

UNIVERSITI TEKNOLOGI MARA

**WARIS LEISURE HOLIDAYS CAR RENTAL
SYSTEM USING JAKOB NIELSEN'S USABILITY
HEURISTICS**

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**BACHELOR OF INFORMATION SYSTEMS (HONS.) BUSINESS
COMPUTING**

JANUARY 2025

ACKNOWLEDGMENT

I would like to express my sincere gratitude to everyone who has supported and guided me throughout the journey of completing my final year project on Waris Leisure Holidays.

First and foremost, I am deeply grateful to my project supervisor, Sir Mohamad Norzamani Bin Sahroni, for their invaluable guidance, constant encouragement, and insightful feedback. Their expertise and suggestions greatly improved the quality of my work and inspired me to strive for excellence.

I would also like to thank the management and staff of Waris Leisure Holidays for providing me with essential data and information that contributed significantly to my project. Their willingness to share insights into their business operations and challenges played a crucial role in shaping the practical aspects of this research.

Special thanks to my family and friends for their unwavering support, patience, and motivation throughout this project. Your belief in my abilities kept me determined and focused.

Lastly, I acknowledge my peers and the academic community for the collaborative spirit and shared knowledge that made this experience fulfilling and enriching.

Thank you all for making this project a meaningful and rewarding experience.

ABSTRACT

Waris Leisure Holidays Car Rental System is a web-based e-commerce platform developed to enhance the vehicle rental operations of Waris Leisure Holidays in Langkawi, Kedah. The system addresses the inefficiencies of the existing manual booking process, which relied on WhatsApp for communication and lacked structured data management. This newly developed system offers a user-friendly interface that integrates real-time booking, staff and admin dashboards, secure data handling, and automated reporting tools. Developed using the Adapted Waterfall Model, the project followed structured phases including planning, analysis, design, implementation, testing, and documentation to ensure alignment with project objectives. The system design was guided by Jakob Nielsen's 10 Usability Heuristics to ensure consistency, intuitive navigation, and enhanced user interaction. Key modules include customer account management, live car availability checking, booking summary with add-ons, and role-based access control for administrators and staff. System evaluation was conducted through user testing and expert reviews, with positive outcomes reflecting improved operational efficiency, reduced booking errors, and higher customer satisfaction. Usability assessments indicated that the system effectively met its functional and design goals. Although the system currently uses a dummy payment module and does not include a mobile application, future enhancements may involve integrating real payment gateways and developing a mobile app to further extend system accessibility and practicality. The Waris Leisure Holidays Car Rental System represents a significant technological step forward, offering a modern, efficient, and user-centered platform for managing vehicle reservations.

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