

## ABSTRACT

As the need for data-driven decision-making increases, the availability of a reliable monitoring system is crucial for survey institutions. The current dashboard system faces significant challenges, including an inefficient and failure-prone data retrieval method using parsing, as well as highly limited and centralized access. This research aims to design and build an efficient survey results monitoring dashboard by leveraging the CSWeb API to present data accurately and implementing multiuser login functionality to distribute data access to authorized users. The system was developed using the Iterative Incremental Software Development Life Cycle (SDLC) method, with implementation using the Laravel framework. The development process was divided into two main iterations: the first focused on building core functionalities such as API integration, data visualization, report downloads, and viewing product photos. The second iteration focused on implementing the multiuser login feature with "Data Manager" and "Field Manager Supervisor" roles. The results show that the developed dashboard successfully integrates with the CSWeb API, enabling real-time and accurate retrieval and presentation of survey data. Validation through manual testing confirmed a 100% match between the data displayed on the dashboard and the source data. Furthermore, automated testing proved that all functionalities, including the multiuser login and user management systems, run stably and meet the established requirements. The resulting artifact is a functional and reliable dashboard that eliminates the bottleneck of centralized access and supports a faster, more effective evaluation and decision-making process for managers.

**Keywords:** *Dashboard, Monitoring, Iterative Incremental, API, CSWeb, Laravel, Multiuser, Manual Testing, Automated Testing*