ABSTRAK

Phoenix Hotel Yogyakarta, Ibis Hotel Yogyakarta, dan Grand Mercure Hotel Yogyakarta berada dalam satu pengelolaan Departemen IT, namun pengelolaan inventaris aset TI masih dilakukan secara manual menggunakan file Excel yang terpisah pada masing-masing unit hotel. Kondisi tersebut menimbulkan beberapa permasalahan, seperti risiko kesalahan input, ketidaksinkronan data antarfile dan antarunit, inkonsistensi format pencatatan, duplikasi data, serta konflik versi dokumen. Selain itu, pencatatan berbasis Excel belum menyediakan validasi data otomatis, riwayat perubahan data yang terstruktur, dan pembatasan hak akses pengguna secara jelas. Permasalahan tersebut menunjukkan belum tersedianya sistem inventaris aset TI terintegrasi multi-hotel yang mampu mendukung pengelolaan inventaris secara terpusat, mengendalikan perubahan data, serta menyediakan informasi aset yang lebih konsisten dan mudah ditelusuri.

Penelitian ini menggunakan metode pengumpulan data berupa wawancara dengan IT Cluster Manager, dokumen internal perusahaan, dan studi literatur. Data yang diperoleh digunakan sebagai dasar perancangan dan pengembangan sistem inventaris aset TI terintegrasi multi-hotel berbasis web menggunakan metode *Waterfall* yang mencakup empat tahap, yaitu *Requirement Definition*, *System and Software Design, Implementation and Unit Testing*, serta *Integration and System Testing*. Sistem dikembangkan menggunakan bahasa pemrograman PHP dengan *framework* Laravel dan basis data MySQL. Sistem yang dibangun mencakup pengelolaan data aset TI, data master, relasi aset, QR Code, transfer aset, approval perubahan data, pelaporan masalah melalui tiket, pencatatan riwayat aset, audit trail, serta pembuatan laporan dalam format PDF, CSV, dan Excel.

Hasil pengujian *Black Box Testing* menunjukkan bahwa seluruh skenario pada 22 kasus uji berjalan sesuai dengan hasil yang diharapkan, meliputi autentikasi, manajemen pengguna, kelola aset, QR Code, relasi aset, dokumen pendukung, transfer, tiket, kategori, lokasi, vendor, pelaporan, *approval*, kelola hotel, profil, notifikasi Telegram, audit *trail*, halaman publik, My Asset, My Ticket, dan dashboard. Pengujian *User Acceptance Testing* (UAT) melibatkan 10 responden yang mewakili role Super Admin, Admin, Viewer, dan Assignee, dengan penilaian pada aspek *learnability*, *efficiency*, *memorability*, *errors*, dan *satisfaction*. Hasil UAT memperoleh nilai keseluruhan sebesar 82,92% dan termasuk dalam kategori Sangat Baik. Secara keseluruhan, sistem inventaris aset TI terintegrasi multi-hotel berbasis web ini mampu menjawab permasalahan belum tersedianya sistem terintegrasi dengan menyediakan platform pengelolaan aset TI yang lebih terpusat, terkendali, dan mudah ditelusuri.

Kata Kunci: sistem inventaris aset TI, sistem terintegrasi, multi-hotel, *Waterfall*, *User Acceptance Testing*.

ABSTRACT

Phoenix Hotel Yogyakarta, Ibis Hotel Yogyakarta, and Grand Mercure Hotel Yogyakarta are managed under the same IT Department, but their IT asset inventory management is still carried out manually using separate Excel files for each hotel unit. This condition creates several problems, such as the risk of input errors, data inconsistencies between files and units, inconsistent recording formats, duplicate data, and document version conflicts. In addition, Excel-based recording does not provide automatic data validation, structured change history, or clear user access control. These problems indicate the absence of an integrated multi-hotel IT asset inventory system that can support centralized inventory management, control data changes, and provide more consistent and traceable asset information.

This study used data collection methods consisting of interviews with the IT Cluster Manager, internal company documents, and literature studies. The collected data served as the basis for designing and developing a web-based integrated multi-hotel IT asset inventory system using the Waterfall method, which consists of four stages: Requirement Definition, System and Software Design, Implementation and Unit Testing, and Integration and System Testing. The system was developed using the PHP programming language with the Laravel framework and MySQL database. The developed system includes IT asset data management, master data management, asset relationships, QR Code, asset transfer, data change approval, issue reporting through tickets, asset history recording, audit trail, and report generation in PDF, CSV, and Excel formats.

The Black Box Testing results showed that all scenarios in 22 test cases ran as expected, including authentication, user management, asset management, QR Code, asset relationships, supporting documents, transfer, tickets, categories, locations, vendors, reporting, approval, hotel management, profile management, Telegram notification, audit log, public page, My Asset, My Ticket, and dashboard. User Acceptance Testing (UAT) involved 10 respondents representing the roles of Super Admin, Admin, Viewer, and Assignee, with assessments covering learnability, efficiency, memorability, errors, and satisfaction. The overall UAT result reached 82.92%, which falls into the excellent category. Overall, this web-based integrated multi-hotel IT asset inventory system addresses the absence of an integrated system by providing a more centralized, controlled, and traceable IT asset management platform.

Keywords: *IT asset inventory system, multi-hotel, Waterfall, Integrated System, User Acceptance Testing*