ABSTRACT

DESIGN OF A WEB-BASED TICKET RESERVATION SYSTEM FOR LEMBAH SUHITA, BANDAR LAMPUNG

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The advancement of information technology significantly influences the management of tourist attractions. The Lembah Suhita educational honeybee tourism site in Bandar Lampung previously relied on a manual reservation system, which often resulted in errors such as duplicate bookings and inefficiencies. This study aimed to develop an internet-accessible ticket reservation system to enhance visitor convenience and management efficiency. The system was developed using the Extreme Programming (XP) methodology, which included planning, design, coding, and testing phases. The system was built using PHP, HTML, JavaScript, and MongoDB as the database. A Greedy algorithm was implemented to process ticket orders by prioritizing the highest number of tickets first. Black Box Testing was used to ensure that the system's functions met the specified requirements. The results showed that the system enabled online reservations, verified payment proof, and managed visitor quotas of up to 250 people. The implementation of this system is expected to reduce booking errors, improve service quality, and attract more visitors to Lembah Suhita.

Keywords: Ticket Reservation System, Greedy Algorithm, Extreme Programming, Black Box Testing