TRAINING DAY6 REPORT:

Topic: Non-Functional Requirements, Page Speed Tools, Minified CSS/JS, and NVDA Screen Reader

Overview: Today's training session covered various non-functional requirements essential for web development, tools to enhance page speed, the benefits of using minified versions of CSS and JS, and the NVDA screen reader.

Key Learnings:

1. **Non-Functional Requirements:**
   - **Performance:** Ensuring the web application runs efficiently, with fast load times and responsive interactions.
   - **Reliability:** The ability of the web application to function correctly and consistently over time.
   - **Security:** Protecting the web application from threats and vulnerabilities to ensure data integrity and privacy.
   - **Interface System:** The design and functionality of the user interface, ensuring it is intuitive and user-friendly.
   - **Usability:** Ensuring the web application is easy to use and accessible to a wide range of users.
   - **Scalability:** The ability of the web application to handle increased load and expand in functionality as needed.
2. **Tools to Enhance Page Speed:**
   - **Google Page Speed:** A tool that analyses web pages and provides suggestions to improve performance.
   - **Lighthouse:** An open-source tool integrated with Chrome DevTools that audits web pages for performance, accessibility, SEO, and more.

By : Natasha Pal CRN : 2215118 URN : 2203508

- o **GTMetrix:** A web-based tool that analyzes page speed and performance, providing detailed reports and recommendations.
3. **Minified CSS and JS:**
   - o **Minification:** The process of removing all unnecessary characters from code (such as whitespace, comments, and newline characters) without changing its functionality.
   - o Benefits include reduced file size, faster load times, and improved performance.
4. **NVDA Screen Reader:**
   - o **NVDA (Non Visual Desktop Access):** A free, open-source screen reader for Windows.
   - o Enables blind and vision-impaired people to use computers by reading the text on the screen in a computerized voice.
   - o Important for web accessibility, ensuring that web applications are usable by all individuals, including those with disabilities.

Practical Exercise:

- Evaluated the performance of a sample web page using Google Page Speed, Lighthouse, and GTMetrix.
- Practiced minifying CSS and JS files and observed the impact on page load times.
- Explored the NVDA screen reader and tested a web page for accessibility, ensuring it could be navigated and read effectively.

Reflections: Today's session highlighted the importance of non-functional requirements in creating robust, high-performing web applications. Learning about page speed tools and minification emphasized the need for optimization in web development. Exploring the NVDA screen reader underscored the significance of accessibility, ensuring that our web applications are inclusive and usable by everyone.

Next Steps: Tomorrow, we will continue to explore advanced topics in web development, focusing on further optimizing web performance and enhancing accessibility.

By : Natasha Pal   CRN : 2215118   URN : 2203508