

ABSTRAK

Ardila, 2026. Rancang Bangun Sistem Antrian Dan Rekam Medis Elektronik Berbasis *web* Pada Klinik Utama Rawat Jalan Thamrin35. Program Studi Teknik Informatika, FT, Universitas PGRI Madiun. Pembimbing (I) Sri Anardani, S.Kom., M.T. (II) Puguh Jayadi, S.Kom., M.Kom.

Pelayanan rawat jalan di Klinik Utama Rawat Jalan Thamrin35 masih dilakukan secara manual sehingga data pasien, status antrian, riwayat pemeriksaan, dan resep belum terintegrasi dalam satu sistem. Kondisi tersebut menyebabkan proses pencarian data, pemantauan pelayanan, serta penyampaian resep dari dokter kepada bagian Farmasi menjadi kurang efektif. Penelitian ini bertujuan untuk merancang, membangun, dan menguji sistem antrian dan rekam medis elektronik berbasis *web* guna mendukung pelayanan rawat jalan secara terintegrasi. Pengembangan sistem menggunakan metode *Waterfall* yang meliputi analisis kebutuhan, perancangan, implementasi, pengujian, dan pemeliharaan. Data penelitian diperoleh melalui wawancara, observasi, dan studi pustaka. Perancangan menerapkan pendekatan *Object-Oriented Programming* dengan pemodelan *flowchart*, *Unified Modeling Language*. Sistem diimplementasikan menggunakan *framework* Laravel 12 dan basis data MySQL. Hasil penelitian berupa sistem berbasis *web* dengan hak akses untuk Super Admin, Petugas Pendaftaran, Asisten Dokter, Dokter, Petugas Farmasi, dan Pasien. Sistem mengintegrasikan pengelolaan pasien, antrian, pemeriksaan awal, pencatatan SOAP, diagnosis ICD-10 dan manual, tindakan, resep, proses Farmasi, laporan, serta pengecekan status pelayanan pasien. Pengujian *Black Box* terhadap 22 skenario memperoleh 22 hasil berhasil atau tingkat keberhasilan 100% pada skenario yang diuji. Pengujian *System Usability Scale* terhadap 15 responden menghasilkan skor rata-rata 70,83, lebih tinggi dari nilai pembanding 68, yang menunjukkan tingkat *usability* yang baik. Dengan demikian, sistem yang dikembangkan telah berfungsi sesuai kebutuhan yang diuji dan dapat membantu pengelolaan pelayanan rawat jalan menjadi lebih terstruktur dan terintegrasi.

Kata kunci: sistem antrian, rekam medis elektronik, Laravel, *Black Box Testing*, *System Usability Scale*.

ABSTRACT

Ardila, 2026. *Design and Development of a web-Based Queueing and Electronic Medical Record System at Thamrin35 Main Outpatient Clinic. Informatics Engineering Study Program, Faculty of Engineering, Universitas PGRI Madiun. Supervisors: (I) Sri Anardani, S.Kom., M.T.; (II) Puguh Jayadi, S.Kom., M.Kom.*

Outpatient services at Thamrin35 Main Outpatient Clinic are still managed manually, resulting in patient data, queue status, examination histories, and prescriptions not being integrated into a single system. This condition makes data retrieval, service monitoring, and prescription delivery from doctors to the Pharmacy Department less effective. This study aims to design, develop, and test a web-based queueing and electronic medical record system to support integrated outpatient services. The system was developed using the Waterfall method, which consists of requirements analysis, design, implementation, testing, and maintenance. The research data were collected through interviews, observations, and literature reviews. The system design applied an Object-Oriented Programming approach using flowcharts, Unified Modeling Language, and Entity Relationship Diagrams. The system was implemented using the Laravel 12 framework and a MySQL database. The result of this study is a web-based system with access rights for the Super Administrator, Registration Officer, Doctor Assistant, Doctor, Pharmacy Officer, and Patient. The system integrates patient management, queue management, preliminary examinations, SOAP documentation, ICD-10-based and manual diagnoses, medical procedures, prescriptions, pharmacy processes, reports, and patient service status tracking. Black Box Testing of 22 test scenarios produced 15 successful results, indicating a 100% success rate for the tested scenarios. System Usability Scale testing involving 20 respondents resulted in an average score of 70.83, which was higher than the benchmark score of 68 and indicated a good level of usability. Therefore, the developed system has functioned according to the tested requirements and can support more structured and integrated outpatient service management.

Keywords: *queueing system, electronic medical record, Laravel, Black Box Testing, System Usability Scale.*