

ABSTRACT

This study aims to develop the Sistem Informasi Tekos application using the NextJS framework by implementing Single-Page Application (SPA) and Client-Side Rendering (CSR). The test method used is the load time test to compare page load times between SPA CSR and SPA SSR. Testing was carried out in a local environment using the Chrome browser on a Macbook device with an M1 Pro chip. The test results show that SPA CSR has a faster page load time than SPA SSR at No Throttling/normal network speed, which is under 5 seconds. However, at Fast 3G and Slow 3G network speeds, both SPA CSR and SPA SSR have a load speed of more than 5 seconds, which indicates that they do not align with the guidelines stated in NFR-01 within the Software Requirements Specification (SRS) document. In this application, there are several pages that cannot implement SSR SPA because it requires dynamic data based on Owner ID, which can only be implemented in CSR. In conclusion, using SPA CSR with NextJS on the Sistem Informasi Tekos can increase page rendering speed and provide a more responsive user experience. However, special considerations need to be taken when choosing a rendering method between SPA CSR and SPA SSR depending on requirements and the complexity of the data used.

Kata Kunci: Sistem Informasi Tekos, Single-Page Application (SPA), NextJS, Client-Side Rendering (CSR), Server-Side Rendering (SSR), Load Time Test