

# INITIATION

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ﴿١﴾ خَلَقَ الْإِنْسَانَ مِنْ  
عَلَقٍ ﴿٢﴾ اقْرَأْ وَرَبُّكَ الْأَكْرَمُ ﴿٣﴾ الَّذِي عَلَّمَ بِالْقَلَمِ ﴿٤﴾ عَلَّمَ  
الْإِنْسَانَ مَا لَمْ يَعْلَمْ ﴿٥﴾ ﴾

صدق الله العظيم

سورة العلق: الآيات من { 1 - 5 }

## DEDICATION

- ✓ *To those who filled the world with justice and light, the best land  
Mohammed bin Abdullah, peace be upon him...*
- ✓ *To my brothers and sisters...*
- ✓ *To each of Lighting a candle in my way...*
- ✓ *To every searching for Science. To all seekers of knowledge...*
- ✓ *All of them dedicate this modest research...*

# Acknowledgement

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## **ABSTRACT**

Most of factories in Sudan are suffering from reduction in production efficiency which caused by weakness and unorganized production and maintenance management. The optimal solution to increase the efficiency is by documenting any single part in the production line.

The program is a system for input factory data (machines, workers and store) and taking them out in reports. This reports helps to improve the productivity of the factory and increase the income and improve the quality. This system converts the traditional paper system to a computerized system which helps to reduce the time and effort.

The software was tested by using data from Leader Technology for Engineering Products which represents one of small scale industry suffers from problems.

The software worked properly. And this reports helped to improving the efficiency of the factory.

## مستخلص الدراسة

معظم المصانع في السودان تعاني من انخفاض في كفاءة الإنتاج التي يسببها ضعف والإنتاج والادارة غير المنظمة للصيانة. الحل الأمثل لزيادة الكفاءة هو من خلال توثيق كل جزء واحد في خط الإنتاج. البرنامج عبارة عن نظام لادخال بيانات المصنع ( الآلات والعمال ومخزن ) واخراجها في شكل تقارير. هذه التقارير تساعد على تحسين إنتاجية المصنع وزيادة الدخل وتحسين الجودة. هذا النظام يستبدل النظام الورقي التقليدي إلى نظام محوسب مما يساعد على تقليل الوقت والجهد. تم اختبار البرنامج باستخدام بيانات تم احضارها من ليدر تكنولوجي للمنتجات الهندسية، والذي يمثل واحد من الصناعات الصغيرة تعاني من مشاكل. البرنامج عمل بشكل صحيح، وساعدت هذه التقارير في تحسين كفاءة المصنع.

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## LIST OF ABBREVIATIONS

<b>Symbol</b>	<b>Meaning</b>
CMMS	Computerized Maintenance Management System
PM	Preventive Maintenance
OLTP	Online Transaction Processing
MQ	Message Queue