

ABSTRAK

Pengelolaan layanan Teknologi Informasi (TI) pada institusi pendidikan tinggi berperan krusial dalam menunjang keberlangsungan aktivitas akademik dan administrasi. Unit Penunjang Akademik Teknologi Informasi dan Komunikasi (UPA TIK) Universitas Pembangunan Nasional "Veteran" Jakarta (UPNVJ) masih mengelola permintaan layanan dan insiden secara manual melalui WhatsApp atau interaksi langsung, tanpa adanya single point of contact. Kondisi ini menyebabkan tiket tidak tercatat secara terstruktur, terjadi penumpukan permintaan, ketidakpastian waktu penyelesaian, serta rendahnya transparansi status layanan bagi pengguna. Berdasarkan permasalahan tersebut, penelitian ini bertujuan merancang, membangun, dan menguji sistem service desk digital terpusat berbasis web bernama "OneServiceDesk" untuk mengotomatisasi alur kerja manajemen insiden dan permintaan layanan di lingkungan UPNVJ. Sistem direncanakan dikembangkan menggunakan metodologi Agile Scrum dengan delapan tahapan sprint, mengadopsi kerangka kerja ITIL 4 sebagai acuan tata kelola layanan melalui penerapan metrik Service Level Agreement (SLA), serta dibangun dengan arsitektur Next.js (frontend), NestJS (backend), dan PostgreSQL (basis data). Teknik pengumpulan data dilakukan melalui studi literatur, observasi langsung, dan wawancara bersama staf UPA TIK UPNVJ. Hasil pengujian akan dinilai melalui dua pendekatan, yaitu User Acceptance Testing (UAT) berbasis black box bersama pengguna akhir dan white box testing menggunakan unit test pada framework Jest, guna menjamin reliabilitas dan akuntabilitas sistem sebelum diimplementasikan penuh.

Kata Kunci: Agile Scrum, ITIL 4, NestJS, Next.js, Service Desk.

ABSTRACT

The management of Information Technology (IT) services in higher education institutions plays a crucial role in ensuring the continuity of academic and administrative activities. The Academic Support Unit for Information and Communication Technology (UPA TIK) at Universitas Pembangunan Nasional "Veteran" Jakarta (UPNVJ) still manages service requests and technical incidents manually through WhatsApp or direct interaction, without a single point of contact. This results in undocumented ticket logging, accumulated request backlogs, uncertain resolution times, and low transparency in service status tracking for end-users. Based on these problems, this research aims to design, develop, and test a centralized web-based digital service desk application called "OneServiceDesk" to automate the workflow of incident and service request management within UPNVJ. The system is planned to be developed using the Agile Scrum methodology with eight sprint phases, adopting the ITIL 4 framework as the main reference for IT service governance through the application of Service Level Agreement (SLA) metrics, and built with Next.js (frontend), NestJS (backend), and PostgreSQL (database). Data collection is conducted through literature review, direct observation, and interviews with UPA TIK staff. Testing results will be evaluated through two approaches: black box-based User Acceptance Testing (UAT) with end-users, and white box testing using unit tests on the Jest framework, to ensure system reliability and accountability prior to full implementation.

Keywords: Agile Scrum, ITIL 4, NestJS, Next.js, Service Desk.