

**DESIGN OF INVENTORY MANAGEMENT SYSTEM APPLICATION (STUDY:  
OUTBOUND INVENTORY PT SEMEN PADANG)**

**FINAL PROJECT REPORT**

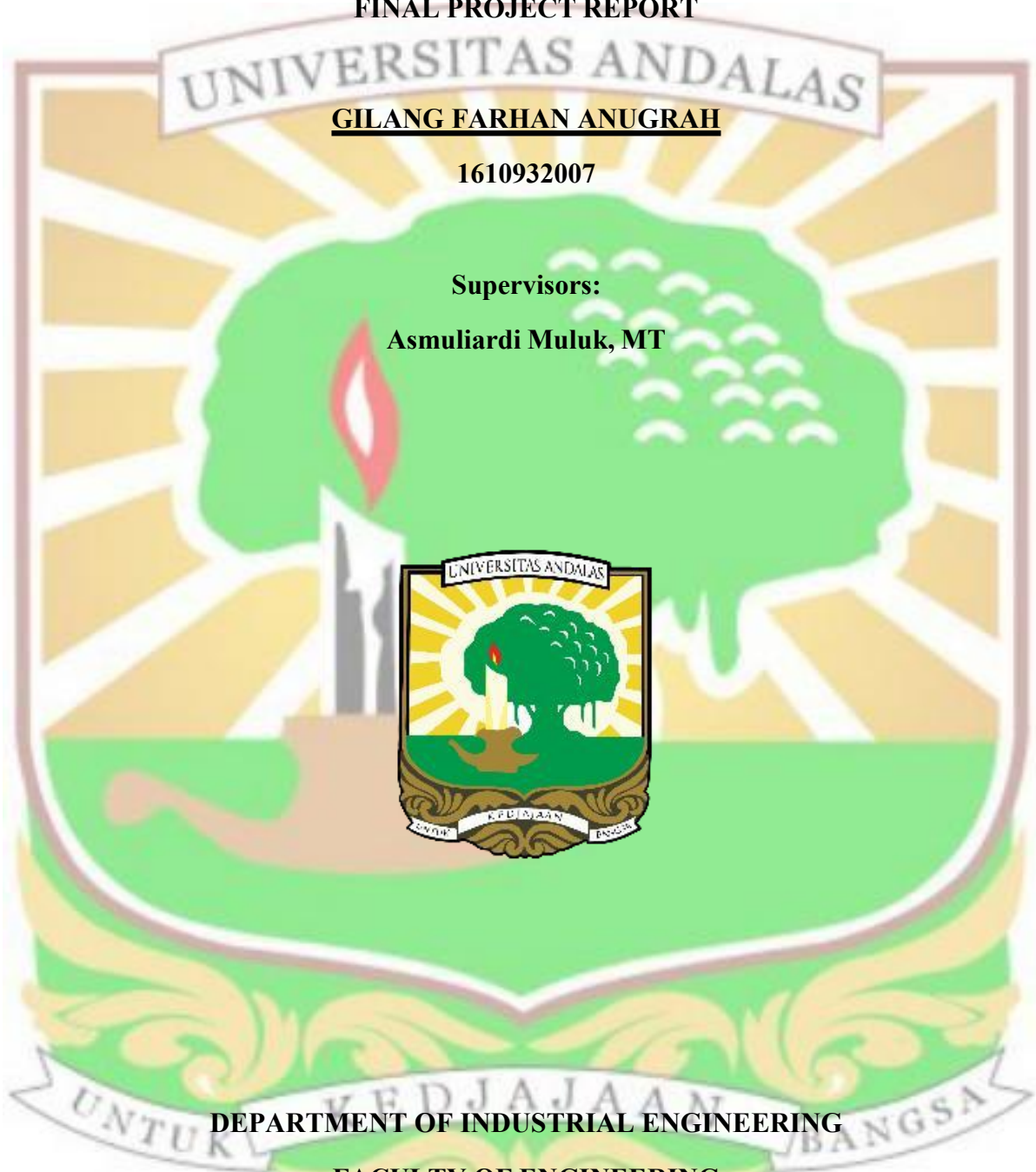
**UNIVERSITAS ANDALAS**

**GILANG FARHAN ANUGRAH**

**1610932007**

**Supervisors:**

**Asmuliardi Muluk, MT**



**DEPARTMENT OF INDUSTRIAL ENGINEERING**

**FACULTY OF ENGINEERING**

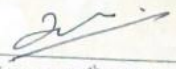
**ANDALAS UNIVERSITY**

**PADANG**

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**APPROVAL PAGE**

This final project is entitled "Design of Inventory Management System Application (Study: Outbound Inventory PT Semen Padang)" written and submitted by **Gilang Farhan Anugrah** as one of the requirements for obtaining a degree of **Bachelor of Engineering** (Major in Industrial Engineering), has been examined and therefore recommended for approval and acceptance.

  
Date: January 8<sup>th</sup> 2023

**Asmuliardi Muluk, M.T**  
NIP. 197105061997021001  
Supervisor

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**PANEL OF EXAMINER**

Approved by the Committee on Final Project Examination

31/07/2023

**Final Project Examination Date**

\_\_\_\_\_

**Reinny Patrisina, S.T.,M.T, Ph.D**  
NIP. 197610022002122002  
Chair

\_\_\_\_\_

**Yumi Meuthia, S.T.,M.T**  
NIP. 198004132008122004  
Member

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Accepted and approved in particular fulfilments for the degree of **Bachelor of Engineering** (Major in Industrial Engineering)

\_\_\_\_\_

Date: January 2023

**Reinny Patrisina, Ph.D**  
NIP. 197610022002122002  
Chair of Industrial Engineering Undergraduate  
Program

\_\_\_\_\_

Date: January 2023

**Feri Afrinaldi, Ph.D**  
NIP. 198209202006041002  
Chair of Industrial Engineering Department

## ABSTRACT

PT. Semen Padang is one of the biggest state-owned enterprises in Sumatra, Indonesia. The company was opened around 1910 and was once confirmed to be the biggest factory controlled by regional ownership outside Jawa. To support the distribution of products, PT Semen Padang has four warehouses in Riau Province to store the types of cement. To manage the warehouses, PT Semen Padang needs inventory management. PT Semen Padang has a unit that controls inventory management activity in the warehouse called Outbound Inventory Unit. Outbound Inventory is a unit in PT Semen Padang that manages the cement product stock and delivery process outside the main factory. Outbound Inventory requests the transportation unit to deliver a certain amount of products to the warehouse and also makes a daily report of products stocked in the warehouse. In giving the information to the Outbound Inventory Unit supervisor, staff will send the reports through e-mail every morning. PT Semen Padang is one of the biggest manufacturing companies in Indonesia, the company should have a private information system to support its daily activity. Therefore it's necessary to develop an information system that can help Outbound Inventory Unit manage inventory and make daily reports.

The study employed several stages including object-oriented analysis to analyze the system that will be developed into the recommendation system. Object-oriented design to make diagram that shows the information system created. Database design by using entity relationship diagram. Programming using PHP and MySQL as database, and also Verification and Validation.

Based on the data processing results, the minimum inventory value and maximum inventory for goods are obtained with application designed have the same calculation results as manual calculation. The designed inventory management information system can be used by 3 user which is the head of the warehouse, the manager, and the logistics section. Inventory management information system in outbound PT Semen Padang designed to be capable support the company in carrying out control planning inventory. With this application, it can facilitate outbound PT Semen Padang to search quickly related to cement product stock and delivery process outside the main factory, fast inventory calculation and a friendly user interface make advantages of the information system.

**Keywords:** Inventory Management System, Object-Oriented Analysis, Object-Oriented Design

UNTUK

KEDJAJAAN

BANGSA

## ABSTRAK

PT. Semen Padang adalah salah satu badan usaha milik negara terbesar di Sumatera, Indonesia. Perusahaan ini dibuka sekitar tahun 1910 dan pernah dikonfirmasi sebagai pabrik terbesar yang dikendalikan oleh kepemilikan daerah di luar Jawa. Untuk mendukung distribusi produk, PT Semen Padang memiliki empat gudang di Provinsi Riau. Untuk mengelola gudang, PT Semen Padang membutuhkan manajemen persediaan. PT Semen Padang memiliki unit yang mengendalikan aktivitas manajemen persediaan di gudang yang disebut Outbound Inventory Unit. Outbound Inventory adalah unit di PT Semen Padang yang mengelola stok produk semen dan proses pengiriman di luar pabrik utama. Outbound Inventory meminta unit transportasi untuk mengirimkan sejumlah produk ke gudang dan juga membuat laporan harian produk yang disimpan di gudang. Dalam memberikan informasi kepada supervisor Unit Inventaris Outbound, staf akan mengirimkan laporan melalui e-mail setiap pagi. PT Semen Padang adalah salah satu perusahaan manufaktur terbesar di Indonesia, perusahaan harus memiliki sistem informasi pribadi untuk mendukung aktivitas sehari-hari. Oleh karena itu perlu dikembangkan sistem informasi yang dapat membantu Unit Outbound Inventory mengelola persediaan dan membuat laporan harian.

Penelitian ini menggunakan beberapa tahapan diantaranya analisis berorientasi objek untuk menganalisis sistem yang akan dikembangkan menjadi sistem rekomendasi. Desain berorientasi objek untuk membuat diagram yang menunjukkan sistem informasi yang dibuat. Desain database dengan menggunakan entity relationship diagram. Pemrograman menggunakan PHP dan MySQL sebagai database, dan juga verifikasi dan validasi.

Berdasarkan hasil pengolahan data, nilai persediaan minimum dan persediaan maksimum untuk barang yang diperoleh dengan aplikasi yang dirancang memiliki hasil perhitungan yang sama dengan perhitungan manual. Sistem informasi manajemen persediaan yang dirancang dapat digunakan oleh 3 pengguna yaitu kepala gudang, manajer, dan bagian logistik. Sistem informasi manajemen persediaan di outbound PT Semen Padang dirancang agar mampu mendukung perusahaan dalam melakukan perencanaan pengendalian persediaan. Dengan aplikasi ini, dapat memudahkan Outbound Inventory unit PT Semen Padang untuk melakukan pencarian secara cepat terkait stok produk semen dan proses pengiriman di luar pabrik utama. Perhitungan persediaan yang cepat dan user interface yang ramah menjadikan keunggulan sistem informasi.

**Keywords:** Sistem Manajemen Persediaan, Object-Oriented Analysis, Object-Oriented Design

