

UNIVERSITI TEKNOLOGI MARA

**ONLINE BOOKING SYSTEM FOR
PUSAT AKUATIK MBBB USING
QUEUEING THEORY**

NURUL AMIRA BINTI KHAMIS

**BACHELOR OF INFORMATION
TECHNOLOGY (Hons.) BUSINESS
COMPUTING**

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ABSTRACT

Pusat Akuatik MBBJ 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 MBBJ. 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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