

**IMPORTANCE OF COMPUTER AUTOMATION FOR SMALL  
AND MEDIUM ENTERPRISES (SMEs)**

**(A CASE STUDY OF KENIYE CONGLOMERATE IN BAYELSA  
STATE)**

**BY**

**PROMISE POKIMA AMAKIRI  
ND/COMP.SCI/20/037  
AND  
BISHOP EDIRIN EMMANUELLA  
ND/COMP.SCI/20/057**

**THIS PROJECT IS SUBMITTED TO THE DEPARTMENT OF  
COMPUTER SCIENCE FACULTY OF SCIENCE  
BAYELSA STATE POLYTECHNIC, ALEIBIRI.**

**JANUARY 2023**

**IMPORTANCE OF COMPUTER AUTOMATION SYSTEM IN SMEs**

**BY**

**PROMISE POKIMA AMAKIRI  
ND/COMP.SCI/20/037  
BISHOP EDIRIN EMMANUELLA  
ND/COMP.SCI/20/057**

**SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE  
FACULTY OF SCIENCE  
BAYELSA STATE POLYTECHNIC, ALEIBIRI.**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE DEGREE OF NATIONAL DIPLOMA (ND) IN COMPUTER  
SCIENCE**

**PROJECT SUPERVISOR:**

**MR. PAUL YERIKEME**

**JANUARY 2023**

**DECLARATION**

We hereby declare that this is my original project work and has not been submitted anywhere for the purpose of awarding a degree.



.....  
**PROMISE P. AMAKIIRI**  
**(Researcher)**



.....  
**Date**



.....  
**BISHOP E.EMMANUELLA**  
**(Researcher)**



.....  
**Date**



.....  
**MR. PAUL YERIKEMEA**  
**(Project Supervisor)**



.....  
**Date**

BAYELSA STATE POLYTECHNIC, ALEIBIRI

## CERTIFICATION

This is to certify that this project titled “**IMPORTANCE OF COMPUTER AUTOMATION FOR SMALL AND MEDIUM ENTERPRISES (SMEs)**” is the original work of the researcher for the 2020/2021 academic session and has not been previously submitted to this or other polytechnic to the best of my knowledge for any undergraduate programme in the Department of Computer Science, Faculty of Science, Bayelsa State Polytechnic, Aleabiri.



.....  
**MR. PAUL YERIKEMA**  
*(Project Supervisor)*



.....  
**Date**



.....  
**MR. PAUL YERIKEMA**  
*(Head of Department)*



.....  
**Date**

## **DEDICATION**

This work is dedicated to God Almighty for granting me mercy good health, security and compassion in the course of my study in the National Diploma (ND).

Secondly, I also dedicate this work to my Parents, Guidance, Lecturers and well wishers for all they academic support and counsels.

BAYELSA STATE POLYTECHNIC, ALEIBIRI

## **ACKNOWLEDGEMENTS**

I want to first acknowledge God for his favour and leading me to the right people who contributed to the success of my academic pursuit.

My profound gratitude and appreciation to my project supervisor Mr. Paul Yarikeme who supervised, tutored and directed me not only in this project work but in my entire journey of this programme may the almighty God reward you for your fatherly role and impact in my life.

BAYELSA STATE POLYTECHNIC, ALEBIRI

## **ABSTRACT**

The study shows the importance of computer Automation for Small and Medium Enterprises (SMEs) a case study of Keniye Conglomerate. The principal findings showed the limitation of manual system and executive knowledge of computers and involvements in computerization leads to more successful computer use in small enterprises. The use of on-site computers also has positive effect on computer success.

Considering the revolution of computers recent reviews have suggested that there will soon be a revolution in the office as computer technology is brought to increase the productivity of our white collar business labour force. The issues of manual operating businesses and offices cannot be overemphasized in terms of records, bookkeeping, stocks intakes, as large volume of files and task are being handled manually resulting in poor performance in terms of accuracy. The increase of business shows the need of proper records and storage medium of information (Olufemi, Adele, Aladejebi 2004). Business automation helps to reduce the stress and inaccuracy of records that is using machine, computerized devices and programs which perform office tasks automatically.

**KEYWORDS:** Automation, Manual, Records

## TABLE OF CONTENTS

Cover Page	-	-	-	-	-	-	-	-	-	i
TitlePage	-	-	-	-	-	-	-	-	-	ii
Declaration	-	-	-	-	-	-	-	-	-	iii
Certification	-	-	-	-	-	-	-	-	-	iv
Dedication	-	-	-	-	-	-	-	-	-	v
Acknowledgement	-	-	-	-	-	-	-	-	-	vi
Abstract	-	-	-	-	-	-	-	-	-	vii
Table of Content	-	-	-	-	-	-	-	-	-	viii

### CHAPTER ONE

1.1	Introduction	-	-	-	-	-	-	-	-	1
1.2	Statement of Problem	-	-	-	-	-	-	-	-	2
1.3	Objective of study	-	-	-	-	-	-	-	-	3
1.4	Statement of Hypothesis	-	-	-	-	-	-	-	-	4
1.5	Significant of study	-	-	-	-	-	-	-	-	4
1.7	Scope of study	-	-	-	-	-	-	-	-	5
1.8	Definition of terms-	-	-	-	-	-	-	-	-	5

### CHAPTER TWO

2.1	Literature Review	-	-	-	-	-	-	-	-	6
-----	-------------------	---	---	---	---	---	---	---	---	---

### CHAPTER THREE

3.1	Research Methodology	-	-	-	-	-	-	-	-	7
3.2	Participants	-	-	-	-	-	-	-	-	8
3.3	Data Collection	-	-	-	-	-	-	-	-	9
3.4	Data Analysis	-	-	-	-	-	-	-	-	9
3.5	Limitations of the study	-	-	-	-	-	-	-	-	10

### CHAPTER FOUR

4.1	The finds and Discussion	-	-	-	-	-	-	-	-	11
-----	--------------------------	---	---	---	---	---	---	---	---	----

4.2	Organizational Structure and Informational flow diagram	-	12
4.3	Stock In take	- - - - -	13
4.4	Payroll	- - - - -	15
4.5.1	Proposed System	- - - - -	16
4.5.2	Differences between manual and automated system	- -	21

**CHAPTER FIVE**

5.1	Summary and Conclusion and Recommendation	- - -	22
5.2	Recommendations	- - -	22
	Reference	- - - - -	23

BAYELSA STATE POLYTECHNIC, ALEBIRI

## CHAPTER ONE

### 1.1 BACKGROUND OF STUDY

Considering the revolution of computers recent reviews have suggested that there will soon be a revolution in the office as computer technology is brought to increase the productivity of our white collar business labour force. The issues of manual operating businesses and offices cannot be overemphasized in terms of records, bookkeeping, stocks intakes, as large volume of files and task are being handled manually resulting in poor performance in terms of accuracy. The increase of business shows the need of proper records and storage medium of information(Olufemi, Adele,Aladejebi 2004).

According to (Agbemaila, Ahiase,sedzro and Nyarko2016) majority of small medium Enterprises(SMEs) do not keep proper records otherwise referred to as incomplete records. Business owners have failed to recognize the importance of a well structured Automated system that will enable them keep proper records and storage of information and work-flow.

Record keeping is vital and good information flow is vital to business management (Ademola,Samuel and ifedolapo 2012). The importance of availability of accurate flow of information, financial informations,stock intake, Payroll methods, to owners and managers for measuring business performance cannot be overemphasized( Amoako, Marfo, Gyabaah and Gyamfi 2014). Business and office automation is nothing more than giving people(workers) better tools than typewriters, telephones, Pen and paper, notebooks or calculators with which to do their work more effectively (Dennis Tschritzis 2015). Business automation helps to reduce the stress and inaccuracy of records that is using machine, computerized devices and programs which perform office tasks automatically.

The introduction of computerized programs like; timesharing, database distributed data processing in a business enterprise like our case study will help reduce its labor force. The widespread use of word-processing and the introduction of electronic mail systems are cited evidence of the on coming revolution of office automation (michealDzism 2018). The study covers the automation of staff management, good record managements of stocks, financial and payroll information management for the keniye conglomerate.

## **1.2 STATEMENT OF PROBLEM**

In a business enterprise like our case study the importance of business automation cannot be overemphasized considering the large intakes of stock, money transactions, staff management which includes payment methods and branch management to ensure proper flow of information and record keeping.

Drawing from the fact that most business enterprises owners and managers pay little or no attentions to the efficiency of work flow focusing more rather on making and selling their products than developing a proper working record system and the importance of business automation(Kengere2010).

In light of the above the major problem associated with a maual operating system in terms of business like our case study is proper flow of information, records and payroll and accountability system.

## **1.3 OBJECTIVE S OF STUDY**

The major objective of this study is to examine the impact of automated business over manual operating businesses the specific objectives are;

- a) To examine the limitation of manual businesses
- b) To ascertain the proper flow of information from head office to branch offices
- c) To establish a proper record keeping of all business transactions
- d) To ascertain a proper staff detailed record

#### **1.4 RESEARCH QUESTIONS**

The research questions are stated below;

- a) What are the limitations of manual operating business(SMEs)?
- b) What is the rate of information flow from offices?
- c) How are company records and transactions kept
- d) How are staff details record kept?

#### **1.5 STATEMENT OF HYPOTHESIS**

The following are formulated in both null and alternative forms for the purpose of the study;

H<sub>0</sub>: there's no limitation in manual operating businesses

H<sub>1</sub>: there's limitation in manual operating businesses

H<sub>0</sub>: there's proper flow of information between offices

H<sub>1</sub>: there's no proper flow of information between offices

H<sub>0</sub>: there's proper company transaction kept

H<sub>1</sub> there's no proper company transactions kept

H<sub>0</sub>: staff details are properly kept

H<sub>1</sub>: staff details are not properly kept

## **1.6 SIGNIFICANCE OF STUDY**

The significance of this study covers a large range of business enterprises considering the rise of small medium enterprises. This study serves as a guide for intending and business owners to know the importance and efficiency of proper information flow, stock, financial transactions within an organization.

Furthermore the present business world revolves around computers. The implementation of computers is essential for Small Scale businesses.

According to Ravi Teja(2019), with artificial intelligent(AI) automation advancement, businesses, organizations and companies are increasing their focus on applying technology to increase efficiency and effectiveness in different processes. This study covers the importance of computer automation for business enterprises.

## **1.7 SCOPE OF STUDY**

There is always room for improvement, and the software used to achieve this purpose can always be upgrade considering the revolving of artificial intelligent.

## **1.8 DEFINITION OF TERMS**

- **MANUAL SYSTEM:**A manual system is a system where labour and work force are carried manually by hands by the staff of then organozation.

- **AUTOMATION:**An automated system is simply nothing, more than giving people (Staff) better tools to work with other than typewriters, phones and calculators (Dennis2012)

## **CHAPTER TWO**

### **LITERATURE REVIEW**

Making of profit is then major aim of every business enterprise and as such the right application of office resources can be used to achieve that goal or objective. In agreement to the statement made by (Dennis Tsichrizis 2012) business and office automation is nothing more than giving people(workers) better tools to work with other than typewriters and calculators.

Complementing highly flexible, competitive and globalized business environment, automating business processes and system can be a route to successful business operations( Suhat, Teena, Bayga 2015) due to the rise of intelligent technologies and smart computing systems, business enterprise are customizing their operations and processes to align them with trending technological innovations. With the implementation of computer automation in SMEs managers and business enterprises owners can now keep records of stock intake and financial transactions. The success of every business is tied to its working environments, resources. Which is supported by John Grey(2016) when contending that the success of a business is a general factor of its environment, staff strength and working tools.

Reviews have proven that with the introduction of computers into work places, will bring forth increase in efficiency and stability of the business and it environments (International Journal Papers 2016).

The success of a business undoubtedly depends on the type of management system the business enterprise has which is in agreement with Fayol principles of management (2014). The function of a manager includes;

- Planning
- Organizing
- Co-ordinating and
- Controlling

Researchers have agreed tirelessly on the link between good automated system and good business performance for many years. The conclusion reached made some authors to believe that no Enterprise(SMEs) can be greater than their management and facility put in place and that a business is good as its management(Yusuf,2012;DFEE1991).

Competition in the 21<sup>st</sup> century global economy will be complex challenging and filled with competitive opportunities and threat. Effective management practices can help firms, businesses enhance performance while competing in the turbulent and unpredictable environments (R.Duane Ireland, Michael. A 2014)'

Increasing customers relationship management (CRM) is being viewed as a strategic, process-oriented, cross-functional value creating for buyers and sellers a means of achieving financial performance (Douglas M. Lambert 2010). The importance of customers to any enterprise cannot be over emphasized since there play a major role in buying of stocks which in turn brings in profit for the organization. A satisfied customer is a potential customer (Promise A.2022) customers are asset to other customers when treated right(Thayne Forbhes 2007). According to Christopher W. Hart in (Marketing Management vol.18 1999) he stated that, Customers are your business.

The importance of business and customers relationship/satisfaction cannot be overemphasized which is agreed by (Drukens 1954) it is the customer who determine what a business is. In fact, they are arguably the most important for without customers a business would not exit.

## **CHAPTER THREE**

### **3.1 Research Methodology**

The study used quantitative (positivist) approach and employed the natural-science inquiry paradigm. The paradigm portrays that there is a reality out there which is tangible, stable and apprehensible; and can be investigated independent of the researcher by observing, experimenting on a large number of participants resulting in the finding that can be analyzed statistically and pruned for the purpose of generalization (Cohen, Manion & Morris 2007). This ideology corroborates the idea that human beings inhabit a relatively stable, uniform, and coherent world that can be measured, understood and generalized (Gay & Airasian, 2000). This suggests that in order to understand the reasons for the declining business performance, the existing information can be sourced not only basing on the feelings and opinions of the researched; but as well as using other methods such as observation, measurement and numeric data. It advocates for the researcher to be detached from the respondents and as such the researchers tried their level best to distance themselves to avoid any form of bias creeping in.

### **3.2 Participants**

The major participants are the staff of Keniye Conglomerate coupled with other SMEs within the state (Bayelsa State) for better analysis.

As regard the sample size, it was difficult to determine the actual number of the respondents. One of the authors observes that “the most perplexing question to both novice and experienced researchers is the question of sample size” (Anderson, 1997, p.199). On the other hand Cohen, Minion& Morris (2007) assert that the sample size is determined by the intended research design. As a result, we followed.

Anderson (1997) philosophy which delineates clear recommendations and conclusions that a suitable sample size should be one with thirty and above respondents. Other reasons for this sample size were for purposes of generalization and to increase validity. The study was conducted among One hundred participants (100) made up of twenty five(25) CEOs, seventeen (17) Managers, Ten (10) Deputy Managers, Fifteen (15) Heads of Department, Twelve (12) Senior staff and Eighteen (18) Managers from Opolo, Swali, Agudama and Akenfa respectively. Of the One hundred (100) participants, forty five (45) were females and fifty five (55) males. The respondents’ age ranged between sixteen (16) years and forty-five (45) and above years. Staffs and business owners both experience and non-experience were asked to state their limitations using the manual system. In the study, stratified sampling was used to select manageable groups of respondents. This type of sampling requires each stratum to be represented in the research because other senior posts have a low incidence relative to managers and customers. From each SMEs which took part the researcher had to identify relevant strata and their actual representation in the population. Then random sampling was used to select participants from each stratum. The positivist paradigm prefers stratified sampling because it ensures sample representativeness, irrespective of the sample size. Therefore, the above respondents were chosen because they have an impact on business Automation Implementations.

## **DATA COLLECTION**

### **3.3 Techniques**

The study used critical friends and the researcher's experience to design the questionnaire. The researchers developed the questionnaire. The questions were piloted using CEOs, Managers, heads of departments, and customers. Piloting was tried out for purposes of improving the questions' ability to do the job for which they are intended. Some authors believe that all data-gathering instruments should be piloted to test how long it takes recipients to complete them, to check that all questions and instructions are clear and to enable researchers to remove any items which do not yield usable data (Bell, 1996; Cohen, Minion & Morris, 2007). After the corrections were made the interview questions were ready to be used in the main research. Data were collected using quantitative methods which included questionnaires. For the other branches of our study and States, due to its location, the questionnaire was posted through the manager after having telephoned them and explained the purpose of the study. The questions were both open-ended and closed-ended (the liker scale type). The questionnaire was favored because it tends to be more reliable than an interview as it has the ability to avoid face to face interaction, thus reducing bias (Cohen, Minion & Morris, 2007) and less costly in terms of money and time.

### **3.4 Data Analysis**

The study used a computer package form of data analysis normally used for quantitative research. The package is formerly known as the Statistical Package for Social Science Version 15, but now appears as a modified version known as Statistical Product and Service Solution (SPSS) or IBM SPSS v. 19. Before the information was fed into the computer, certain things were taken into consideration following Monyatsi (2001) ideas. Firstly, it was decided that errors that might have

occurred during the research be noted and eliminated, secondly the completed questionnaires were counted to check if there were any missing. Thirdly, it was checked if all questions were answered. Fortunately all questions were answered. Lastly, it was checked if the respondents represented all cadres of the senior management. After having completed the above exercise the data were ready for SPSS. The liker scale analysis followed Oppenheim's (1996) methods of working with the frequencies and percentages of the levels of agreement and disagreement of the respondents. The data collected was represented in the form of frequency, tables and percentages. As for open – ended questions code frame was used to interpret the findings. Different views from respondents were closely examined. This approach made the data more meaningful and understood.

### **3.5 Limitations of the Study**

The limitations are outlined in view of the fact that the approaches used are reliable and valid; but they also have their shortcomings which were beyond the researchers' control. Due to time and financial constraints it was not possible to cover all Managers and heads of department in the field. Data collected were mainly the respondents' perceptions about Business Automation Implementations as well as their interpretation of the questions asked in the questionnaire. Being at the mercy of the respondents' good will may produce findings that favored them and affect the quality of data collected. It is the researchers' opinion that sometimes data collected based on people's opinion can be tainted by personal bias. This was taken into account during the data analysis.

## CHAPTER FOUR

### 4.1 Findings and Discussions

The findings of this study covers view of other enterprise not just the scope of our study as (Medford Williams 2005) stated in other to evaluate the findings of an enterprise it must be compared to the existing system. Considering the importance of computer to the society the right application of computer and it resources especially in the business world will be of great achievement. Majority of business start up with a manual operating system (Uche2016). Keniye Conglomerate is an enterprise that has operated its business manually for a decade now. Some of the findings and limitations encountered in this system are;

- Poor service delivery
- Miscalculations of stocks
- Poor record intake
- Inaccuracy account balancing

Below is an overview of its record pattern

CUSTOMERS NAME	GOODS	QUANTITY	AMOUNT
Foodshop	Chivita 315ml	7	36000
Success kitchen	Eva water medium	5	15000

With the widespread availability of Microcomputers, the cost of small business computer have been reduced to a point where nearly all businesses, no matter how can afford computer power for their information processing needs. Computerize system can help solve small business problems thereby improve prospect for success (William H. Delone 2016). Below is a manager's report of a manual system;

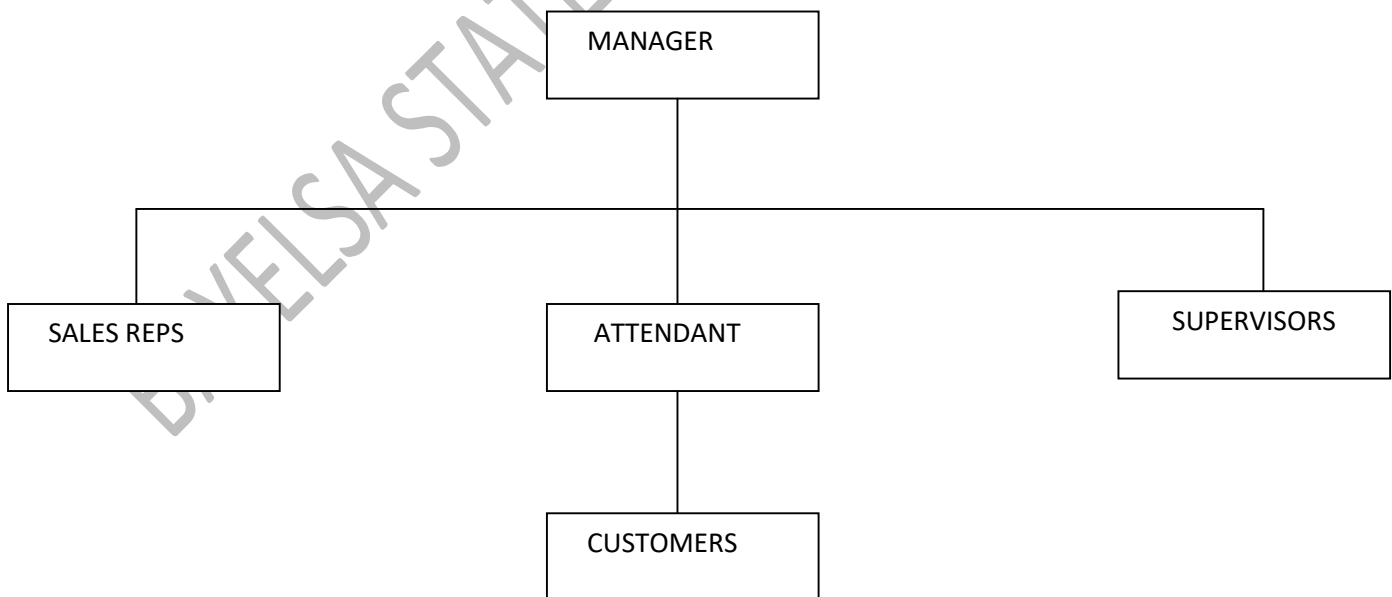
A manual system in itself is sometimes efficient in terms of record keeping but has its limitations since records are kept in notebooks which may go bad or ink faded considering it is writing down with pen and paper.

Despite this potential small businesses should approach computerization cautiously. Lack of computer knowledge on the part of the owner/manager and lack of computer experience have resulted in all too many misadventures in

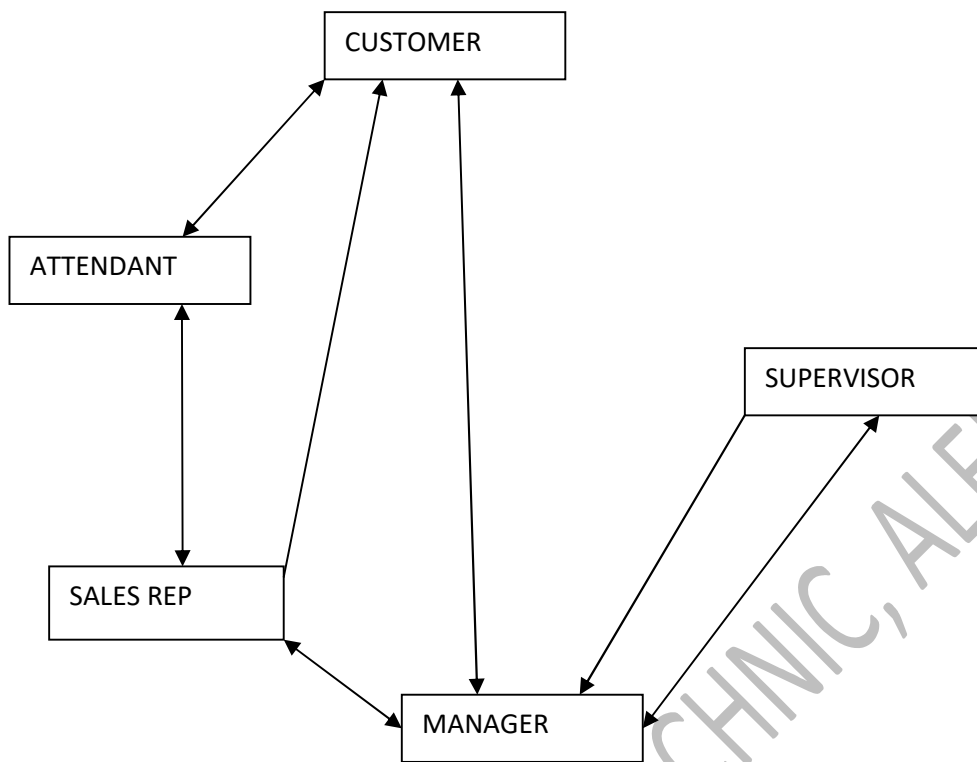
electronic data processing (Apcar1980,Schollhammer and kuriioff,1979). small businesses are finically ill-equipped to absorb such expenses.

#### 4.2 ORGANIZATIONALSTRUCTUR/INFORMATION FLOWS DIAGRAM

The in diagram shows the structural and information flow from one point to another in keniye conglomerate. Below is the information flow diagram:



ORGANZIZATIONAL STRUCTURAL DIGRAM



INFORMATION FLOW DIAGRAM

### 4.3 STOCK IN TAKE

The necessity of recording all the transactions and systematically cannot be overemphasized (C.J Mairura). Goods may be sold on credit to several persons. However, strong ones memory maybe, one cannot hope to remember all the details regarding all these transactions. Considering the volumes of goods the process of keeping proper and secured records of stocks and transactions cannot be over emphasized.

Despite this importance of accounting records most small enterprises do not maintain proper records (W. James , Kelvin, 2016).

According to several authors (kibuka, 1996;Miles1995;Maalu1990), keeping records as process has evolved over many centuries to serve the social and economic needs of the society . Below is an over view of a respondent as regards stock in take and proper records,

Records	Frequency		Total
	Male	Female	
Cash book	4(10%)	2(5%)	6(8%)
Sales book	4(10%)	4(5%)	8(10%)
Purchase book	3(8%)	-	3(4%)
Invoice	2(5%)	2(5%)	4(5%)
Receipts	28(70%)	32(80%)	60(75%)
Note books	31(78%)	32(80%)	63(79%)

#### **Respondent records of various enterprises;**

Most of the (79%) of the business owners maintain notebooks (registers) and 75% of the respondents maintained receipt book. There were very few respondents who maintained the cashbook, 8%,sales book 10% ,purchase book 4% and the invoice 5%. This shows that most businessmen do not know the importance of keeping proper records and electronic base records.

#### **4.4 PAYROLL**

Payroll is a critical operation for every organization to pay employee accurately their salary and enrollments on time. The idea of taking control of employees pay calculations are very tedious if done manually and requires effort and time mainly for big organizations.(Kritika mahajan,shilpashukla 2015). Hence if this process is automated, it would be of great benefits as it would require less time to calculate the salary of the employees.

#### **4.5.1 PROPOSED SYSTEM**

The proposed system is a web based system. The base of the proposed system is a database, which stores all the information pertinent to personnel, allowances, deductions, taxes, savings and net pay. The payroll system will stay up to date with pay checks and tax filings. This includes calculating allowances, taxes and other deductions, printing individual pay slips and deduction vouchers. The features of the system are;

- It maintains the payrolls as well as employee information.
- The system should also be easy to access,
- Accurate and consistent results can be obtained in the form of documents whenever the user needs. It should inherit all the properties of high
- Security, fast recovery, robustness, flexibility, reliability, scalability.

In an organization, there are many departments and each department has a payroll section to manage its payroll activities. Each section has to perform necessary operations like data collection and preparation, entry, updates, monitoring and reporting of data. Many of these existing practices and procedures need to be reassessed at this time of changing needs, changing demands of employees and

changing technologies. With this payroll system, payroll section would be able to keep a record of employees including their personnel data, pay slips, allowances, deductions, leave, savings and taxes etc.. Net pay of each employee is calculated by his allowances and deductions mentioned according to the company rules. The individual pay slips are printed out as a receipt if employee wants to get a print out. Pay bands, grade pay, allowances, deductions and tax information are updated if there is any amendment in salary structure. The computer based payroll application is a web-based design. The server-side of this application is partitioned in terms of logic into three-tiers or layers. Each layer performs a different function and the layer partitioning is as follows:

**1) Presentation Layer:** Presentation Layer is nothing but it is a user interface which every user see on the computer, mobile and window screen. Designing part of any application is known as Presentation Layer. The User can post input and get output on the presentation layer only. In asp.net .aspx file is known as a presentation layer. In case of web applications, the web browser (Internet Explorer, Mozilla 2 Firefox) is known as presentation layer.[6]This layer has been built using

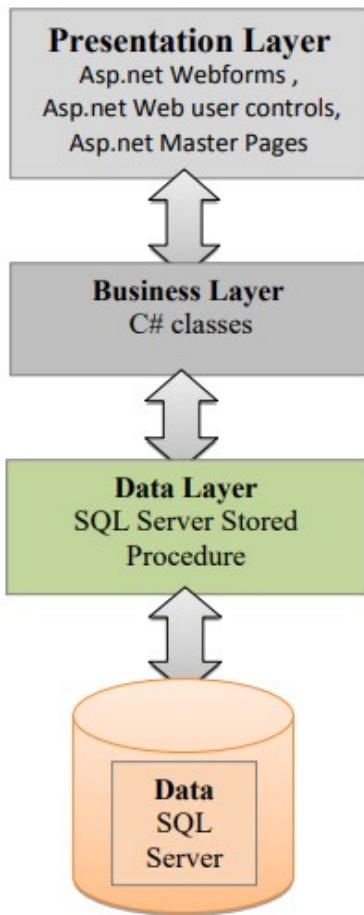
technologies like HTML, JavaScript, AJAX, JSON and CSS in this proposed system.

**2) Business Layer:** Business Access Layer acts as a mediator Layer between Presentation layer and Data Access layer. This layer is used to transfer the data between Presentation Layer and Data Access Layer. This layer is mainly used for Validations and calculations purpose. It is optional layer if working on a small project. But if working on large projects, then include this layer in 3-Tier Architecture Applications. It is used to enhance the security and prevent brokering the application. The business logic is the code running on the server that contains

processing instructions utilizing technologies such as .NET 4.5. The proposed payroll system uses .NET 4.5 in business layer to implement dynamic pages.

3) **Data Access Layer:** This Layer only communicates with Business Access Layer. Data Access Layer contains the method that helps Business Access Layer. Business layer class's methods call the Data Access Layer Class methods to perform some required action with database such as insertion, deletion, updating etc. All database related connection codes are written in this layer only such as SQL query, stored procedure etc. The data tier is containing all the user information, username, and passwords for web application.

BAYELSA STATE POLYTECHNIC, ALFBR



**3-tier architecture**

BAYELSA STATE POLYTECHNIC, ALEIBIRI

## 1. Login Page

**WELCOME TO PAYROLL**  
*Please enter your credentials*

Company ID:  
testingcompany1

Employee ID:  
testingid2

Password:  
\*\*\*\*\*

Sign Me In

Fig 2: Login page

## 2. Dashboard



Fig 3: Dashboard

## 3. Profile

**PAYROLL** Welcome testing testing

Employee

- Dashboard
- Profile
- Attendance
- Salary
- Calen
- Tax

Manager

- Dashboard
- Leave Request
- Project
- Department

Human Resource

- Dashboard
- Asst
- Requisitionment
- Department

Employee Details

testing  
developer  
testing@test.com

PERSONAL DETAILS

ACCOUNT: [input] CITY: [input] STATE: [input] PIN: [input] PHONE: [input] MOBILE: [input]

ADMINISTRATIVE: [input] EMPLOYER/EMPLOYEE: [input] BLACK BOARD: [input] MONTHLY SALARY: [input]

OFFICIAL DETAILS

EMPLOYER: [input] EMPLOYEE: [input] ACCOUNT NUMBER: [input] PFC CODE: [input] BRANCH NAME: [input]

Fig 4: Profile

## 4. Attendance

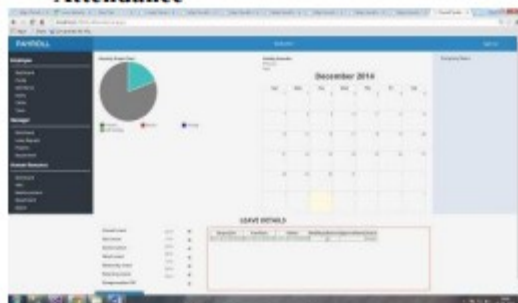
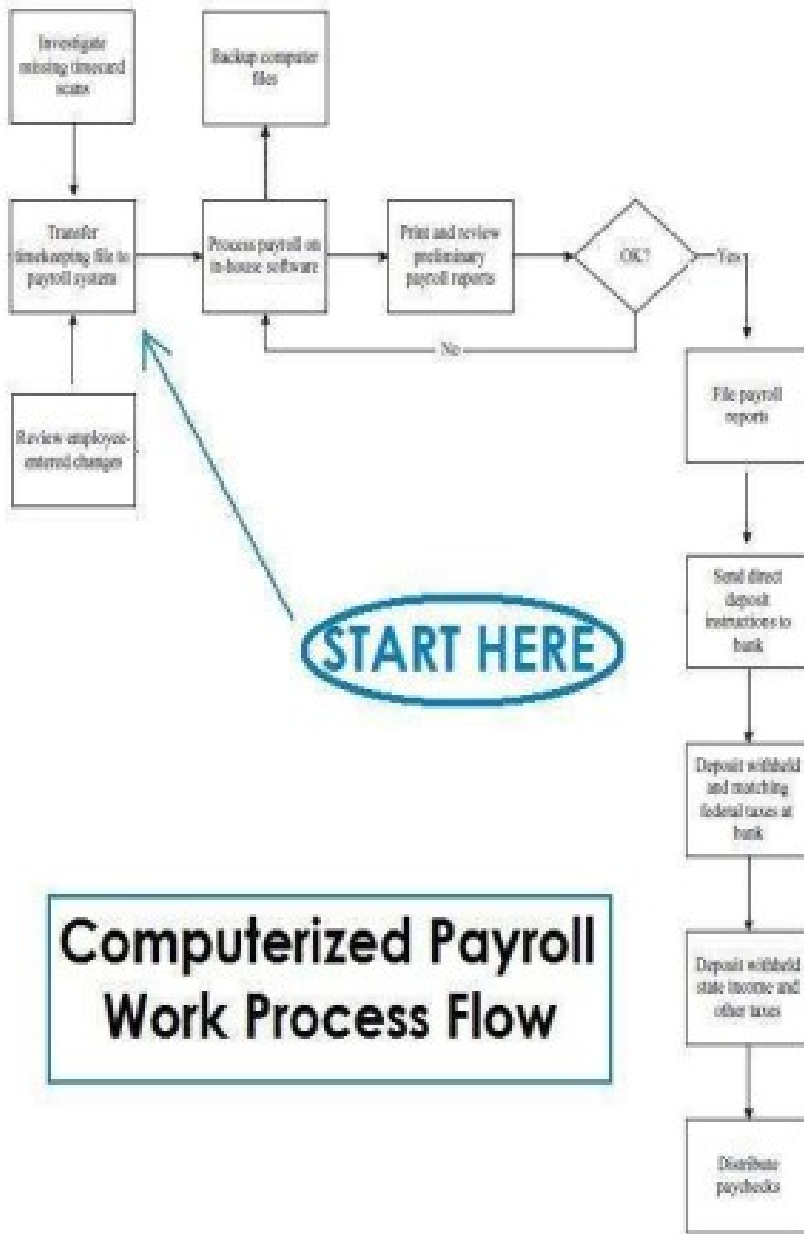


Fig 5: Attendance



**Computerized Payroll  
Work Process Flow**

BAYELSA

ALEIBIRI

#### 4.5.2 DIFFERENCE BETWEEN A COMPUTERIZED PAYROLL SYSTEM AND MANUAL SYSTEM

<b>Features</b>	<b>Manual payroll</b>	<b>Computerized payroll</b>
<b>Meaning</b>	Manual payroll means that you, or another employee within your company, calculate the payroll each pay period entirely on paper	Computerized system enables you to store unlimited data while managing the data as well.
<b>Speed</b>	Accounting software processes data and creates reports slower than the computerized system	Accounting software processes data and creates reports much faster than manual systems.
<b>Errors</b>	Maximum errors as manual calculations are done	Minimum errors as automatic or computerized calculations are done
<b>Cost</b>	Manual accounting with paper and pencil is much cheaper than a computerized system, which requires a machine and software.	Expenses associated with accounting software include training and program maintenance. Expenses can add up fast with costs for printers, paper, ink and other supplies.
<b>Productivity</b>	Productivity is usually lower, particularly in routine or operational situations such as	Productivity is higher than manual payroll as employees get their salary early as calculations are

	transaction processing.	done on regular basis
--	-------------------------	-----------------------

## CHAPTER FIVE

### 5.1 SUMMARY CONCLUSION AND RECOMMENDATION

Considering the revolution of computers, recent reviews have suggested that there will soon be a revolution in the office as computer technology is brought to bare, the increase in the productivity of businesses and enterprises.

In conclusion an automated system in a business enterprise as that of our case study will be efficient for the growth of the business as (Amoako, marfo, gyabaah, gyamfngi 2014) has stated,

The importance of availability of accurate financial information, stock intake and records to owners and managers for measuring of performance of businesses cannot be over emphasized therefore, an automated system serves as a means of achieving that goal in SMEs

### 5.2 RECOMMENDATION

From the research findings, it is clear that majority of the informants were dissatisfied with the manual system. Majority respondents strongly feel that lack of resources, poor working conditions, calculations errors, time consumption which had a greater extent contributed to companies' productivity. The implementation of computers to office will help fill in that gap. Considering the constraint of this

study which include; time and money, research can be further developed to improve office performance

### 5.3 REFERENCES

1. Computer Based Payroll System Implementation For E-Governance at Punjab Agricultural University, Poonamdeep Kaur, Dr. Dinesh Grover,CSE Deptt., Guru Nanak Dev Engg. College, Ludhiana,International Journal of Engineering Research and Development-ISSN: 2278-067X, p-ISSN : 2278-800X, www.ijerd.com Volume 5, Issue 3 (December 2012), PP. 55-60
2. Payroll Management System as SaaS, Dhanamma Jagli, Ramesh Solanki, Parth Chandarana, Proceedings of National Conference on New Horizons in IT - NCNHIT 2013,Pg.90
3. A Project Report on “Payroll Management System”, Bangladesh Open University,School of science and technology, Rafiqul Alam Khan, Md. Jahirul Kader, Institute of Science &Technology,Pg. 4-6
4. Kibuka, G .(1996). Going into business. Nairobi: Project finance data centre and cons. Kuehl, C.R & P. A. Lambing (1990). Small Business Planning and Management. USA, The Dryden Press.
5. Baker, L. M. (2011). The relationships between leadership practice and business

6. motivation, capacity, and work setting as related to change in literacy instruction. Retrieved 27March, 2013 from:<http://udini.proquest.com/view/the-relationships-between-pqid:2550133691>.

BAYELSA STATE POLYTECHNIC, ALEIBIRI

## APPENDIX 1

Department of Computer Science  
Faculty of Sciences  
Bayelsa State Polytechnic Aleibiri.  
Date 20/12/2022.

Dear Respondent,

I am a final year student of the above polytechnic, current undertaking a research on “Importance of computer automation for small and medium enterprises (SMEs)”

This is in partial fulfillment of the requirement for the award of a National Diploma in the faculty of sciences.

Therefore, solicit your response to the following questions asked below. I promised to treat your answers confidentially possible. Please, in each section I expect you to tick in the box provided where necessary.

Thank you in anticipation for your corporation.

Yours faithfully,

.....  
**PROMISE AMAKIRI**

.....  
**BISHOP EDIRIN EMMANUELLA**

## APPENDIX 2

### (Bio Data of Respondent)

#### QUESTIONNAIRE FOR IMPORTANCE OF COMPUTER AUTOMATION FOR SMALL AND MEDIUM ENTERPRISES (SMEs).

Please kindly respond by ticking (√) on the option that the best suit your opinion and comment briefly and appropriate where you are ask to comment on.

##### Personal Data

(a) Sex      Male  Female

(b) Age

- i. 13 – 14
- ii. 15 – 16
- iii. 18 – 19
- iv. 20 – above

(c) Occupation

- i. Civil servant
  - ii. Student
  - iii. Applicant (unemployed)
  - iv. Retiree
  - v. Others
- 

##### Research Questions

1. Do a computer Automation have an impact on Business Enterprises?

- a. Yes
- b. No

2. Is there any significant relationship existing between computer usage and business' performance?

a. Yes

b. No

3. Does computer Automation have an impact on business productivity?

a. Yes

b. No

4. Does the implementation of computers affect management and staff work flow?

a. Yes

b. No

5. Is there reduction in productivity with computers in the office?

a. Yes

b. No

6. Does computer implementation affect staff and customer relationship?

a. Yes

b. No

BAYELSA STATE POLYTECHNIC, HILBIRI