

**DESIGN OF A WEB-BASED ONLINE REGISTRATION
APPLICATION AT THE GENERAL PRACTICE CLINIC OF
dr. ANA DEWI LUKITA SARI, M.P.H. IN BANTUL**

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ABSTRACT

Background: Technological advancements are driving digital transformation in healthcare. The general practice clinic of dr. Ana Dewi Lukita Sari, M.P.H. in Bantul still relies on a hybrid registration system, which causes long queues, unpredictable waiting times, data duplication risks, and potential loss of medical records. With 1,918 patient visits recorded in 2025 (averaging 7–10 patients per session), a web-based online registration system is urgently needed to improve service efficiency.

Objective: To design and develop a web-based online registration application for dr. Ana Dewi Lukita Sari, M.P.H.'s general practice clinic in order to streamline the registration process, improve data accuracy, and support healthcare digitalization.

Methods: This Research and Development (R&D) study utilized the waterfall model (analysis, design, coding, testing, and evaluation). The research subjects consisted of 1 general practitioner and 1 registration officer. Data were gathered through observation and interviews. System testing was conducted using black-box testing and User Acceptance Testing (UAT). The study took place from January to March 2026 in Bantul, Yogyakarta.

Results: The web-based online registration application was successfully developed using HTML, CSS, and JavaScript. Its features include patient data input, appointment scheduling, digital medical records management, and queue management. Black-box testing indicated that all functions operated according to the scenario, and UAT results confirmed that the application successfully met user needs.

Conclusion: The web-based online registration application was successfully developed using the waterfall method and proven to be fully functional. The system is effective in enhancing service efficiency, reducing patient waiting times, and supporting digital transformation in primary healthcare.

Keywords: Online registration, web application, general practice, waterfall, medical records.

**PERANCANGAN APLIKASI PENDAFTARAN *ONLINE*
BERBASIS *WEB* PADA PRAKTIK DOKTER UMUM
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ABSTRAK

Latar Belakang: Perkembangan teknologi mendorong transformasi digital di sektor kesehatan. Praktik Dokter Umum dr. Ana Dewi Lukita Sari, M.P.H. di Bantul saat ini masih menggunakan sistem pendaftaran *hybrid*. Hal ini memicu antrean panjang, ketidakpastian waktu tunggu, risiko duplikasi data, dan potensi hilangnya berkas rekam medis. Sepanjang tahun 2025, tercatat ada 1.918 kunjungan pasien (7–10 pasien per sesi), sehingga diperlukan sistem pendaftaran *online* untuk meningkatkan efisiensi pelayanan.

Tujuan: Merancang aplikasi pendaftaran *online* berbasis *web* di Praktik Dokter Umum dr. Ana Dewi Lukita Sari, M.P.H. guna meningkatkan efisiensi proses pendaftaran, akurasi pengelolaan data, dan mendukung digitalisasi kesehatan.

Metode: Penelitian *Research and Development* (R&D) ini menggunakan model *waterfall* (analisis, perancangan, pengkodean, pengujian, dan evaluasi). Subjek penelitian meliputi 1 dokter dan 1 petugas pendaftaran. Data dikumpulkan melalui observasi dan wawancara. Pengujian sistem menggunakan metode *blackbox testing* dan *User Acceptance Test* (UAT). Penelitian dilakukan pada Januari–Juni 2026 di Bantul, Yogyakarta.

Hasil: Aplikasi berhasil dikembangkan dengan fitur input data pasien, pemilihan jadwal, dan manajemen antrean menggunakan HTML, CSS, dan *JavaScript*. Hasil *blackbox testing* menunjukkan semua fungsi berjalan normal, dan hasil UAT mengonfirmasi bahwa aplikasi memenuhi kebutuhan pengguna.

Kesimpulan: Aplikasi pendaftaran *online* berbasis *web* berhasil dikembangkan dan terbukti fungsional. Sistem ini layak digunakan untuk meningkatkan efisiensi pelayanan, memangkas waktu tunggu pasien, serta mendukung transformasi digital pada fasilitas kesehatan tingkat dasar.

Kata Kunci: Pendaftaran *online*, aplikasi berbasis *web*, praktik dokter umum, *waterfall*, rekam medis.