the user experience, including allowing users to save their progress and resume the test later.

Finally, to ensure that the web app was responsive and mobile-friendly, I used Bootstrap. Bootstrap is a popular front-end framework that provides a set of pre-designed components that can be used to create a responsive and consistent user interface. With Bootstrap, I was able to create a responsive design that adapted to different screen sizes and devices, ensuring that the web app was accessible and usable for all users, regardless of their device.

Overall, using HTML, CSS, JavaScript, and Bootstrap allowed me to create a user-friendly and accessible web app that enabled individuals to take the Bangor Dyslexia Test remotely and get accurate results. The use of these technologies also allowed for easy maintenance and updating of the web app to ensure it remains reliable and effective for identifying dyslexia in individuals.