

# ***A WEB-BASED APPLICATION FOR EQUIPMENT BORROWING AND ROOM MONITORING***

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## ***ABSTRACT***

*Equipment borrowing process in the Computer Network Laboratory of Bengkalis State Polytechnic still applies manual procedures for equipment borrowing through written requests that require approval from several parties, thus potentially causing data loss and recording errors. To overcome these problems, a web-based Equipment Borrowing and Room Monitoring Application was developed. Available features include equipment borrowing, loan validation, return validation, room monitoring, and report management. This application allows students and lecturers to apply for loans, view equipment availability, and receive loan and return validation, while the admin can manage equipment data, verify applications, and generate reports. The development was carried out using the Waterfall method and testing using the Black Box method. In conclusion, this application is able to replace the manual paper-based system with a digital system that is more efficient, accurate, and professional. This system helps lecturers and students in the process of borrowing laboratory equipment more quickly and easily, while making it easier for the admin to manage and monitor the Computer Network Laboratory of Bengkalis State Polytechnic.*

*Keywords: Equipment Loan, Room Monitoring, Website, Laboratory, Waterfall*