

***WAREHOUSE INVENTORY APPLICATION DEVELOPMENT USING  
AUTOMATION FEATURES IN IDENTIFYING MATERIAL READINESS  
FOR PRODUCTION***

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***ABSTRACT***

*Warehouse inventory management at PT. Mobilkom Telekomindo Duri is currently handled manually using logbooks and Microsoft Excel, leading to recording errors, data duplication, delays in material distribution, and difficulties in determining material readiness for production. These issues render stock management ineffective and hinder company operations. This study aims to develop a warehouse inventory application capable of managing inventory data in an integrated manner and providing an assembly automation feature to assess material readiness based on production requirements. The proposed solution is a Flutter-based application utilizing a MySQL database, featuring modules for material, transaction, project, and report management, as well as automated material readiness identification. The research methodology encompasses problem identification, observation, interviews, literature review, system analysis, design using Unified Modeling Language (UML) and Entity Relationship Diagrams (ERD), application development, and testing via the Black Box Testing method. The results demonstrate successful application implementation, with all functions operating as required. The assembly automation feature effectively identifies material readiness, thereby enhancing inventory management efficiency, minimizing recording errors, and facilitating more accurate inventory monitoring.*

***Keywords*** : Assembly, Flutter, inventory, MySQL, automation