

ABSTRAK

Perkembangan teknologi digital telah mendorong transformasi layanan kuliner, termasuk proses pemesanan menu di restoran. Ayam Mringis merupakan UMKM kuliner di Jakarta Selatan yang masih menerapkan pemesanan manual sehingga waktu tunggu pelanggan mencapai 10–15 menit, berisiko menimbulkan kesalahan pencatatan, dan menyulitkan pengelolaan transaksi secara terstruktur. Banyaknya pilihan menu juga sering membuat pelanggan kesulitan menentukan pesanan. Penelitian ini bertujuan merancang dan membangun aplikasi pemesanan menu berbasis QR Code menggunakan *framework* Laravel untuk meningkatkan operasional yang efektif dan kualitas pelayanan. Metode pengembangan yang digunakan adalah *Rapid Application Development* (RAD), sedangkan analisis kebutuhan sistem dilakukan menggunakan PIECES. Teknologi yang digunakan meliputi Laravel, PHP, HTML, CSS, JavaScript, dan MySQL. Kebaruan penelitian terletak pada penerapan *frequency-based recommendation* yang mengolah data historis penjualan untuk menampilkan menu populer sehingga membantu pelanggan menentukan pilihan secara lebih terarah. Pengujian sistem dilakukan menggunakan *black box testing* dan *User Acceptance Testing* (UAT). Hasil *black box testing* menunjukkan bahwa seluruh 15 skenario pengujian berhasil dijalankan dengan persentase keberhasilan 100%. *User Acceptance Testing* yang melibatkan satu pemilik, dua kasir, dan tiga pelanggan menghasilkan tingkat penerimaan sebesar 91,11% dengan kategori sangat baik. Pengguna menilai sistem mudah digunakan, sesuai dengan kebutuhan operasional, dan membantu mempercepat proses pemesanan. Dengan demikian, sistem mampu mendukung operasional yang efektif, meminimalkan kesalahan pencatatan, dan meningkatkan kualitas pelayanan di Ayam Mringis.

Kata Kunci : digitalisasi umkm, qr code, *frequency-based recommendation*, *rapid application development*, *user acceptance testing*

ABSTRACT

The development of digital technology has encouraged the transformation of culinary services, particularly restaurant ordering processes. Ayam Mringis is a culinary MSME located in South Jakarta that still relies on a manual ordering system, resulting in customer waiting times of 10–15 minutes, a risk of order-recording errors, and difficulties in managing transaction data systematically. The wide variety of menu options also makes it difficult for customers to select their orders. This study aims to design and develop a QR Code-based menu-ordering application using the Laravel framework to improve operational efficiency and service quality. The system was developed using the Rapid Application Development (RAD) method, while the PIECES framework was applied to analyze system requirements. The technologies used include Laravel, PHP, HTML, CSS, JavaScript, and MySQL. The novelty of this study lies in implementing a frequency-based recommendation method that processes historical sales data to display popular menu items and assist customers in making more informed choices. The system was evaluated using black-box testing and User Acceptance Testing (UAT). The black-box testing results showed that all 15 test scenarios were successfully completed, achieving a success rate of 100%. The UAT involved one owner, two cashiers, and three customers, resulting in a user acceptance rate of 91.11%, which was categorized as excellent. Users considered the system easy to use, suitable for operational needs, and helpful in accelerating the ordering process. Therefore, the system can support operational efficiency, minimize order-recording errors, and improve service quality at Ayam Mringis.

Keywords: *msme digitalization, qr code, frequency-based recommendation, rapid application development, user acceptance testing*