



**Web-based Application Tools Borrowing System for Warehouse
Engineering**

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CHAPTER I INTRODUCTION

Background

In the engineering warehouse division, various technical tools are shared among engineers to support maintenance and repair activities. Currently, the borrowing process is still recorded manually using a logbook. This method has several limitations, such as the risk of losing data, difficulty tracking borrowing history, and no real-time information about tool availability. These issues can slow down work efficiency and increase the chances of administrative errors.

As technology keeps advancing, digitalizing administrative systems has become essential especially in technical environments where speed, accuracy, and organization really matter. Because of this, a web-based system is needed to handle the tool borrowing and returning process more efficiently. This kind of system would help improve overall accuracy, transparency, and control in managing tools.

The system is designed so that engineers can request tools directly through the web app before picking them up from the warehouse. At the same time, the warehouse staff can easily monitor tool status, track borrowing history, and generate reports in a more organized way.

Problem Statement

Given the background information provided above, a number of significant issues can be found:

How to design a web-based tool borrowing system that can replace manual logbook records?

How can the system help monitor the status and availability of tools?

How can the system provide real-time access to the tool borrowing history?

ABSTRACT

The tool borrowing process within the warehouse engineering division is still handled manually through logbooks. This method often leads to issues such as data being lost or difficulties in tracking the borrowing history of tools. To address these challenges, a web-based borrowing system was developed with the aim of simplifying digital record-keeping and reducing paper usage.

The system includes features for recording tool check-outs and returns, monitoring tool availability, and tracking borrowing history. Built using PHP for the backend and MySQL for the database, the application runs on the company's local network for internal use.

With this system, engineers can borrow tools more easily and efficiently, while the warehouse staff can oversee tool inventory with greater accuracy and organization. Ultimately, this solution is expected to support the digital transformation of engineering operations within warehouse environments.

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