

**COMSTEN MANAGEMENT SYSTEM**

**KONG EIK MING**

**This report is submitted in partial fulfillment of the requirement for the  
Bachelor of Information and Communication Technology  
(Software Development)**

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KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA**

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## DECLARATION

I hereby declare that this project entitled

### **Comsten Management System**

is written by me and my own effort and that no part has been plagiarized  
without citations.

**STUDENT** : \_\_\_\_\_ **DATE:** \_\_\_\_\_  
(KONG EIK MING)

**SUPERVISOR** : \_\_\_\_\_ **DATE :** \_\_\_\_\_  
(PUAN MASSILA KAMALRUDIN)

## DEDICATION

This is a special dedication to all that help me alot in this project.

Firstly i would like to give my dedication to my beloved family. They give me fully support on this project, to collect the information and also support my expense in study life, so that i can pay full attention to complicit this project. Thanks for their patience and love towards me that really encourages me. I really appreciate them for their kindness and understanding for me.

Secondly, i would like to give my appreciation to Puan Massila Kamalrudin for being my supportive supervisor. She gave me a lots of guidance and directions from the beginning of the project planning until the completion of the project. Encouragements and supports are greatly given by her as a supervisor to ensures that i can complete this project in proper. There are so mercy that have Puan Massila Kamalrudin as my giude supervisor to complete this project.

Thirdly, i would like to show my appreciation to the pipes factory Comstem Industries Sdn. Bhd for allowing me to simulate the education's need into this whole project. Again, i wish to thank the Factory Comstem Industries Sdn. Bhd for been so kind to me and this project.



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I would like to thank Puan Massila Kamalrudin for giving me assistance to complete this project successfully. Puan Massila Kamalrudin is my PSM supervisor, which has helped me and given me a lot of useful advice in completing the project documentation. She has shown me plenty of references and knowledge in completing the project. With her advice, comments and guidance, I am able to accomplish the report within the given time.

Next I wish to thank the factory Comsten Industries Sdn Bhd, a factory of processing pipes in Sarawak that contributed to my research work. Their cooperation is worth my appreciation because they have shown the information and documentation about the factory management. I would like to thank my family members that have offered unlimited support during the time that I had to do this research and report at Sarawak. They have shown consideration and support to me in completing the project.

Besides that, I wish to thank my course mates and friends from KUTKM and also others that may not have been mentioned here. With these supports, I can complete this system program successfully.

## ABSTRACT

This is a system special developed for the pipes produce factory named Comsten Industries Sdn Bhd which located in Sibul Sarawak. This is a system which easy to used by every level of user. The system developed based on the way of Comsten Management environment. This is an application project. The purpose of this system is to help the factory manager to manage the factory, and also to standardize the factory management system. All the report can be easily generated using the function provided in the Comsten Management System. Within this system, the processes of payroll are simplified and easy to use. This system developed by using the J2EE in Eclipse development tools in majority. The Eclipse plugin may needed like Jigloo, Hibernate, API, and other else. And the report generated by using the crystal report. This system developed based on prototype module that which are reusable. The system used object oriented methodology and using UML (unified Modeling Language) notation in analyzing, designing and architecting the system.

## ABSTRAK

Sistem ini dibina khas untuk kilang yang mengeluarkan paip bernama Comsten Industries Sdn Bhd, terletak di Sibu Sarawak. Ini adalah satu sistem yang senang digunakan oleh semua perengkat pengguna. Sistem ini dibina bergantung kepada situasi pengurusan Comsten. Ia adalah satu pemohonan sistem. Tujuan system ini adalah untuk membantu the pengurus kilang menguruskan kilang. Dan juga setarakan sistem pengurusan kilang. Semua laporan dapat mudah dihasilkan dengan menggunakan fungsi yang berada dalam Comsten Management Sistem. Dengan adanya system ini, proses pengajian telah diringkaskan dan juga mudah digunakan. Kebanyakannya sistem ini dibina dengan menggunakan J2EE dalam Eclipse alat bina. Tambahan alat bina Eclipse adalah seperti Jigloo, Hibernate, API dan lain-lain. Laporan dihasilkan melalui Crystal report. System ini dibina bergantung kepada model yang boleh guna semula. System ini menggunakan cara object oriented dan gunakan UML (unified modeling language) notasi dalam analisis, reka bentuk dan membingkai sistem tersebut.



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## LIST OF ABBREVIATIONS

1. KUTKM Kolej Universiti Teknikal Kebangsaan Malaysia
2. PSM Project Saujana Muda
3. OOAD Object Oriented Analysis and Design
4. UML Unified Modeling Language
5. CPU Central Processing Unit
6. ERD Entity Relationship Diagram.



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## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

This is a system designed special for Comsten Industry Sdn Bhd. The main concept of this system is help the Industry manager to manage the worker record, payroll calculation, inventory in and out, and also the quantity control of material.

As an industry manager have to keep the record of entire worker. The record that needed to keep for each worker such as worker daily work hour, salary rate, worker details, worker duty, worker monthly payroll and so on. The welfare provided from Industry to all workers, if the worker needed money for daily use, they can borrow money from industry, after that the worker salary of the month will be getting minus best on how many money had been borrowed. In this care, worker's monthly salary must not less than total money had been lent of the month.

Manager has to manage the inventory production- pipes in and out. Manager has to keep track of each type PVC pipe that wont out of stock while customer make pipes purchase order in time so that customer can go though their project. The summaries of the total of each pipe produced have to keep by monthly and amount of each time pipes had been sold also have to keep as refer. The record should keep systematically.

## 1.2 Problem statement(s)

The detail of each worker should be kept in biodata of worker. Each worker have their own total work time of the month, salary rate, experience, duty, bank account number and other else. All those detail needed to refer back every time to calculate the worker monthly salary, and also to change the hourly salary rate and other else. There are not clear enough and also not easy to be edited if all those details are kept in paper work. The record should include all the previous industry workers. It becomes a large number for worker's details to keep. All the worker's detail should keep as secret cannot referred by other people else than manager.

Payroll affected by workers' salary rate, EPF, SOCSO, total work time of the month and also the total money had being lent to the worker. For the payroll calculations, the formula of payroll calculation is totally same but values are difference for each worker. In this case, the manager has to calculate all the worker salary one by one at the end of each month.

In the process of pipes manufacture, each worker should list out the detail of the process manufacture and total of pipes had been produced. After that the supervisor make testing and checking of the pipes manufacture. Lastly the manager should make the summaries of the manufacture, and make update of each types of pipes in documentation. By the total pipes in store that documented, manager manage schedule the process of manufacturing pipes.

### 1.3 Objective

#### Worker details storage

- To store the details information of each worker more systematic.
- To store each worker salary rate for calculating the payroll.
- To store the total work hour of each worker.
- To store total amount of money lent to the workers.

#### Payroll Calculation

- Calculate the salary of each worker.
- Calculate the EPF and also SOCSO.

#### Inventory control

- To store the quantity production of each type of pipe daily.
- To store as record of each time pipes exported.
- As a control of the total material amount in store.

## **1.4 Scopes**

This system is for the factory administrator to manage the factory more effective. All the documentation becomes standardize and zero error. The management of industry will be much easier. The processes of manufacturing also had being simplified.

This system including the worker's detail, attendance, payroll, worker respond in manufacturing process and other else. All of those are manage by the industry manager. This system including the basic of this management and reduce the random of mistake in laugh number of production and also the product export. The calculation of worker salary should be standardized and be more secured. The system also can keeps record of each worker, and store it. The process of updating manufacture, inventory and worker detail become automatically.

## **1.5 Project significance**

The system can help the industry manager manage the industry in simplified way and also more systematic. The system will help the manager to generate and summaries the manufacturing. The industry manage also can use this system to calculate each workers payroll at the end of each month. With this system, the manager can know the overall of inventory status by clearly, accurate and easy. The factory can avoid from out of store if customer needed product on time. The deceit in worker attendance can be minimized.



## 1.6 Expected Output

- Clear and editable worker's information detail.
- Calculate worker's salary base on total work hours.
- Record total amount money had been lent to each worker.
- Calculate EPF, SOCSO of each worker.
- Auto- summaries the manufacturing detail.
- Record pipes production of each worker.
- More secure in manufacture documentation.

## 1.7 Conclusion

With this system the management of the factory can be more standardize and systematic. The probability of damage because of human negligence in management can be reducing to minimum. The industry manager can pay more attention to manage others like the customer service, better sales, workers welfare and other else. This system designed special for help the Comsten Industries in manufacturing management.