

ABSTRACT

The development of an effective and efficient information system is crucial in today's digital era. This research aims to develop and implement the Front End of a web dashboard application for research and studies within the PPM Directorate using the Agile Scrum method. Agile Scrum methodology was chosen due to its flexibility and adaptability in managing software development. The Front-End development of this web application also utilizes React for its capability to build dynamic and responsive web application interfaces. In this study, the development process was carried out through a series of short sprints, allowing for product testing and adaptation based on user feedback. Additionally, Google Chrome Lighthouse was used to audit and optimize the performance, accessibility, SEO, and best practices of the web pages. The test results indicate that the use of Agile Scrum and React significantly improves the efficiency, flexibility, and quality of the final product. Performance testing using Google Chrome Lighthouse ensures that the web pages meet performance standards. This research concludes that the combination of Agile Scrum and React is highly effective in the development of academic and research information systems. It also provides benefits in web application development.

Keyword: *Agile Scrum, Dashboard, React, Google Chrome Lighthouse*