ABSTRAK

RANCANG BANGUN *FRONTEND* SISTEM INFORMASI CAPAIAN PEMBELAJARAN LULUSAN (CPL) BERBASIS WEB MENGGUNAKAN METODE AGILE KANBAN

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Pendidikan tinggi memiliki peran penting dalam menghasilkan lulusan yang berkualitas dan kompetitif, sehingga setiap program studi perlu memastikan capaian pembelajaran lulusannya (CPL) sesuai standar yang ditetapkan. Saat ini, pengolahan dan penyajian data CPL di Universitas Lampung belum dilakukan secara sistematis, sehingga diperlukan sistem yang mampu mendukung pencatatan, perhitungan, dan penyajian informasi CPL secara terstruktur. Penelitian ini bertujuan merancang dan membangun *frontend* Sistem Informasi CPL berbasis *web* menggunakan *React.js* dengan metode *Agile Kanban*. Tahapan penelitian meliputi *studi literatur*, analisis kebutuhan *fungsional* dan *nonfungsional*, perancangan arsitektur *frontend*, serta pengembangan menggunakan papan *Kanban* yang terdiri atas kolom *Backlog/To Do*, *In Progress*, *Testing*, dan *Done*. Hasil penelitian menunjukkan bahwa *frontend* sistem berhasil dibangun dengan struktur *modular*, *layer* tampilan terpisah, *hooks*, *service*, dan *API* yang mendukung pengelolaan alur data secara efektif. Pengujian fungsional menggunakan metode *black box testing* menunjukkan tingkat keberhasilan sebesar 78,34% yang menandakan sebagian besar *test case* berjalan sesuai ekspektasi dan fungsi utama *frontend* dapat beroperasi dengan baik. Penelitian ini menghasilkan artefak teknis berupa *frontend* Sistem Informasi CPL yang dapat dijadikan referensi atau *prototype* untuk pengembangan sistem lebih lanjut.

Kata kunci: Capaian Pembelajaran Lulusan, *Frontend, React.js, Agile Kanban, Black Box Testing*.

ABSTRACT

Design and Development of a Web-Based Frontend for Graduate Learning Outcomes Information System (CPL) Using Agile Kanban Method

By

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Higher education plays an important role in producing qualified and competitive graduates, making it essential for each study program to ensure that its graduates' learning outcomes (Capaian Pembelajaran Lulusan / CPL) align with established standards. Currently, the processing and presentation of CPL data at the University of Lampung are not carried out systematically, highlighting the need for a system that can support structured recording, calculation, and presentation of CPL information. This study aims to design and develop a web-based frontend for the CPL Information System using React.js and the Agile Kanban method. The research stages include a literature review, analysis of functional and non-functional requirements, frontend architecture design, and development using a Kanban board consisting of Backlog/To Do, In Progress, Testing, and Done columns. The results show that the frontend system was successfully built with a modular structure, separate view layers, hooks, services, and APIs, which effectively support data flow management. Functional testing using the black-box testing method yielded a success rate of 78.34%, indicating that the majority of test cases ran as expected and the main frontend functions operated properly. This study produces a technical artifact in the form of a CPL information system frontend that can serve as a reference or prototype for further system development.

Keywords: *Graduate Learning Outcomes, Frontend, React.js, Agile Kanban, Black Box Testing.*