UNIVERSITI TEKNOLOGI MARA

ONLINE BOOKING SYSTEM FOR PUSAT AKUATIK MBJB USING QUEUING THOERY

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JANUARY 2025

ACKNOWLEDGEMENT

With great appreciation, I would like to thank everyone who helped me finish my project, Online Booking System for Pusat Akuatik MBJB.

First and foremost, I would want to express my sincere gratitude to my supervisor, Miss Wan Adibah Hanis Binti Wan Aziz, for their important advice, support, and helpful criticism, all of which greatly influenced the course and result of this project.

Additionally, I want to express my sincere gratitude to University Teknologi MARA for providing the tools and assistance required to complete this project successfully.

I would like to express my gratitude to Pusat Akuatik MBJB's management and employees for their cooperation and readiness to offer insightful information on their manual logbook system, which significantly enhanced the project's study and conclusions.

I would especially like to thank my family and friends for their constant understanding, encouragement, and support during this journey.

Finally, I would want to thank everyone whose ideas and work have inspired or been cited in this project.

I appreciate all of your help and inspiration.

ABSTRACT

Pusat Akuatik MBJB previously used a manual booking system via physical logbooks, which resulted in recurring issues such as double booking, incorrect data being recorded, delays in confirmations, and reduced customer access. These complications highlighted the need for an efficient and dependable booking system that can accommodate the growing number of visitors to the center and improve customer satisfaction. The goals of this project was to develop an online booking system specifically tailored to the working needs of Pusat Akuatik MBJB. The main goals were to identify the constraints of the current manual system, design a web-based booking system, and test its usability and functionality. The system was developed with the Waterfall model as adapted, and it had phases such as requirement analysis, system design, implementation, and testing. The system was created using PHP and MySQL. The functionalities of the system were user sign up and login, package choice, time slot booking, credit card payment, generation of QR code tickets, and admin-staff panel for bookings, news, package, and customer management. End users and experts tested the system using coordinated questionnaires and feedback sessions. The results showed that users found the system to be operational, simple to use, and greatly more effective compared to the manual method. Expert appraisal confirmed that the system increased the queuing theory. Minor improvements were suggested, such as streamlining staff registration and adding visual cues for navigation.

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