

INTEGRATED INVENTORY WITH PROCUREMENT AND PRODUCTION MAN-
AGEMENT



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INTEGRATED INVENTORY WITH PROCUREMENT AND PRODUCTION MANAGEMENT

ABSTRACT

This thesis presents the development of a web-based procurement system designed to improve the efficiency of purchase request (PR) and purchase order (PO) processes within an organization. The system addresses common issues in manual procurement workflows, such as approval delays, input errors, and difficulty in tracking inventory needs. Built using the Next.js framework and MongoDB as the database, the system includes features such as dynamic form fields, automatic ID generation, approval tracking, and real-time data access from related collections like users, materials, and suppliers. These features allow for more accurate data input, faster processing, and better control over procurement activities.

The system was evaluated through functional and user acceptance testing. Results show that the platform functions as expected, reduces processing time, and minimizes human error. Users also reported that the interface is intuitive and the overall workflow is significantly more efficient compared to manual methods. By automating key procurement tasks, the application supports better inventory management and contributes to a more responsive supply chain. The system provides a solid foundation for digital procurement in small to medium-sized enterprises and is designed to be scalable for future needs such as analytics, reporting, and integration with other business systems.

TABLE OF CONTENTS

Contents

STATEMENT OF ORIGINALITY	iii
SCIENTIFIC PUBLICATION APPROVAL FOR ACADEMIC INTEREST	iv
ADVISOR APPROVAL FOR JOURNAL/INSTITUTION’S REPOSITORY	v
SIMILARITY INDEX REPORT	vi
GPT ZERO CHECK	vii
ABSTRACT	viii
DEDICATION	ix
ACKNOWLEDGMENTS	x
TABLE OF CONTENTS	xi
Contents	xii
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
CHAPTER I INTRODUCTION	1
1. Background of the Problem	1
2. Objective	2
3. Problem Functional Analysis	3
4. Solution Usage Scenario	4
CHAPTER II SYSTEM OVERVIEW	5
1. Existing Business Process	5
2. Proposed Business Process	6
3. Functional Description	7
4. Data Requirement from User’s Perspective	8
5. Functional Requirement	13
6. Nonfunctional Requirement (Activity Diagram)	14
CHAPTER III SYSTEM DESIGN	17
1. Data Flow Diagram	17
2. Global Variable	20

3. Verification Demonstration and Proof Design Process	21
CHAPTER IV IMPLEMENTATION	22
1. Function/Procedure/Class Implementation	22
2. Database Implementation.....	50
3. User Interface Implementation	53
4. Integration among every module	59
5. User Guide	73
6. Video Demonstration.....	88
CHAPTER V TESTING.....	89
1. Functional Testing	89
2. Testing Other Specification	93
REFERENCES	96

LIST OF TABLES

TABLE	Page
Table 2.1 users	9
Table 2.2 Purchase Request	10
Table 2.3 Purchase Request Items	10
Table 2.4 Approval	11
Table 2.5 Purchase Orders	11
Table 2.6 Purchase Orders Items	12
Table 2.7 Supplier	12
Table 2.8 Material	13
Table 3.1 Verification and Proof design	21
Table 5.1 Testing Create PR	89
Table 5.2 Testing Approval Form	91
Table 5.3 Testing Convert PR to PO	92
Table 5.4 Testing Create PO	93
Table 5.5 Testing Performance	94
Table 5.6 Testing Response time	95

LIST OF FIGURES

Figure 2.1 Existing Process.....	5
Figure 2.2 Proposed Process	6
Figure 2.3 Use Case Diagram	7
Figure 2.4 ERD	8
Figure 2.5 Activity Purchasing Staff	14
Figure 2.6 Activity Supervisor.....	15
Figure 2.7 Activity Receiving.....	16
Figure 3.1 DFD Create PR.....	17
Figure 3.2 DFD Approve PR	18
Figure 3.3 DFD Create PO.....	18
Figure 3.4 DFD Receive	19
Figure 4.1 DFD Create PR.....	22
Figure 4.2 DFD Approval	29
Figure 4.3 DFD Create PO.....	37
Figure 4.4 DFD Receiving.....	43
Figure 4.5 Database Schema PR.....	50
Figure 4.6 Database Schema PR items	51
Figure 4.7 Database Schema Approval.....	51
Figure 4.8 Database Schema PO.....	52
Figure 4.9 Database Schema PO items	52
Figure 4.10 UI PR Page	53
Figure 4.11 UI PR Form	54
Figure 4.12 UI Approval Form	55
Figure 4.13 UI PO Page	56
Figure 4.14 UI PO Form	56
Figure 4.15 UI PO Detail	57
Figure 4.16 UI Receiving Page.....	58
Figure 4.17 UI Receiving Detail.....	58
Figure 4.18 API PR.....	59
Figure 4.19 API PR.....	60
Figure 4.20 Integration PR Form	61
Figure 4.21 Integration PR Form	62
Figure 4.22 Integration PR Table.....	63
Figure 4.23 API Approval.....	64
Figure 4.24 Integration Approval Modal.....	65
Figure 4.25 Integration Approval Modal	65
Figure 4.26 Integration Approval Modal	66
Figure 4.27 API PO.....	66
Figure 4.28 Integration PO Form.....	67
Figure 4.29 Integration PO Form.....	68
Figure 4.30 Integration PO Table	69

Figure 4.31 Integration PO Table	69
Figure 4.32 Integration PO Detail.....	70
Figure 4.33 API Receiving	71
Figure 4.34 Integration Receiving Table	72
Figure 4.35 User Guide PR Page	73
Figure 4.36 User Guide PR Form	74
Figure 4.37 User Guide PR Detail/Approval Form	77
Figure 4.38 User Guide Conver to PO.....	78
Figure 4.39 User Guide PO Page.....	80
Figure 4.40 User Guide PO Form	81
Figure 4.41 User Guide PO Detail with Pending Status	83
Figure 4.42 User Guide PO Detail with Ordered Status	84
Figure 4.43 User Guide Receiving Page.....	85
Figure 4.44 User Guide Receiving Form.....	87