UNIVERSITI TEKNOLOGI MARA

THE DEVELOPMENT OF AN ONLINE ORDERING SYSTEM FOR THE HADIAH & FLORIST BASED ON NIELSEN'S USABILITY HEURISTICS

AINAA HUMAIRA BINTI AHMAD JAMIL

BACHELOR OF INFORMATION SYSTEMS (HONS.) BUSINESS COMPUTING

JULY 2026

TABLE OF CONTENTS

CONTENT **PAGE**

SUPERVISOR APPROVAL i
STUDENT DECLARATION ii
ACKNOWLEDGEMENT iii
ABSTRACT iv
TABLE OF CONTENTS v
LIST OF FIGURES ix
LIST OF TABLES x
LIST OF ABBREVIATIONS xii

TABLE OF CONTENTS

CHAPTER 1 1
1.1 Background of Study 1
1.2 Current Business Process 4
1.3 Problem Statement 6
1.4 Objectives 8
1.5 Scope 8
1.6 Significance 10
1.7 Project Framework 11
1.8 Gantt Chart 14
1.9 Conclusion 15
CHAPTER 2 17
2.1 E-Commerce 17
2.1.1 Advantages of E-Commerce 18
2.2 Online Ordering System 19
2.2.1 Concept of Online Ordering System 20
2.2.2 Benefits of Online Ordering System 21
2.2.3 Common Features of Online Ordering System 23
2.3 Usability Heuristics 25

4.1 Business Process Improvement 96
4.2 Implementation of Theory 97
4.2.1 Usability Heuristic 98
4.3 System Flow and Interface 102
4.3.1 Homepage 102
4.3.2 System Flow for Customers 105
4.3.3 System Flow for Staff 112
4.3.4 System Flow for Manager 115
4.4 System Testing 117
4.4.1 Test Case 118
4.4.1.1Normal Scenario 118
4.4.1.2 Alternative Scenario 123
4.5 User Testing 124
4.5.1 SUS Likert Distribution 125
4.5.2 Adjusted SUS Graph 128
4.5.3 Mean Scores for Section B (Effectiveness) 129
4.5.4 Mean Scores for Section C (Efficiency) 131
4.5.5 Aggregate Usability Score 133
4.5.6 SUS Calculation Result 134
4.5.7 Interpretation of System Usability Scale (SUS) Results 135
4.6 Expert Testing 136
4.6.1 Section A: System Functionality 137
4.6.2 Section B: Usability Heuristics 140
4.6.3 Discussion of Expert Evaluation Results 143
4.7 Project Summary 144
4.8 Conclusion 146
CHAPTER 5 148
5.1 Summary of the Project 148
5.2 Limitations of the Project 149
5.3 Recommendations for Future Work 150
5.3 Conclusion 151
REFERENCES 153
APPENDICES 157
APPENDIX A: PROGRESS UPDATE CONSULTATION WITH SUPERVISOR 157

ACKNOWLEDGEMENT

First and foremost, I would like to thank Allah SWT with all my heart for His blessings, guidance, and strength that have enabled me to overcome the tough periods with patience and determination throughout this project. I would like to thank my supervisor, Madam Nazatul Azleen Binti Zainal Abidin, for providing me with excellent advice, constructive criticism, and guidance that have enabled me to make this project much better. I would like to thank my lecturer for CSP650, Miss Hasnul Azirah Abdul Hamid, for all the assistance, support, and encouragement she has provided for me throughout this study. Last but not least, I would like to thank all those who have been with me all along, bearing with me, being patient with me, and encouraging me to do my best.

ABSTRACT

The e-commerce industry keeps growing, prompting small firms to use digital solutions for better efficiency. Currently The Hadiah & Florist uses handwritten documentation and messaging apps for managing orders, payments, and delivery, which lead to delays, data errors, and inaccuracy. The project analyzed the current business process and identified problems to design and develop an Online Ordering System as well as evaluate its functionality and usability. The system was designed using the Adapted Waterfall Model which contains phases of planning, analysis, design, implementation and testing and was implemented using PHP, HTML, CSS and MySQL. The system allows customers to browse items, customize bouquets, place orders, make payments and track order progress. The employees and management can handle sales, products, orders and deliveries smoothly. The evaluation of the system usability based on Nielsen Usability Heuristics and the System Usability Scale (SUS) shows that the system is easy to use and helps users to complete their duties successfully. The system satisfactorily accomplishes its objectives and has a good potential for adoption in a real business context with additional improvements like real-time order tracking function and integration of payment gateways.