

# ***DESIGN AND CONSTRUCTION OF WEB-BASED LIBRARY SYSTEM***

***(Case Study: Muhammadiyah 3 Mlati Middle School)***

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## ***ABSTRACT***

*SMP Muhammadiyah 3 Mlati is one of the schools under the auspices of Muhammadiyah, with the aim of forming learners who are pious, have noble character, are progressive, and excel in Science, Technology, and Arts (IPTEKS). Established since 1982, this school has graduated thousands of students spread throughout Indonesia. Despite having a tradition of excellence in education, SMP Muhammadiyah 3 Mlati still faces challenges in library management. The library system used currently tends to be prone to errors and slow in its process, especially in book borrowing and returning transactions. This study aims to design a more effective library system at SMP Muhammadiyah 3 Mlati. The methods used in this final project report include problem identification, data collection, analysis and system requirements, system design, prototyping and testing. The results of this study are the design of a library information system that includes the design of a process model, data model, physical database, relationships between tables, as well as the interface and implementation of the database. In conclusion, the library information system at Muhammadiyah 3 Mlati Middle School demonstrates that the system design has successfully increased the efficiency and effectiveness of library services, enabling optimal data management, borrowing and returning, and monitoring of book stock.*

*Keywords: Information System, Library, Library System, Muhammadiyah 3 Mlati Middle School, Books*