UNIVERSITI TEKNOLOGI MARA

PALM COLLECTION AND LOGISTICS APPOINTMENT BOOKING SYSTEM FOR LEMBAH MERBAU TRADING: A SHNEIDERMAN'S GOLDEN RULES-BASED INTERFACE APPROACH

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TABLE OF CONTENT

CONTENT			PAGE
SUPERVISOR APPROVAL			**II**
STUDENT DECLARATION			**III**
ACKNOWLEDGEMENT			**IV**
ABSTRACT			**V**
TABLE OF CONTENT			**VI**
LIST OF FIGURES			**X**
LIST OF TABLES			**XII**
LIST OF ABBREVIATIONS			**XIV**
CHAPTER 1	**INTRODUCTION**		**1**
1.1	BACKGROUND OF STUDY		1
1.2	CURRENT BUSINESS PROCESS		3
1.3	PROBLEM STATEMENT		6
1.4	OBJECTIVES		9
1.5	PROJECT SCOPE		9
	1.5.1	Users	10
	1.5.2	Functionalities	10
	1.5.3	Process	12
	1.5.4	Data	13
1.6	SIGNIFICANCE		14
1.7	PROJECT FRAMEWORK		15
1.8	GANTT CHART		19

5.3 PROJECT LIMITATIONS 142
5.4 RECOMMENDATIONS FOR FUTURE ENHANCEMENT 143
5.4.1 Enhancement of Usability: Bilingual Interface Support 143
5.4.2 System Accessibility: Mobile Application and Low- Bandwidth Optimization. 143
5.4.3 Operational Interventions: Automated Notification Services. 144
5.5 PROJECT SUMMARY 144
5.6 CONCLUSION 145
REFERENCE 146
APPENDICES 150
APPENDIX A: INTERVIEW SESSION 150
APPENDIX B: EVIDENCE 151
APPENDIX C: USER AND EXPERT EVALUATION 153

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ABSTRACT

In this study, the Palm Collection and Logistics Appointment Booking System (PCLABS) will be developed, and it is aimed to enhance the efficiency of palm oil collection and logistics management in Lembah Merbau Trading. The existing system of operation is highly dependent on the manual record-keeping and informal communication behaviors that often lead to conflicts of schedules, missed appointments, and data redundancies as well as challenges of tracking transactions. The suggested system will mitigate those shortcomings because it will provide a centralized and web-based system that helps in booking appointments, managing schedules, and monitoring transactions in real-time. PCLABS identifies three key user roles, namely customers, staff, and administrators, and each of them is supported by role-specific dashboards and capabilities to meet their operational needs. The system will undergo an adapted Waterfall Model development process whereas the interface design will be based on the Eight Golden Rules of Interface Design as postulated by Shneiderman to maintain consistency, usability, and easy interaction. Functionality and usability are measured as a result of system testing and user evaluation in combination with expert assessment. System testing was conducted using a test plan to verify that all system functionalities operate as intended. User evaluation was carried out using a Google Form questionnaire involving 30 respondents to assess the usability and overall performance of the system**.** The results show that the system is workable, dependable and can promote better communication and operational coordination among customers and staff. Despite the fact that the existing version is confined to web-based access and simple reporting options, there are potential improvements that can be made in the form of mobile application support, automatic notification of users, and increased system integration. On balance, PCLABS is an illustrative example of how a digital solution of appointment and logistics management can supplement the efficiency of the operations and allow operating a business sustainably in the palm oil collection sector.