

**DESIGN AND IMPEMETATION OF A LEGAL CASE MANAGEMENT
INFORMATION SYSTEM**

ase study: **ODOKOL AND COMPANY ADVOCATES**

BY

AYOYI SALI AMBROSE

REGNO BIT-12890-61-DU

AND

KATO EMMANUEL


REGNO BIT-12044-61-DU

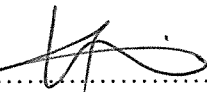
**A research project submitted in partial fulfillment of the Requirements for the
Award of a Degree of Bachelor in Information Technology of Kampala
international university**

YEAR MAY 2009

DECLARATION

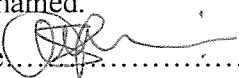
I **AYOYI SALI AMBROSE** and **KATO EMMANUEL** hereby declare that the work contained in this report paper is our original work and has not been submitted or published for an award of a Degree from any university or any other higher institutions of learning with the exception of where work attributed to other scholars has been referenced and all there work has been acknowledged.

Signature..........Date 21st/04/09.....

Signature..........Date 21st/08/09.....

APPROVAL

This report has been submitted for examination with my approval as the supervisor of the students named.

Signature  Date 21/08/09

MR. Ssempebwa Ronald
(Supervisor)

DEDICATION

We dedicate this research study to our dear parents who recognized the value of our education since we started the journey of our academic carrier. They sacrificed every thing for us while fore going the good pleasures of the world it is only unfortunate that some of them did not live to see our success. Thanks a lot and may the almighty God bless you and add you more days. This research is also dedicated to brothers and sisters for the prayers and moral support during the struggle we say may God bless you all.

ACKNOWLEDGEMENT

The success of this report is attributed to a number of individuals all of whom we are unable to acknowledge at this particular moment but do humbly request you to receive our thanks for your contribution to the success of our work. But above all the greatest acknowledgment goes to the almighty God.

Special thanks also go to our supervisor and lecturer Mr.Sempebwa Ronald for the time he took off his busy schedule to make this work a success. You will be remembered forever for your good work may the almighty God bless you.

I would like to give special thanks to my family members, first of all to my beloved father Mr.Ngirie Samuel Yekko and mum Mrs. Ngirie Josyline for the unconditional support and sacrifice they made to us as their dear children, you are truly the best parents in the world. I also convey my happiness and thanks to my other siblings (Siwa, Christine, Scovia, Annet, Lillian, Elijah, Flavia and to my late sister Benna) for all the encouragement and inspiration you always gave me. I really say I am very proud of you and also wish you the best in life.

Special thanks to my mother Ms.Kabahenda Alice for the unending support you gave to me despite being a single parent may the Almighty God bless you by adding you more days. Special thanks also go to my dear brothers and sisters especially Lucy, Agnes, Ester, Waswa, and James for the very good advice that you always gave me.

It would be unfair for us not to mention our classmates and friends whom we always shared very good moments including class work like discussions and projects you were the best class mates I have ever met thanks very much for all the great moments we shared together and the wonderful friendship that we shared we wish you the best that life has got to offer you bye and we hope we shall meet again.

Finally I would like to also thank a few other people who were very instrumental in all my struggles first to my uncle Joseph Kweyey whose advice is immeasurable, secondly to my dear aunt Irene Akena and the husband for all the support they gave to me and finally to my paternal Grand mother

May God bless all of you!

TABLE OF CONTENTS

CHAPTER ONE

Introduction and background

1.1 Introduction.....	1
1.2 Background of the study.....	1
1.3 Problem statement.....	2
1.4 Objectives.....	3
1.4.1 Main objective.....	3
1.4.2 Specific objectives.....	3
1.5 Research questions.....	4
1.6 Scope.....	4
1.7 Significance of the study.....	4

CHAPTER TWO

Literature review

2.1 Introduction.....	6
2.2 Information technology.....	6
2.3 Information and communication technology.....	8
2.4 Management information systems.....	10
2.5 Management information systems in Uganda.....	11
2.6 Roles of management information systems.....	11
2.7 Objectives of management information systems.....	12
2.8 Related systems.....	13
2.8.1 Law firm survey.....	13
2.8. Law firms and technology.....	14

CHAPTER THREE (METHODOLOGY)

3.1 Introduction.....	16
3.2 System study.....	16
3.3 Study population.....	17

3.4 Data collection methods.....	17
3.4.1 Interviews.....	18
3.4.2 Questionnaire.....	18
3.4.3 Observation.....	19
3.5 Design techniques and tools.....	20

CHAPTER FOUR

SYSTEMS ANALYSIS AND DESIGN

4.1 Introduction.....	21
4.2 Current system.....	21
4.3 New system.....	22
4.3.1 Over view of the new system.....	22
4.4 System functions.....	23
4.4.1 User requirements.....	23
4.4.2 Functional requirements.....	23
4.4.3 Non functional requirements.....	24
4.4.4 System attributes.....	24
4.5 System specification.....	24
4.5.1 Software specification.....	25
4.5.2 Hardware specification.....	25
4.6 Process flow chart.....	27
4.7 Conceptual design.....	28
4.8 Entities within the system.....	29
4.9 Entity relationship modeling.....	30
4.10 Entity relationship diagram.....	31
4.11 Context diagram.....	32
4.12 Design.....	33
4.12.1 Logical design.....	33
4.12.2 Physical design.....	34
4.12.3 Tables.....	34
4.13 Conclusion.....	35

CHAPTER FIVE

SYSTEM IMPLIMENTATION AND OPERATATION

5.1 Introduction.....	36
5.2 Server configuration.....	36
5.3 Coding the system.....	37
5.4 Creating the web application.....	38
5.5 Sample interfaces.....	38
5.5.1 Security requirements/ interface.....	38
5.5.2 Form design.....	40
5.5.3 Query/ Report design.....	46
5.6 System evaluation and user training.....	50
5.6.1 System testing.....	50
5.7 Debugging corrections.....	51
5.8 User and technical documentation.....	51
5.9 System maintainace.....	51

CHAPTER SIX

RECOMMENDATIONS AND CONCLUSIONS

6.1 Introduction.....	53
6.2 Conclusion.....	53
6.3 Recommendations.....	54
6.4 Areas of future study.....	55
6.5 Limitations of the study.....	55
APPENDIX.....	56
References.....	59

LIST OF FIGURES

FIG 3.1 Showing the process of system development

Fig 4.1 Showing the flow of information

Fig 4.2 Showing the conceptual design

Fig 4.3 Showing the entities within the system

Fig 4.4 Showing the relationships between the entities

Fig 4.5 Showing the entity relationship

Fig 4.6 Showing the logical design of the system

Fig 4.7 Showing the process of physical design

Fig 5.1 Showing the login form

Fig 5.2 Showing failed login

Fig 5.3 Showing the home page

Fig 5.4 Showing a form for management

Fig 5.5 Form for inserting new users

Fig 5.6 Showing the details of lawyers

Fig 5.7 Showing the form for registration

Fig 5.8 Showing the lawyer case contribution

Fig 5.9 Showing the witness input form

Fig 5.10 Showing the monthly reports

Fig 5.11 Showing the weekly reports

LIST OF TABLES

→ Centre

Table 5.1 showing a report on registration

Table 5.2 showing the contributions of different layers

Table 5.3 showing a list of witnesses to different cases

LIST OF ACRONYMS

IT-Information technology

ICT-Information and communication technology

MIS-Management information systems

UNDP-United nation's development programme

DFD-Data flow diagram

UML-Unified modeling languages

ORM-Object role modeling languages

ABSTRACT

The use of ICT offers great opportunities for improving the effectiveness and efficiency of the cases and dissemination of information by the judiciary sector. New information and communication technologies can make tremendous contribution to the improvement of the handling and management of information. This has led to a number of studies to assess the benefits, challenges and possible solutions associated with the adoption of information and communication technologies (ICT).

Unfortunately, few studies have been focused on the use of information and communication technology in areas related to law for whom the adoption rate is far slower than other institutions like the banking sector. This study assessed how the adoption of ICT in law firms can facilitate access, dissemination and enhance better storage, retrieval, update and management of information with maximum safety hence improving on the time needed to process a particular piece of information.

However the installations of ICTS comes along with its own challenges different to particular cases which must be addressed if any benefits are to be realized. Lack of clear information systems, low knowledge about computer and poor financing of the department are the major setbacks to the use of ICT. Information systems in Odokol and company advocates largely depend on paper and ink. It also depends on people to transfer information from one place to another and from one office to another. Problems like delay in the flow of information, difficulty in allocating information are a common phenomenon as a result decisions can be made basing on inadequate and inaccurate information.

This research therefore shows that an effective strategy must be in place in order to narrow the gap and increase the ability of the people to use ICT for information access and dissemination.

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction:

The strategic and operational importance of information technology in the law firms is no longer questioned. An established law practice firm and scholarly commentary suggests that corporate practice is most successful when integrated with information systems management. Information systems management focuses on any organized combination of people, hardware software, communication and data resources that collects or transforms and disseminates information in the form of voice, data, text, and images or graphics, they range from telephone, radio, computers and television to the internet.

The prospects of ICTS in Uganda are tremendous. Its utilization in development programs is increasing. The information revolution is creating new opportunities to address societal problems and implementation of policies. Technological progress now enables us to process, store, retrieve and communicate information in whatever form it may take, unconstrained by distance, time and volume (Bargeman et al 1994).

In an attempt to identify sectors that are likely to be responsive to technological change and promise high return on investment is the judiciary. The judiciary has materialized as one potential target sector to harness ICT for development. The use of information systems has helped legal organizations to know when, how and what cases are handled by the different attorneys and judges. This has helped the organization to ensure security of information and relevant data within the company and their clients.

1.2 Background of the study

Through the years, the clients have grown to trust the ability that the company offers. The company unsurpassed legal and superlative services have built a strong reputation for Odokol and company advocates and ensured continued satisfaction for her clients, that is rendering wide-range of legal advice to its disparate clients and professionally responded to their needs.

The company has currently expanded its offices both physically and in the technology department, with head office situated on the ground floor Amber House where it's easily accessible to her clients.

The firm provides a host of legal services with its major practice areas being corporate, including: commercial and criminal law. The firm has competence in corporate finance, international finance, revenue law and taxation, privatization, divestiture, investment law, international business transactions and international trade law.

The company further deals with real property law and conveyance, commercial litigation, bankruptcy and insolvency, receiverships liquidation and amalgamations. Labor and employment law, to mention but a few.

Some of the challenges faced by the company and the other law firms at large include lack of automation which is on a large scale. Though there are also a number of pending cases as well that are yet to be handled.

In case study of Odokol law firm and advocates, records of the clients and there details management is centralized that is all clients' information is handled in one office, and almost every thing is paper based. The secretary has a Manuel file for each client that contains his or her details, each clients information is captured in his or her file and labeled or tagged and stored in the secretaries office. Implying lack of a reliable, flexible, information management criterion that is trusted by most of clients in the currently demanding legal environments.

1.3 problem statement

Client's information is a very important component of a law firm. There can be no law firm without clients. Historically, as one of the reasons every institution likes keeping records of previous events. Safe and proper management of client's information is very important. In recent news paper article (new vision Oct 5th 2008) a famous court in Uganda was quoted to have misplaced records of its clients. It went further to indicate that several other records could have been lost due to poor storage or human error.

In the case study of Odokol law firm and advocates, records of the clients are handled manually that is to say paper work as indicated in the previous sections but with the ever increasing number of clients and the technical aspects of cases and consultations, its important to have the personal details of the clients updated in order to have reliable information about the client. The largely missing centralized portal system access even constraint the process further for the attorneys and support staff from working quickly and collaboratively; enhancing their job satisfaction a dream far from reach, hence delaying the timely completion of most cases. In the long run, problems associated with Paper file information management and record keeping will set in Information mishandling in most of these firms ranging from loss of files to accessibility and security problem. Conflict in update still stands out clearly as the biggest problem especially situations that demand changes on case records, this constraint means either reorganization of the whole file documentation or creation of new records which is not only time and work demanding but also unauthorized access. Therefore it's against this background that the researcher strongly felt prompted to pursue this research and contribute in finding the solution.

1.4 Objectives.

1.4.1 Main Objective

Design a records management system that will be used to solve the problem of having too many files, and act as a tool for record keeping in the law firm(s). It will also provide decision making support to the managers.

1.4.2 Specific Objectives

The specific objectives of the study at Odokel and Company Advocates are;

- To critically review existing literature on ICT used by Odokol and company advocates.
- To develop a records management system that provides decision support to improve mechanism in the company
- To establish the opportunities and challenges that ICT can offer to improve information access by Odokol and company advocates.

- To study the existing systems and suggest the way forward on the improvement of ICT use by the law firm.

1.5 Research questions

- What is the current state of ICT application in Uganda and extend of its application by Odokol and company advocates?
- What is the government policy towards ICT especially in regard with the judiciary?
- Is it possible to develop a records management system to facilitate decision making in the law firm?
- Is it possible to build a system that can ensure security of all the information?

1.6 Scope.

The study focused on how information and communication technology can further be employed in improving the access and delivery of information by law firms in Uganda. particularly, this research based on Odokol and company advocates which was founded in the year 1995. With its offices located in Bugolobi Township as the only main branch though it has other branches in central Kampala in Uganda house along Kampala road. However our research is going to only cover the main branch at Bugolobi covering all the departments which include the administrative department headed by director of the company, the accounts department, records department under the clerks, and the lawyers department that is composed of four stand in . The research is going to concentrate mainly in the current year that is to say the year this research is carried out (2009).

The study did not look in detail on areas like the maintenance of the system, physical security of the system, teaching of the staff on how to use the system and how the firm will incorporate future growth of the company into the system though the study will have a mention of this areas of the system but not in detail.

1.7 Significance of the study.

The research will provide significance and value to the various groups who are directly or indirectly affected by the system. And specifically help overcome the problems mentioned in the problem statement. The major significance includes;

- A lot of the paper work reduced since most of the activities involve a lot of typing and processing of the information that will automatically be stored in the database.
- The findings of this study analyses the benefits of ICT as an essential tool for better access of information by law firms.
- The researcher gained knowledge in research skills and in addition gain satisfaction derived from having contributed to developing a solution to some of the problems affecting the society.
- The findings of this study are helpful to future researchers as source of literature.
- The research is also a partial requirement for the award of a bachelor's degree in information technology.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction.

This chapter reviews literature related to the topic of study and covers the following: information technology in general, and IT as a strategic driver (IT, ICT and MIS) to organizational transformation and development in the judiciary sector in Uganda.

2.2 Information technology (IT)

James A O'Brien (2004) defines IT as “....a term used to over a broad spectrum of computing and communication device that capture data(input), processes and convert data, stored data and present data(output)”.

Ronald T & William Ranl (2003) defines it as “a system that is both simple and complete and electronic hardware devices and informal (word of mouth) communication chain or computer based information systems that use hardware and software net internet net and other telecommunication networks that transform data resources into an endless variety of information products. Cash, James and Dr Roberts (1994) defines IT as “an electronic mechanical device which accepts to input data, process it according to programmed logical and arithmetic roles, store and output or calculate results”.

IT is an informatics (computing science) which deals with the design, realization, evaluation, and use of all maintenance of information processing systems including hardware, software and human aspects. However they disagree on the communication of processed data since they do not tell us the final user of the data.

According to Kerry young (1999) “IT is any computer based tool that people use to work with information and support the information processing needs of an organization”. This definition is considered appropriate in this research because it is specifically “computer based”.

Augeron and Comford (1993) observe that in the recent decades there has been an increasing recognition of the significance of the information handling functions both in

individual organizations and in the judiciary as a whole. They further state that modern organizations especially big law firms devote a great deal of attention to how they set themselves about capturing, storing and processing the information that they use in their operations and inform their management decision making. In doing this they have to rely on the use of computers and telecommunication equipment.

It has been widely accepted that information and the systems that handle information are key resources of a company and be used to distinguish success from failure of an organization strategy for long term survival. Effective utilization of IT as a resource can provide a competitive advantage of handling and management of a company's records allowing them to out compete their rivals or rise the level of quality of their services to meet the client needs.

Research has also addressed the socio impact of the diffusion of the new technology based information systems (IS). Indicative studies include the pioneering work of IDA HOOS (1973) who criticized the validity, the moral basis and the consequences of the computer based information systems in the public places in the United States. Continuing research at the University of Irvine in California has monitored the changes occurring in government with the implementation of new generations of information systems Kramer (1987)

Bowden (1992) classified information available in electronic form into three main groups

- Factual
- Reference and
- Informal information source

He states that use of information technologies allows users to have information at minimum cost within a limited period. He argues that printed information sources go out of date immediately they are printed whereas electronic information is easily and regularly updated.

The advent of computers has made a wide spread image of instantaneous world access to information. This is deceptive access to information is increasingly dependent on wealth and skills feather (1994) technology has made more information more people but the same technology has made information access difficult.

Printed information is in many ways faxable, its portable, easily stored, familiar, user friendly and adaptable to many purposes. It however has two major limitations that is to say its difficult to change and difficult to search. With computers, however, updating, revision and orientation of data can be a continuous process, and the user can have virtually instantaneous access to the updated version (feather 1994) with the computerization of the information the search is controlled by the user and not by the indexer.

2.3 Information and communication technology (ICT)

Information and communication technology is the convergence of computing, telecommunication and video techniques. With computing providing the capability for processing and storing of information, telecommunication provides the means for communicating it and video providing high quality display of images.

Recent advances in electronic based ICT's are at the heart of socio and economic transformation taking place in both industrial and many developing countries. As the cost of ICT continues to fall and there capabilities increase, there applications are becoming vital in all sectors of judiciary and the society.

Developing countries like Uganda can no longer expect to base the development of there judicial systems on there comparative labor advantage. The advantage that counts know is the application of knowledge Drunker (1994). The generation and the application of

knowledge however depend upon much more on access to global information infrastructure.

The emergence and convergence of ICT remains at the center of global social economic and organizational transformation and development. the information and communication technology sector is a gamut which the judiciary and services activities, internet service provision, telecommunication equipment, media and broadcasting, libraries and documentation centers and other related information communication activities ansi (1999). These technological components which used to be counted as separate activities have converged to characterize all aspects of ICT.

The recent millennium assembly of the United Nations emphasized this in its declaration on the right to the access of information and communication. It says that “information underpins the learning, research and debate that drives a country forward and that access to information’s essential for describing and understanding the differences of the present, building visions of a better future, developing partial ways to achieve these visions and educating and inspiring those who must make the future Godlee (2000).

In summary the enormous challenges facing every nation as rise to demand for information super high way and global information infrastructure make the promulgation of overall national and judiciary sector specific information policies, including the unlimited creation of effective management and equitable distribution of national information resources to all sectors and the level of societies absolutely essential. In there absence, a state of policy chaos exist which lead to confusion, waste, abuse and misuse of not just information resources but resources of all types.

The challenges to government in general and the judiciary sector in particular therefore is the reorientation of there role, there rules, regulations and there national policies in the cyber era. these helps them to maximize the driving forces propelling them to expand to the fullest potential the positive benefits of the information technology while at the same time maximizing the negative forces that are acting as barriers to frustrate this exploitation.

2.4 Management information systems (MIS)

The ALA world encyclopedia library and the information service (1986) describe an information system as “methods of accurately storing a large number of records and rapidly retrieving any required record”.

Lincoln (1986) describes an information system as a network of people, data, methods or equipment. Lincoln conceives all the components of information systems as equal and necessary parts. The ALA world encyclopedia library and information service (1986) describes information systems as an inactive object, which is being used by the interested parties. This view does not tally with that of Lincoln. Which conceives information as an equal component with the others in the system?

The encyclopedia of library and information science (1976) defines an information system as “a collection of people, procedures and equipment designed, built, operated and maintained to let, record, process, store, retrieve and display information.

This view is synonymous with that of Lincoln because in both concepts, human resource is seen to work hand in hand with equipment and procedures as equal entities to facilitate management of information.

Unlike those concepts that view information systems just as computers, libraries, registries Spivack (1978) sees an information system as a collection of data or information records or elements of some sort and the means of acquiring, organizing and retrieving and otherwise processing them for use. Thus is not constituted of computers only but also other resources to include manpower’ structures, procedures, guidelines, documentation, events, businesses, transactions and data.

According to the encyclopedia of library and information science (1976) a management information system is defined generally as:” Any reporting technique, Manual or automated which provides the members of the organization with data used in its operations.” The encyclopedia of information service, however defines MIS as “one unit generally provider of general file processing capabilities together with user interface

methods to simplify the manipulation and analysis of the stored data. It includes simple record keeping provisions together with exceptions, reporting and output generating capabilities”.

Management information systems is geared towards the proper execution of goals and objectives of an institute or an organization through planning, organizing and coordination of functions. Cuadra(1974) also emphasizes that MIS are environments of man-machine arrangements and procedures that are directed to augmenting human capabilities in dealing with planning, operations and controls of data. Both there opinions point towards provision of accurate and timely information to managers with an aim of enabling organizations set goals.

2.5 Management information systems in Uganda

Akishole and Kayondo (1998) made a study of management information systems in the United Nations development program (UNDP) in Kampala. The study noted that UNDP receives uses and generates a lot of documented information. It also noted that through high degree of circulation of information in department offices and individuals, efficiency is reached.

2.6 Roles of information systems

Montana (200) stated that in the early days of transaction processing, they acted as “paper factories” to get employees paid, typing of data and so on. During the early days of computers, the objectives of information systems were defined by productivity measures but later during the MIS era, the forces of information systems shifted to producing reports for management.

Information systems grow in response to problems, and the information is for problem solving. An information system identifies problems, acquires helpful information and delivers the information to those who need it matching the available information with an information need.

Stressing the importance of information management, Stoner (1989) says that information has become an important and indispensable business resource. The objectives of information are to collect data, record, store and provide for its retrieval and transmission Sugura (1985).

Oloa (1989) identified the objective of an information system as provision of information refining of information and organizing the information in an easily understood format. He states that the value of information depends on four factors

- Its quality
- Timeliness
- Reliance to management ability to take action.

2.7 Objectives of management information systems

The major objectives of management information systems are

1. To provide fast and accurate information in response to specific request.
2. To provide information sources from which required information is accessed.
3. To provide form any information delivery structure which information is handled.
4. To control and monitor facilities of information systems.

A law firm can be understood as a social community specializing in speed and efficiency in the creation and transfer of legal knowledge Nahapiet and Ghoshal (1998). Many law firms represent large corporate enterprises, organizations, or entrepreneurs with a need for continuous and specialized legal services that can only be supplied by a team of . The client is a customer of the firm, rather than a particular lawyer. According to Galanter and Palay (1991), relationships with clients tend to be enduring. Such repeat clients are able to gain benefits from the continuity and economies of scale and scope enjoyed by the firm.

can be defined as knowledge workers. They are professionals who have gained knowledge through formal education (explicit) and through learning on the job (tacit).

Often, there is some variation in the quality of their education and learning. The value of professionals' education tends to hold throughout their careers. For example, in Norway are asked whether they got the good grade of "laud" (now A), even 30 years after graduation. Professionals' prestige (which is based partly on the institutions from which they obtained their education) is a valuable organizational resource because of the elite social network that provides access to valuable external resources for the firm Hitt *et al* (2001).

2.8 Related systems

2.8.1 Law firm survey

Work in law firms, and law firms belong to the legal industry. According to Becker *et al.* (2001), the legal industry will change rapidly because of three important trends. First, global companies increasingly seek out law firms that can provide consistent support at all business locations and integrated cross-border assistance for significant mergers and acquisitions as well as capital-market transactions. Second, client loyalty is decreasing as companies increasingly base purchases of legal services on a more objective assessment of their value, defined as benefits net of price. Finally, new competitors have entered the market, such as accounting firms and Internet-based legal services firms.

Montana (2000) is not convinced that law firms will change, arguing that law stands out as an anachronism in the age of knowledge management. Law is entirely man-made; there are no hidden physical principles. A person researching some question of law ought to be able quickly and easily derive an answer with certainty. According to Montana (2000), nothing is further from the truth.

Both Becker *et al.* (2001) and Mountain (2001) believe that law firms will have to change. Mountain (2001) has addressed the question why law firms ought to invest in online legal services when studies to date show that there is no correlation between law firm technology and profitability. He argues that legal Web advisors are a disruptive technology that law firm competitors, such as accounting firms, dot-coms, and corporate clients, are beginning to harness to erode law firm margins.

All authors seem to agree that the competitive strength of a law firm comes from knowledge. Knowledge is a renewable, reusable and accumulating resource of value to the firm when applied in the production of legal services. Furthermore, all authors seem to agree that knowledge management can be improved in law firms, and that information technology can be an enabler of knowledge management improvement in law firms.

A sample of 500 Australian law firms was obtained. The questionnaire was mailed to the managing director in each firm. A total of 47 questionnaires were returned and received by the researchers. A summary of the characteristics of respondents can be understood. Most respondents had a management position in the firm, and the most frequent reply was managing partner. The IT budget was 4.2 percent of the total revenue budget, and the IT staff was 1.8 percent of the total staff.

It has been argued that larger firms will be more advanced in their use of information technology than smaller firms. Survey results from Australian law firms support this by identifying the number of and the number of IT persons in the firm as determinants of knowledge management technology projects in the firms.

2.8.2 Law firms and technology.

The Law Society (the professional body supporting the legal profession in the UK) supports the Government aim of promoting e-commerce and of establishing equivalence between electronic and paper transactions Law Society (1999). However, it is clear that private practice law firms are lagging behind other professions in their use of information technology generally. Many solicitors still prefer printed reference works to electronic versions Bindman (1999). This was confirmed in a study by the University of North Umbria that examined firms with between 20 and 300 fee earners. The study found that only 75 percent had access to on-line databases compared to more than 90 percent of other players in the legal industry, such as academic institutions, court and tribunal organizations and professional societies Bindman (1999). Many preferred printed sources because they were familiar to them. Given that a law firm's business is essentially concerned with the retrieval and dissemination of information, electronic technology would seem to offer an opportunity to improve service provision. Any form of

technological advancement that enhances these key components is surely an essential part of a lawyer's toolkit. Desk-top research carried out for this paper suggests that there is still a long way to go before the greater use of IT generally, the use of the Internet and more specifically, e-commerce penetrates the whole of the legal market and before it is seen as a viable business tool. Malpas (2000) suggests that most will admit their knowledge of IT is weak but believes that most law firms are now taking new technology very seriously. Larger firms appear to be far more advanced in the integration of new technologies and working methods than smaller firms are.

CHAPTER THREE

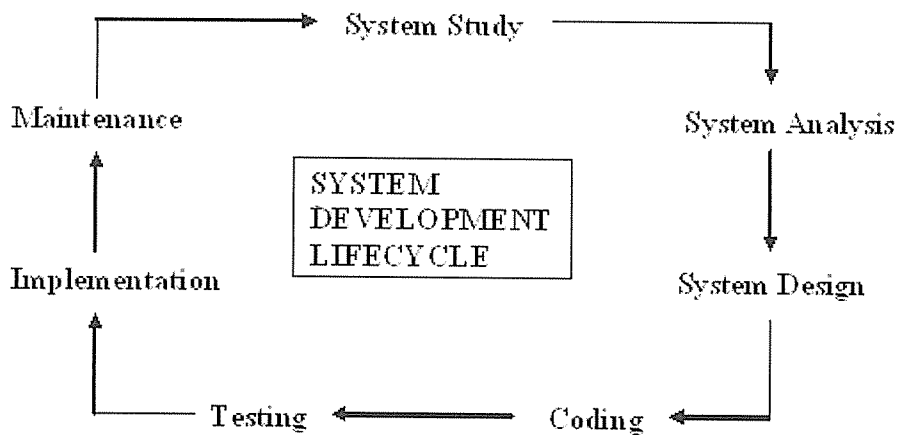
METHODOLOGY

3.1 Introduction

This chapter explains the research methods, procedures and techniques that were employed in the process of collecting the required data for the study. It specifically looks at the role at the area of study, study population, sampling strategy, sources of data, data collection methods and data analysis.

The system was developed using the waterfall model as represented below through the different stages.

Fig 3.1 showing the process of system development



3.2 System study

This was the first stage of the system development life cycle. The system study was done in two phases. In the first phase, the preliminary survey of the system was done which helps in identifying the scope of the system. The second phase of the system study was more detailed and in-depth study in which the identification of user's requirement and the limitations and problems of the present system were studied. This research/ study also involved the techniques that are employed in the process of data collection. This helped in gathering the data that was used in the actual building of the system according to the

requirements of the users. In the process, the researcher used a number of methods to gather the data among which included the following; questionnaire, observation. The research also involved a number of people who provided information by interviewing them, these included all the levels of management in the organization like the executive level managers, middle level managers, the supervisory level managers and the clerk level personnel. After studying the current system, the researcher was able to identify some of the problems affecting the current information system hence prompting working towards designing a new information system.

3.3 Study population

The collection of data using the fact finding techniques targeted senior managers who include the executive directors of the company who are responsible for strategic decisions of the company. These helped give information that concerns the top management like the objectives of the organization, the mission of the organization and the future plans of the firm. Secondly, the research also targeted the middle level managers like the clerks who are responsible for the supervision of the operational staff. Thirdly, the research also targeted the operational staff who are directly responsible for the running of the activities of the organization. This staff gave information that is used to determine requirements for the system under investigation. Finally, the research also targeted the beneficiaries of the system like the clients or the users of the system.

The research also used purposeful sampling techniques to choose respondents who are able to give reliable and accurate information that is used in the process of building the system.

3.4 Data collection methods

The research involved the use of a number of tools and instruments that are useful in the collection of the data that was used in the construction of the system. It also involved the use of a number of ways to collect the data. These are discussed in the proceeding section;

3.4.1 Interviews

There were situations when some people within the company claim to be too busy to read and answer questions on paper, so the researcher scheduled and made appointments with him/her for interviews. These interviews were face to face interaction between the researcher and the respondent.

The research involved the use of a number of interview types and techniques in order to get information at all levels. These types of interviews used include;

1. Structured interviews-The research involved the use of these type of interview in order to find the real facts on the ground because structured interviews give straight forward questions that require direct answers from the respondents. The researcher used both open ended and closed ended questions. Open ended questions allowed the respondent to reply the questions in a way that seemed to be appropriate to him or her.
2. Closed ended questions-Closed ended questions restrict the answers to a specific/short or direct responses like yes or no and if necessary may require a few lines of explanations. This type of interview was mainly used when interviewing the top level managers who are most of the time very busy to fill the questionnaires.

The interviews were used because they gave the analyst an opportunity to motivate the respondent to respond freely and openly to questions and hence the interviewer can probe for more feedback from the interviewee. However interviews can mean to be time consuming and costly and some times impractical due to the location of the respondents.

3.4.2 Questionnaire

The research involved the use of a questionnaire whereby the researcher designed a questionnaire that contains questions about the key areas of the project under investigation. He distributed the questionnaires to all the various people in the organization basing on the levels of management and the amount of information that would be needed from these various levels of management. Questionnaire approach helps the researcher gather large volumes of information and from a larger

number of respondents. The researcher mainly employed two main types of questionnaires which are discussed below;

- Free format questions- These offers the respondent greater latitude in the answer in that the questions are not structured and therefore the respondent is free to fill in the questionnaire in a way that he feels it should be.
- Fixed format questions-This type of questionnaire contained questions that require selection of predefined responses. In this case the answers are specific and direct.

The researcher chose the questionnaire approach because questionnaires can be answered quickly and provide a relatively inexpensive means for gathering information from a large number of individuals but on the other side, questionnaires have no guarantee that an individual will answer or explain all the questions and the respondents are always few. Finally there is no opportunity for the respondent to clarify a vague or incomplete answer to any question.

3.4.3 Observation

In the process of gathering facts, the researcher had to find time to the organization physically and observe what was going on within the organization. These helped the researcher to verify the facts collected using other methods and also capture some more information that would have been ignored. The researcher had to observe the activities of the organization department by department. Finally, the findings had to be recorded. The data collected through observation is highly reliable because the researcher had to see what was exactly happening and what was being done on the ground.

3.5 Design techniques and tools

The new system designed is a web-based application that is designed using Wamp server 5 (Windows Apache MySQL Server) as database and PHP connecting it to an interface developed in Macromedia Media Dream weaver.

During analysis, data was collected on the available files, decision points and transactions handled by management. Interviews and on-site observation were the tools used during system analysis. All procedures, requirements are analyzed and documented in the form of detailed data flow diagrams (DFDs) and data dictionary.

Basing on the user requirements and the detailed analysis of a new system, the system design proceeded. The design phase proceeded in two stages:

- Preliminary or general design
- Structure or detailed design

In the preliminary or general design, the features of the new system are specified. A blue print of the intended system having the same components and inter-relationship among the same components as the original problem is also specified for the detailed design stage. Input, output and processing specifications are drawn up in detail.

CHAPTER FOUR

SYSTEM ANALYSIS AND DESIGN

4.1 Introduction

This chapter focuses on preliminary design, detailed design that is to say providing a detailed description of the system design and the tools that were used in the design and implementation process. Detailed design defines requirements for input, processing, storage and output as well as system control and backup. This includes the conceptual model, logical and physical modeling of the database.

The researcher used different diagrams to represent the different components of the system and illustrate the functionality of each component. The diagrams used included the Use-case diagram, Sequence diagram, entity relationship diagrams, and context diagrams among others.

4.2 Current system

In the research conducted, the researcher used observation, interview and questionnaire approach in gathering information.

Observation. This was done mainly in the IT department and records store, which deals with company records. The researcher observed the whole process of data recording as new clients come to register and also when old clients come to check with there and also for the recording of the progress of clients cases.

Interview. The questions were prepared in advance and interview plan prepared. This is documented in appendix. The level of interview was clients and the staff of Odokol law firm advocates. The interview gathered information on how the current system was and developed a basis of how the proposed system should be. Though, some of the staff said the system was serving them better but a large number needed change.

As a result of all the analyses of the information collected by the researcher, a number of weaknesses were identified within the current system as discussed below

- Since the system is not computerized, client's information is stored in different locations. It's difficult to have all the files updated hence leading to data inconsistency.

- Delay in processing of the clients information and other related delays. This is due to large volumes of data in different locations.
- Possible lack of integrity-this is because the firm uses a Manuel system of record keeping in files and spread sheets.
- Poor data security-with the information scattered, its difficult to secure all of it. Some of the information may easily accessible by unwanted people for example incase of accidents like fire, all the information may be destroyed.
- A lot of paper work is involved which is tedious.

However despite of all the weaknesses identified in the current system, it also had a number of strengths which can not be left out. Therefore the outstanding features of the current system include the following;

- The current system has the advantage of having the records available on a hard copy for reference purpose.
- It's easier to expand and also cheap especially as concerned with registration since only what is needed is the acquisition of more files, photocopying of registration forms.
- To implement is not expensive since acquiring files and papers is not as expensive as acquiring computers, software and networking them.

However the above weaknesses can be solved by developing a computerized management information systems that will be able to capture all the client details, the employee details of the company.

4.3 New system

4.3.1 Overview of the project

In this chapter the current system has been studied and the user requirements listed. A justification for a new system has been identified. This implies that the method of choice can be used to develop a solution to the prevailing problems. In this chapter the new system is to be designed using entity relationship modeling.

Entity relationship modeling is a modeling language that is used to model information systems before coding and implementation begins. It is also at times referred to as a top-down approach in database design that begins by identifying entities and then the

attributes of the entities and finally the constraints that could be applying to these entities. The models are easy to understand by the lay man as compared to programming codes. It's therefore a good programming tool to use since the programmer can be able to easily communicate with clients hence gathering the needed user requirements easily. When the client is happy with the design, the programmer then proceeds to coding and eventual implementation.

4.4 System functions

System functions are what the system is supposed to do and the following are the functions of the system

- The system does record employee and products information. The recordings include adding, changing and deleting of data.
- The system generates reports for employee, products, branch and departments with the jobs the company offers.
- The system manages the users of the system by creating new users and deleting users, changing of passwords and usernames.

4.4.1 User requirements

- Availability of data when needed.
- Timely acquisition of data
- User friendly systems
- Error reporting
- Report production

4.4.2 Functional Requirements

The system designed is required to be able to:

- Allow input of information on , court cases, clients (accused and plaintiffs) and witnesses and be able to retrieve such information
- Allow users modify the stated information in (i) above;
- Generate a monthly report about cases handled giving their current status
- The system should enable queering of the data within the system

4.4.3 Non-Functional Requirements

The researcher identified the nonfunctional requirements of the system that were meant to help him/her to come up with a design that is able to deliver the functional capabilities

4.4.4 System attributes

These are non-functional requirements. They are constraints under which the system operates and these included;

- Response time and memory requirements. Time required for the system to access a particular component was minimal and for generating the reports was directly dependent to the number of records in the database. Memory required was 512 MB and above.
- Ease of use. The system has a help file that enables the user to read and understand the flow and operations of the system. The interfaces themselves have tool tip texts that makes users know what is needed and what the controls does.
- Operating systems platforms. Windows platform was used because of its user friendly environment. Specifically the system was developed under windows XP operating system.
- Interfaces. The impression of the screens used to design the system was cool and easy to navigate through one to the other. The colors, pictures and texts used in the interfaces matched the organizations needs.
- Fault-tolerance. The system in the event of failure, the transactions that were not committed successfully are rolled back to the original state.

4.5 System specification

The system specification states the features of the computers that will be used to run or interact with the application that is to say input, output, and processing and control specification.

4.5.1 Software specification

- 1 PHP was chosen because its easy to use as compared to other software's like ASP.
- 2 MYSQL this is used as a database management system.
- 3 Dream weaver

4.5.2 Hardware specifications

The hardware components necessary for implementing the application should be in position of being easily replaceable if need arises like improving on the processor speed

The computer that runs the database should have the following features to ensure faster processing of information like the generation of the reports;

- 1 At least 60GB of hard disk space
- 2 At least 1000MB of RAM
- 3 At least 2.4GHZ of processing power
- 4 An internet connection

The computer that the users use should have the following features

- 1 At least 40GB of hard disk space
- 2 At least 1GB of RAM
- 3 200MHZ of processing power
- 4 Standard NIC
- 5 Printer
- 6 Internet connection

Some key terms used in ORM and their related meanings are described bellow

- 1 Conceptual schema. This describes the universe of discord for the representative system. It shows the design that specifies what state and transactions are possible and the decoration of the elementary facts and constraints
- 2 Object. The object refers to the thing of interest.
- 3 Entity. An object that is described
- 4 Relationship. association between two or more objects
- 5 Constraints. these are the restrictions or obstacles

The researcher developed the product to handle daily data recordings of the company .
The operations included adding data, updating data and production of reports
The system works with pay role to deliver information like basic salary, net salary and capturing of details

4.6 Process flow chart

The process flow chart shows the flow of information and procedures when the users that is to say staff and the clients are to access or retrieve information.

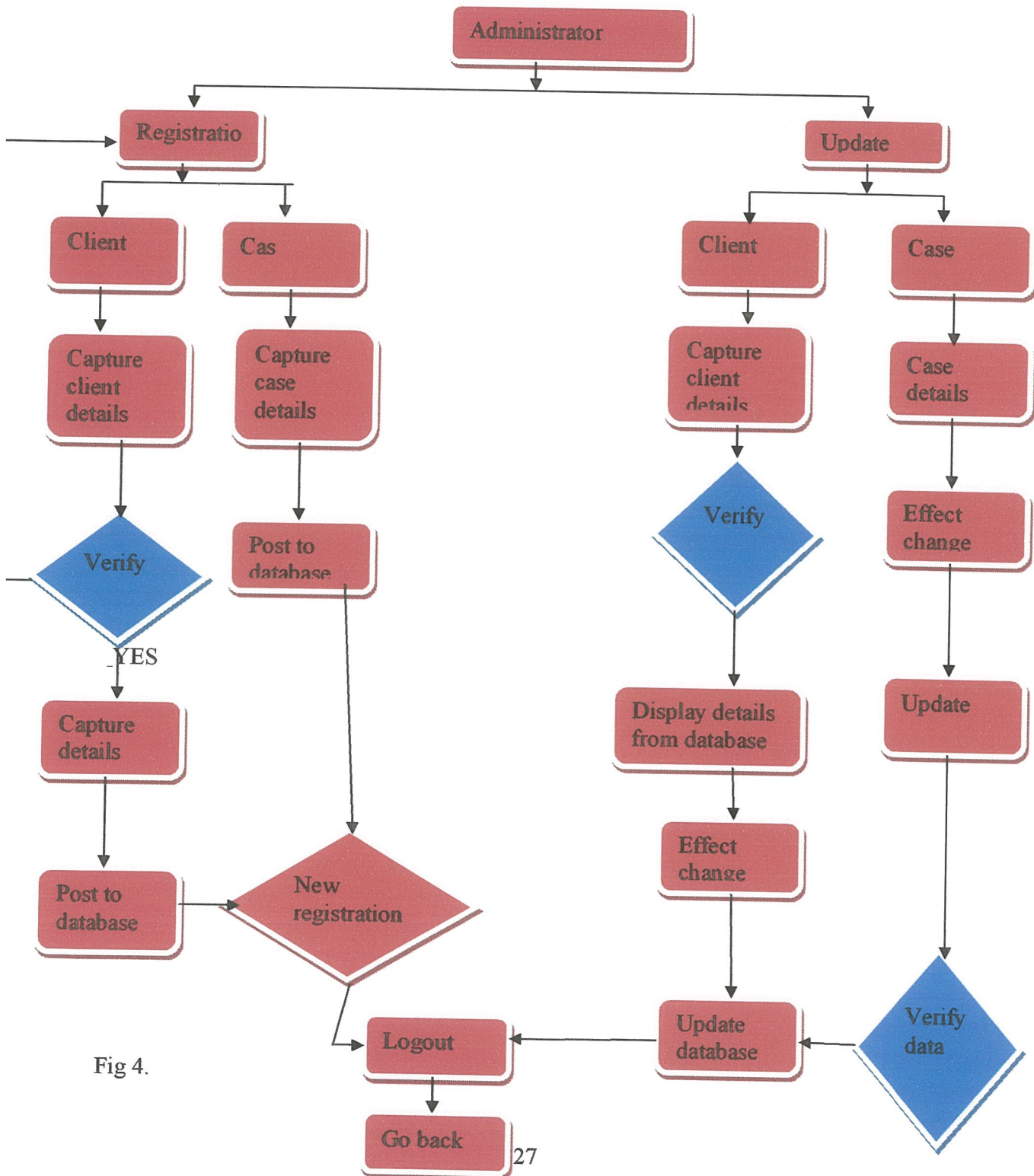


Fig 4.

4.7 Conceptual design

The figure below gives the conceptual schema of the new information system

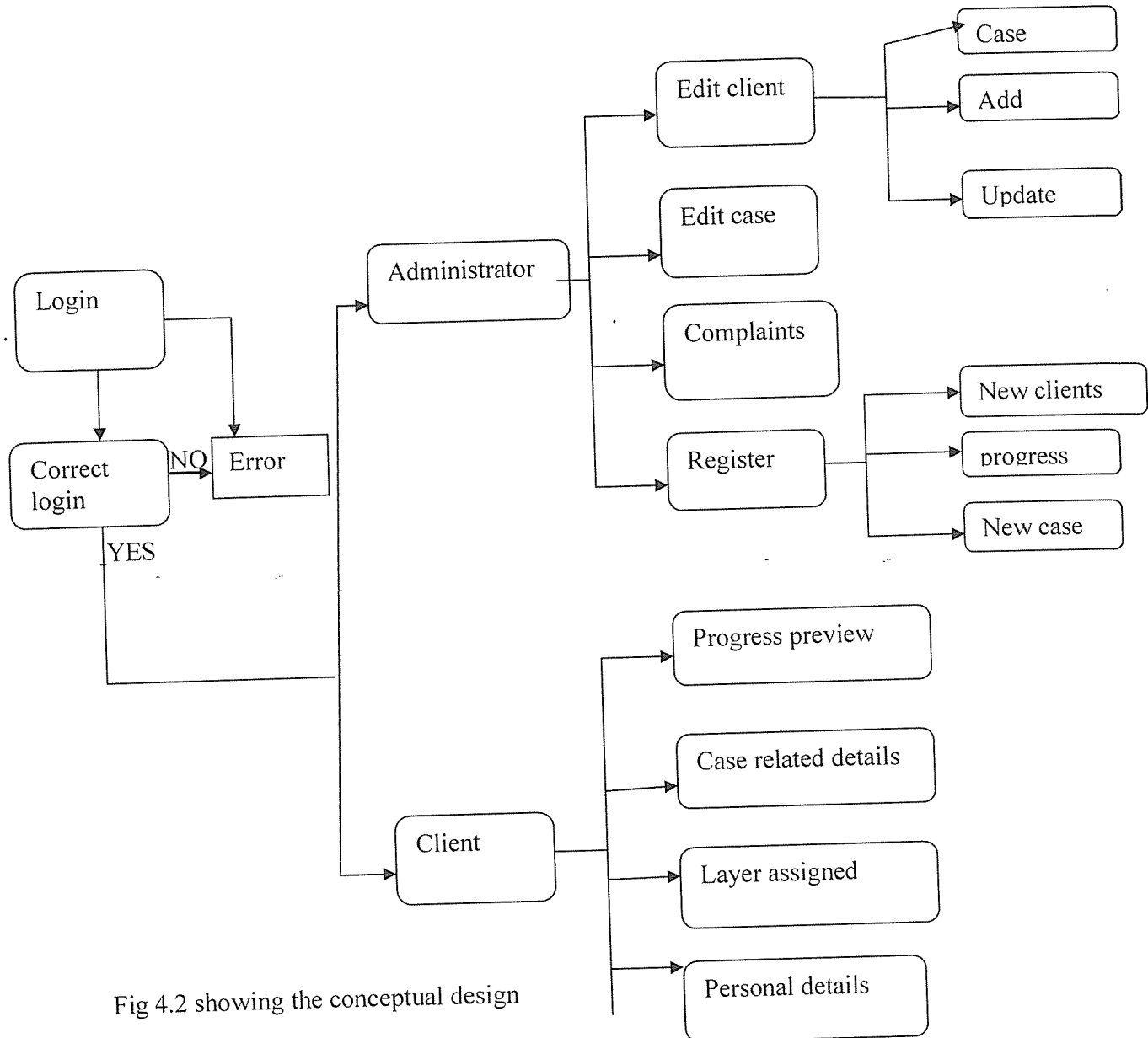


Fig 4.2 showing the conceptual design

4.8 Entities within the system

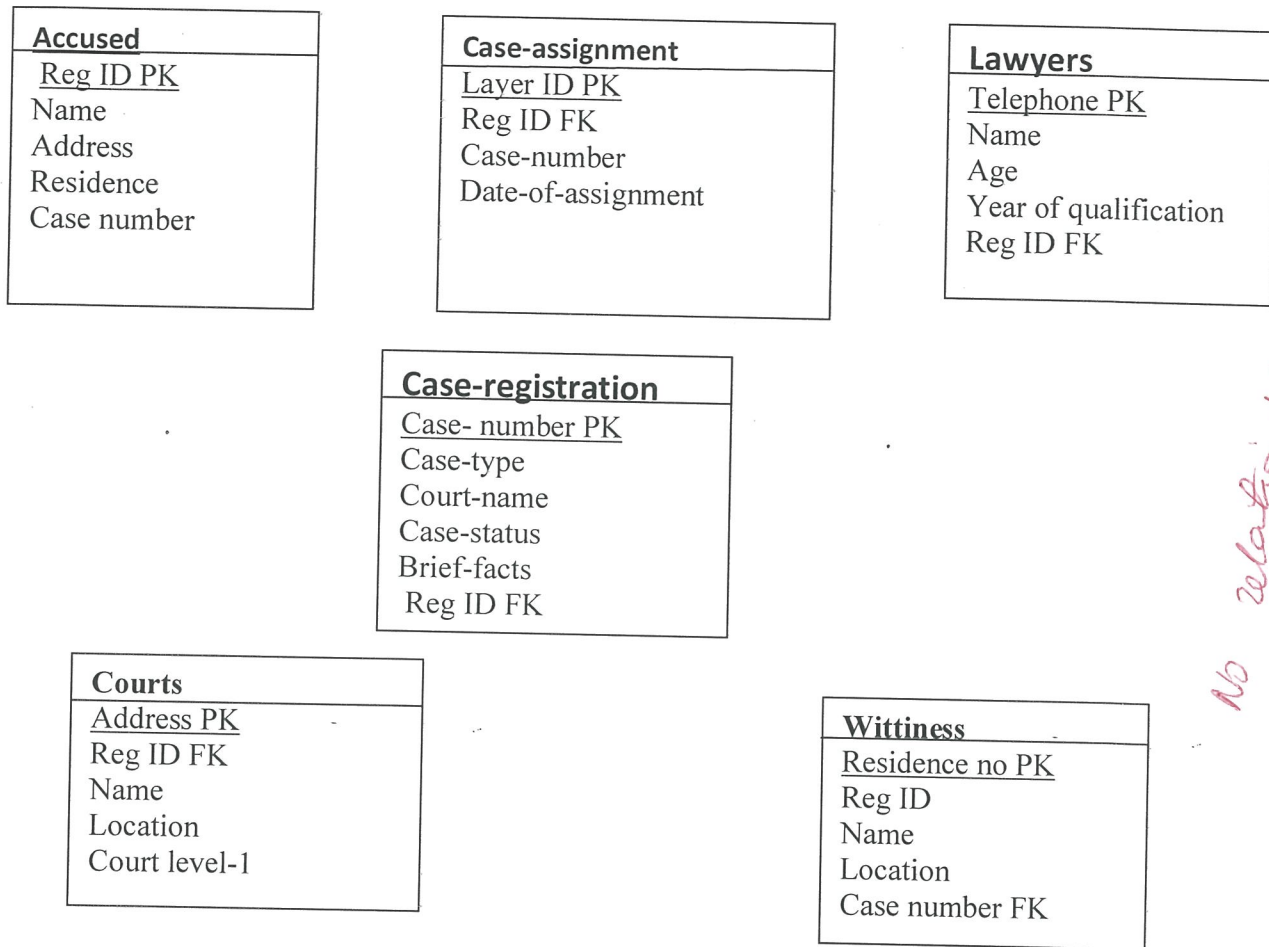


Fig 4.3 showing entities within the system

4.9 Entity relationship modeling

The entities of the system were identified and the following shows the relationship between the entities and their multiplicity.

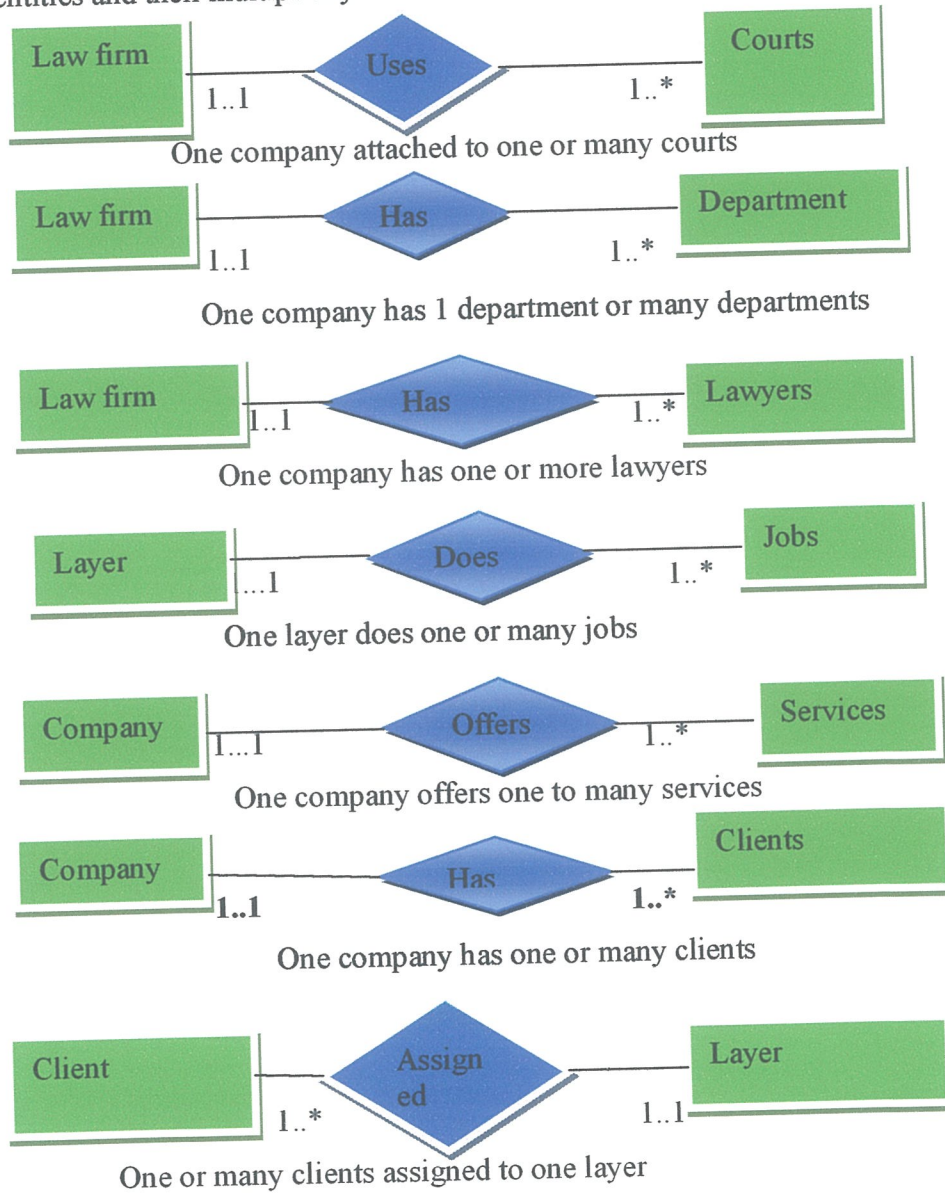


Figure 4.4 showing the relationships between the entities

4.10 Entity Relationship Diagram

This represents a single-ER diagram and it includes the attributes of each entity.

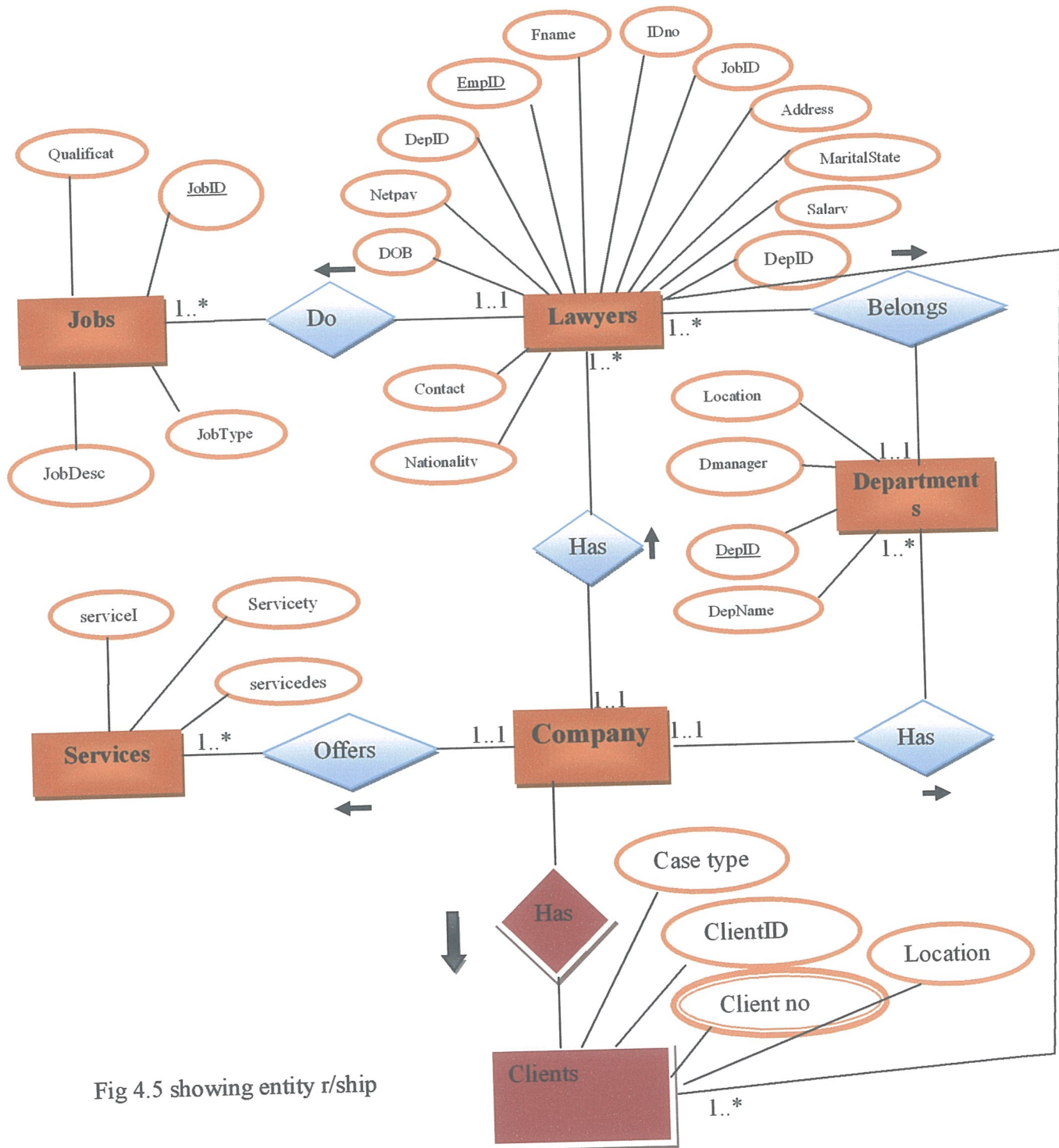


Fig 4.5 showing entity r/ship

4.11 Context diagram

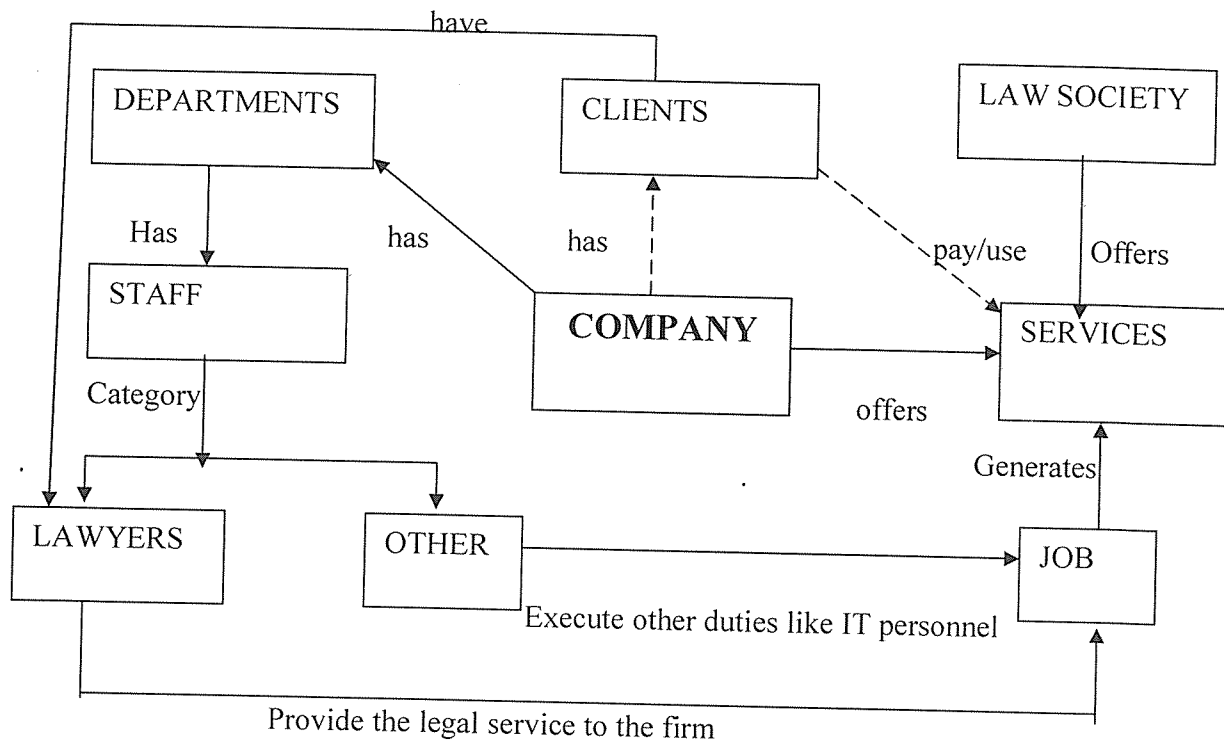


Figure 4.6 showing the context diagram

4.12 Design

4.12.1 Logical design

The logical design is also called the architectural design where by the requirements are partitioned into components. These results to an architectural design document which describes what each component must do and how they interact with each other to provide the overall required service.

When using the system, you must login to the system first by providing a user name and a password which is authorized by the administrator of the system.

The logical design is represented with the diagram below.

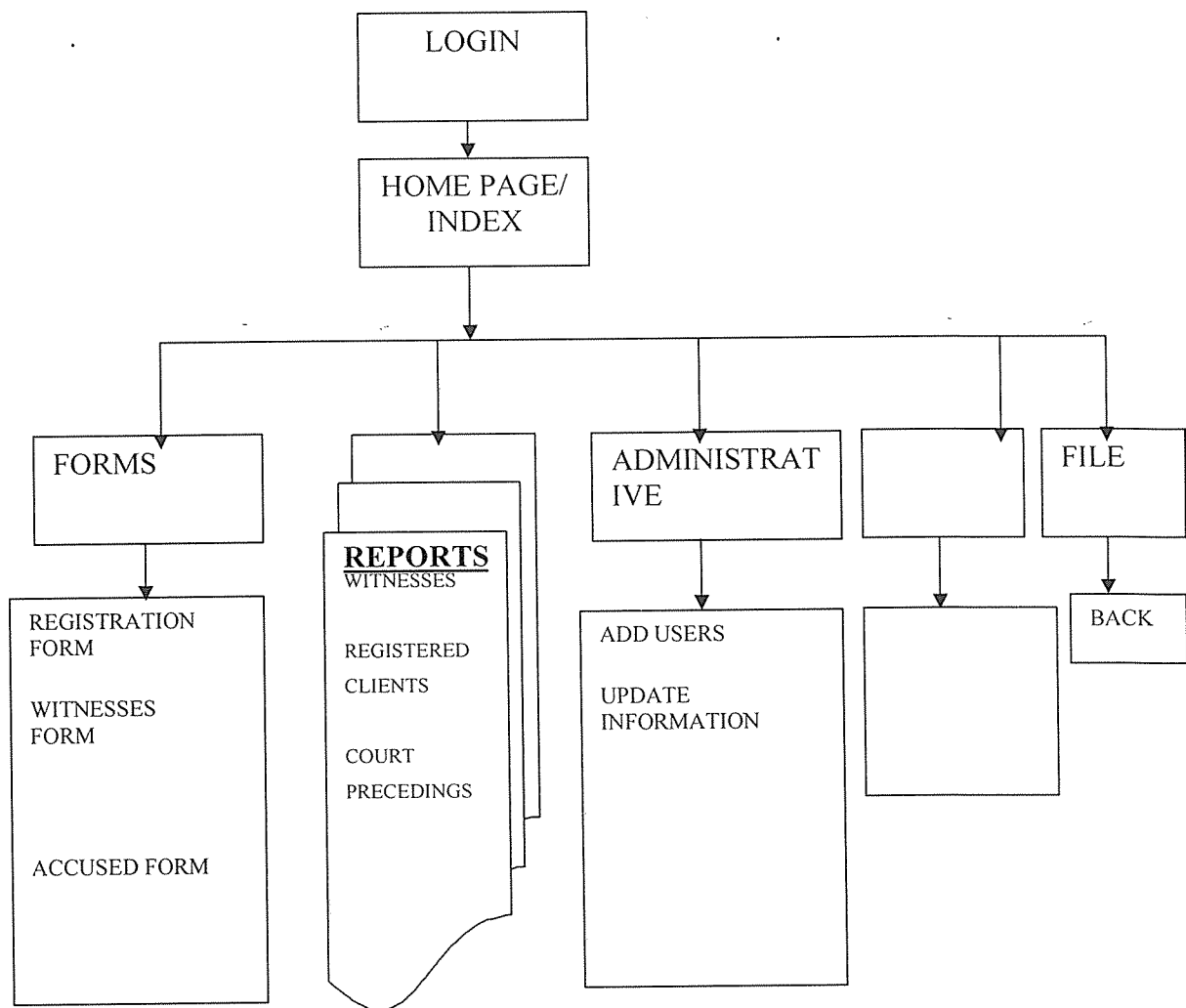


Figure 4.7 showing logical design of the system

4.12.2 Physical design

The physical design is also called detailed design whereby a detailed design document is generated which describes how each component does what is required to do, and it thus shows how the whole system does what is required to do.

The physical design sub-process involves a number of steps of refinement to the architectural model, resulting in a detailed design model which describes the design of the functions of each component. Describing how each component provides its required functions, the design of the interfaces of each component and describing how each component provides its services to other components.

4.12.3 Tables

Login table: It was used to store user's details, Username and password.

Field	Type	Null	Key	Default	Extra
username	varchar(20)	NO			
password	varchar(8)	NO	PRI		

Fig 4.9 showing the process of physical design

Summary of results

In analyzing the collected data about the current system, the researcher came up with the following observations;

Figuratively, the interaction between the lawyers and the clients and administrative staff at the law firm is described below:

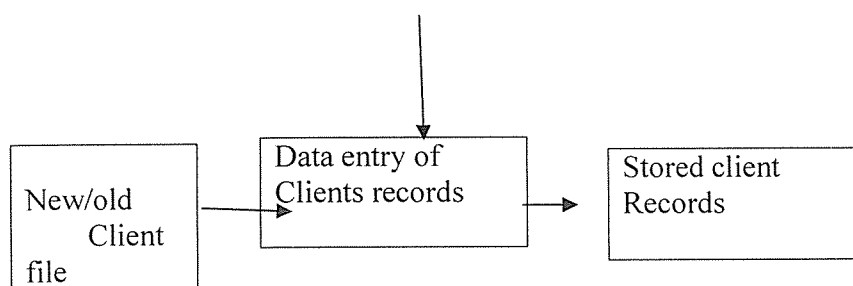


Fig 4.8

For the new clients, a client file is issued where he or she registers for the first time and hands the fully filled form to the secretary or the administrator. The later confirms data entry in the clients file, if it's correctly done, the file is kept together with the other stored

clients files. And for the old clients who already have there files, there new information is added to the existing file.

4.13 Conclusion

In this chapter, we observed and analyst the current system being used at Odokol law firm advocates by considering the strengths and weaknesses. Based on the strengths and weaknesses, the current system does not meet the information systems requirements of the law firm. The deliverables that come out of this is to develop a new system for the law firm.

CHAPTER FIVE

SYSTEM IMPLEMENTATION AND OPERATION

5.1 Introduction

Having designed the information system, the next step is to implement the model using PHP, MYSQL and Dreamweaver. The system involved most the activities carried out in the current system.

Different forms, queries and reports were developed using PHP, MYSQL and Dreamweaver. The new system will help the users achieve the following;

1. The clients will be able to view his or her information on line.
2. The law firm will be able to advertise there information on line.
3. Bothe the lawyers and the clients can be able to send messages, emails to each other that is to say improved communication between clients and the law firm.

5.2 server configuration

Install WAMP5 the computer to be used. Make sure that all previous versions of MySQL on the machine are uninstalled and the MySQL folder deleted. Start the installation of WAMP making sure you specify the root directory and the default browser during installation.

Open PhpMyAdmin interface and set the administrator password to 'mypassword'. Open the php configuration file C:\wamp\phpmyadmin\config.inc.php and look for the following parameters and set them to the values below:

```
$cfg['PmaAbsoluteUri'] = 'localhost/phpmyadmin/';
```

```
$cfg['Servers'][$i]['user'] = 'root';
```

```
$cfg['Servers'][$i]['password'] = 'mypassword'
```

The implementation of the system has been divided into several major areas which include the following;

5.3 Coding the system

In the system implementation, several codes were written for the proper running of the system. All forms, report interfaces and designs plus all controls were designed using codes. Some sample codes written are shown below

```
<? Php
# FileName="Connection_php_mysql.htm"
# Type="MYSQL"
# HTTP="true"
$hostname_conn = "localhost";
$database_conn = "law_firm";
$username_conn = "root";
$password_conn = "my_password";
$conn = mysql_pconnect($hostname_conn, $username_conn, $password_conn) or
trigger_error(mysql_error(),E_USER_ERROR);
?>
```

The code below part of the listing of the Accused.php form for inserting information of accused persons in the database;

```
if ((isset($_POST["MM_insert"])) && ($_POST["MM_insert"] == "form1")) {
    $insertSQL = sprintf("INSERT INTO accused (Name, Telephone, Residence, Case_No)
VALUES (%s, %s, %s, %s)",
        GetSQLValueString($_POST['Name'], "text"),
        GetSQLValueString($_POST['Telephone'], "text"),
        GetSQLValueString($_POST['Residence'], "text"),
        GetSQLValueString($_POST['Case_No'], "text"));
    mysql_select_db($database_conn, $conn);
    $Result1 = mysql_query($insertSQL, $conn) or die(mysql_error());
}
mysql_select_db($database_conn, $conn);
$query_Case = "SELECT Case_No FROM case_registration";
$Case = mysql_query($query_Case, $conn) or die(mysql_error());
```

```
$row_Case = mysql_fetch_assoc($Case);  
$totalRows_Case = mysql_num_rows($Case);  
?>
```

5.4 Creating the web application

Dream weaver development application tool was used to design the interfaces and incorporate the PHP code for establishing connection and interaction between the system user and the database server. This can be done by running the php codes.

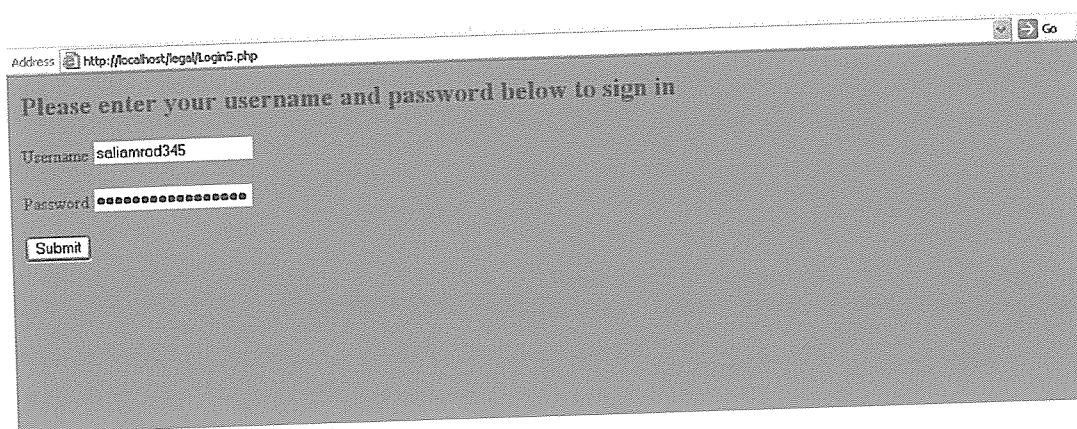
5.5 sample interfaces


The implementation of the system has been divided into several major areas which include the following

5.5.1 Security requirements

The system will implement a security system where by every user of the system will be assigned a user name and a password before he or she can access information. This is because of the sensitivity of the cases. This is implemented by using the log in form as shown below.

This is done to protect the system from unwanted access of information both internally add externally.



Address  http://localhost/legal/Login5.php

Please enter your username and password below to sign in

Username

Password

Fig 5.1 showing a login form

If you are not a registered user or you enter a wrong password, a message will be displayed to inform you that login failed.



Fig 5.2 Showing failed login

5.5.2 Form design

Forms have been designed using PHP and MYSQL to capture the client's information, the lawyer's information and the law firm's information. Once its captured, it's passed to MYSQL database were its stored and retrieved whenever needed. Examples of such forms include

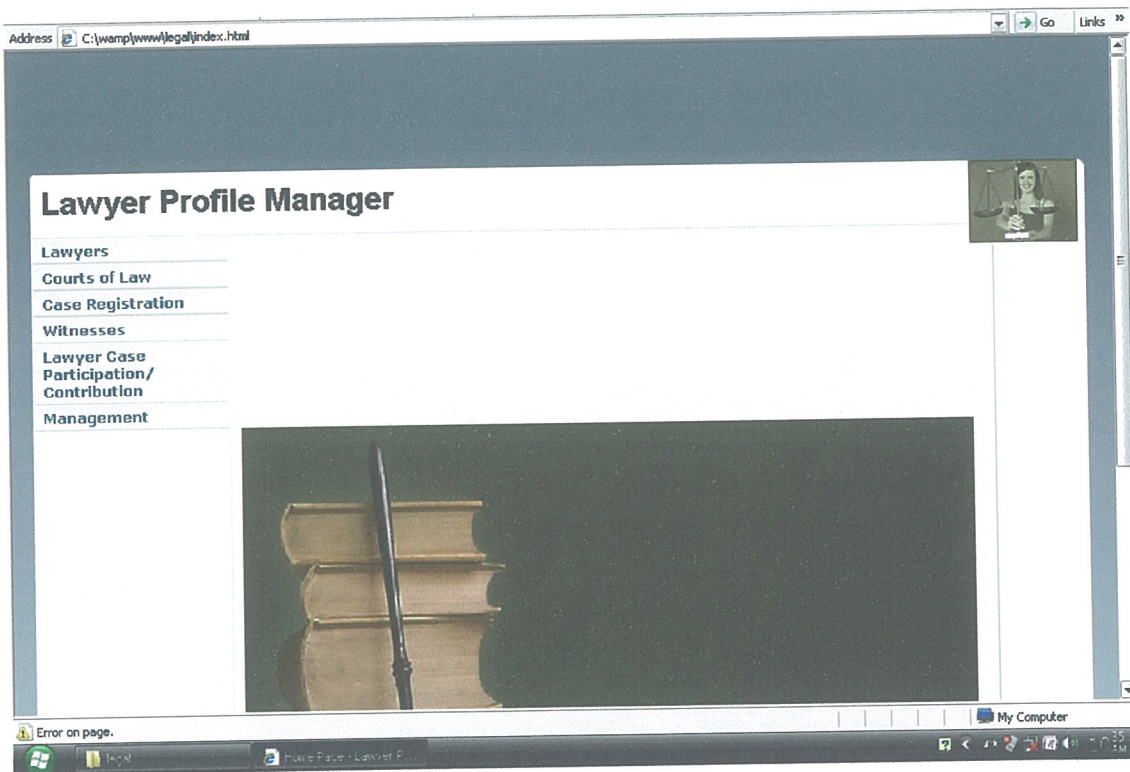


Fig 5.3 showing the home page

The above figure is a snap shoot of the website showing the home page (index) where all the other forms are viewed from and from the index you are able to browse for any form for instance from the home page, you can browse the lawyers form, courts of law form, witnesses form and many other forms.

The screenshot shows a web browser window displaying a 'Management Console' page. At the top left, there is a 'Home' button. Below the title, there are two links: 'Add a New User' and 'Assign a Case'. Further down, there is a 'Reports' link. A section titled 'Search for case details by:' contains two search forms. The first form is for 'Case Number' with a 'Search' button. The second form is for 'Plaintiff Name' with a 'Search' button.

Fig 5.4 showing a form for management

The form above is used by the administrator to add new users to the system for example in case of employment of a new staff the administrator uses this form to add the user by assigning them the user names and passwords together with the privileges that they need for example they can be given the privileges of viewing the client details but not editing them. The same form is also used for searching the case details of particular cases and weakly, monthly or yearly reports are also viewed from here. This page is controlled by management.

The screenshot shows a web browser window displaying a 'New User Insertion Page'. The address bar shows the URL 'http://localhost/legal/New%20User.php'. The page has a title 'New User Insertion Page'. Below the title, there are two input fields: 'Username:' and 'Password:'. To the right of the 'Password:' field is an 'Add' button.

Fig 5.5 Showing the form for inserting new users into the system

The screenshot shows a web browser window with a single tab titled 'Home'. The page has a dark grey header with the title 'Lawyers Details Input Page' in white. Below the header is a form with the following fields and values:

Field	Value
Names:	sali ambrose
ID	CF098534
Telephone:	0712803287
Date Of Birth:	2005/09/12
Year Qualified:	Year

Below the form is an 'Add' button. The date field is followed by a placeholder 'yyyy-mm-dd'. The browser's status bar at the bottom shows 'Done' and 'Local intranet'.

Fig 5.6 For capturing details of the layers

The above form is used to capture the details of the lawyers for example to capture details like name, telephone number, date of birth and the year of qualification.

The screenshot shows a web browser window with the address bar displaying `http://localhost/legal/Case.php?username=sal&password=sa&Submit=Submit`. The page has a 'Home' button in the top left. The main heading is 'Case Registration Page'. Below this is a form with the following fields:

- Case No:** A text input field containing 'fred009'.
- Date Entered:** A text input field containing '2005/09/12' with a placeholder 'yyyy-mm-dd'.
- Case Type:** A dropdown menu with 'Criminal' selected.
- Court Name:** A dropdown menu with 'BUGANDA ROAD COURT' selected.
- Case Status:** A dropdown menu with 'Being Heard' selected.
- Brief Facts:** A text area containing the text 'the case involved the murder of the son mr bunga on the 3/09/2005 on his way'. There are small icons for undo, redo, and list on the right side of the text area.

An 'Add' button is located at the bottom right of the form. The browser's status bar at the bottom shows 'Done' and 'Local intranet'.

Fig 5.7 showing the page for registration of cases

The above is registration form which captures the details concerning a particular case with all the facts that are needed to proceed with the case for example case No, Date Entered, Case Type, and the court that is handling the case and finally whether the case is won, lost or it is still being heard. This is mainly done by the court clerks.

Address http://localhost/legal/Case%20Contribution.php?username=sal&password=sa&Submit=Submit Go

[Home](#)

Lawyer Case-Contribution Information Page

Case No:

Lawyer ID:

Contribution:

Other Notes:

Done Local intranet

Fig 5.8 showing the contribution layers in particular cases

The form above is used to capture the contributions of deferent lawyers in particular cases. For example some draft submissions, others cross examine the witnesses among the many contributions made by the layers. This form is also used to capture additional information about the layers

The screenshot shows a web browser window with a URL bar containing a long, complex URL. The page has a dark grey background. At the top left, there is a 'Home' button. Below it, the title 'Witness Input Page' is displayed. The form consists of four input fields: 'Names:' with the text 'katongole micheal', 'Address:' with 'p.o box kampala', 'Telephone:' with '0782567875', and 'Case No:' with a dropdown menu showing '1'. An 'Add' button is located below the 'Case No:' field.

Home

Witness Input Page

Names: katongole micheal

Address: p.o box kampala

Telephone: 0782567875

Case No: 1

Add

Fig 5.10 Showing witness input form

The form above captures the witness details like the witness's name, address, telephone number, and the information given by the witness concerning the case. The also sends the details of the witnesses to the database where is stored for reference.

5.5.3 Query/ report design

Queries can only be viewed by the authorized staff. In order to query about the data in the database, a query has to be designed and developed. Examples of the queries include;

Address http://localhost/phpmyadmin/sql.php?db=law_firm&table=case_registration&token=82cc96cb9ea05c54aa996887708b777d&pos=0&session_max_rows=30&disp_direction=▼ Go Links


SQL result

Host: localhost
Database: law_firm
Generation Time: Jun 22, 2009 at 01:55 PM
Generated by: phpMyAdmin 2.10.1 / MySQL 5.0.45-community-nt
SQL query: SELECT * FROM 'case_registration' LIMIT 0, 30 ;
Rows: 12

Case_No	Date_Entered	Case_Type	Court_Name	Case_Status	Brief_Facts
5	0000-00-00	Criminal	buganda rod court	Won	Lost and appealing
88h	2007-10-19	Criminal	budo	Lost	this person if found guilty will be hanged
90d	2008-02-18	Criminal	kampala	Being Heard	the case hearing is adjaned till further notice
BBSTR89	2007-01-28	Criminal	budo	Being Heard	HIGH WAY ROBBERY
BRTS456	2008-10-20	Civil	mbale high ourt	Lost, Being App	office abuse
CR 004	2006-03-18	Criminal	buganda rod court	Being Heard	Th accused is alledged to have murdered peter on t...
CR1204	2007-09-19	Criminal	kampala	Lost, Being App	RAPED A 15 YAER OLD GIRL
ddr680	2006-12-31	Civil	kampala	Being Heard	idle and disorderly
drc789	2007-02-21	Civil	kampala	Lost, Being App	traffic offence
DS456	2007-02-01	Civil	mbale high ourt	Lost	corruption accusations
ul1204	2007-09-19	Criminal	kampala	Lost, Being App	RAPED A 15 YAER OLD GIRL
XYZ289	2007-09-21	Civil	budo	Lost	RECKLESS DRIVING

Table 5.1 Showing a report on registration

The report above shows all the information of case registration from 2000 to 2008 highlighting a case type, court where the case is being handled, case status and brief facts about the cases.

Address  http://localhost/phpmyadmin/sql.php?db=law_firm&table=lawyer_case_contribution&token=82cc96cb9ea05c54aa996887708b777d8pos=0&session_max_row

SQL result

Host: localhost

Database: law_firm

Generation Time: Jun 22, 2009 at 02:22 PM

Generated by: phpMyAdmin 2.10.1 / MySQL 5.0.45-community-nt

SQL query: SELECT * FROM 'lawyer_case_contribution' LIMIT 0, 30 ;

Rows: 10

ID	Case_No	Lawyer_ID	Contribution	Other_Notes
1	5	1	Research	collected alot of information that was neccessary ...
2	5	1	Drafting submissions	alot of it has brought contribution to our researc...
3	88h	3	Drafting submissions	abandoned
4	88h	1	Drafting submissions	
5	BBSTR89	2	Research	the layer was also invokved in collecting evidence...
6	XYZ289	3	Cross-examination of witnesses	the later involved him self by going upto the scen...
7	CR1204	2	Drafting submissions	the layer evaluated the information given by the o...
8	DS456	1	Research	involved him self in the court preceeding and the ...
9	ul1204	2	Making submissions	drafted the documents neccessary to bail out the cl...
10	88h	3	Case coordination	consulted with other layers to gather more informa...

Table 5.2 showing contributions of different lawyers

The query above captures the contribution of different lawyers to particular cases. These are always used to evaluate the performance of the different lawyers employed by the firm. Reports also enable the production of hard copy documents for reference. The report above also captures other notes that is necessary in the case contribution

Address  http://localhost/phpmyadmin/sql.php?db=law_firm&table=witnesses&token=82cc96cb9ea05c54aa996

SQL result

Host: localhost

Database: law_firm

Generation Time: Jun 22, 2009 at 02:46 PM

Generated by: phpMyAdmin 2.10.1 / MySQL 5.0.45-community-nt

SQL query: SELECT * FROM `witnesses` LIMIT 0, 30 ;

Rows: 11

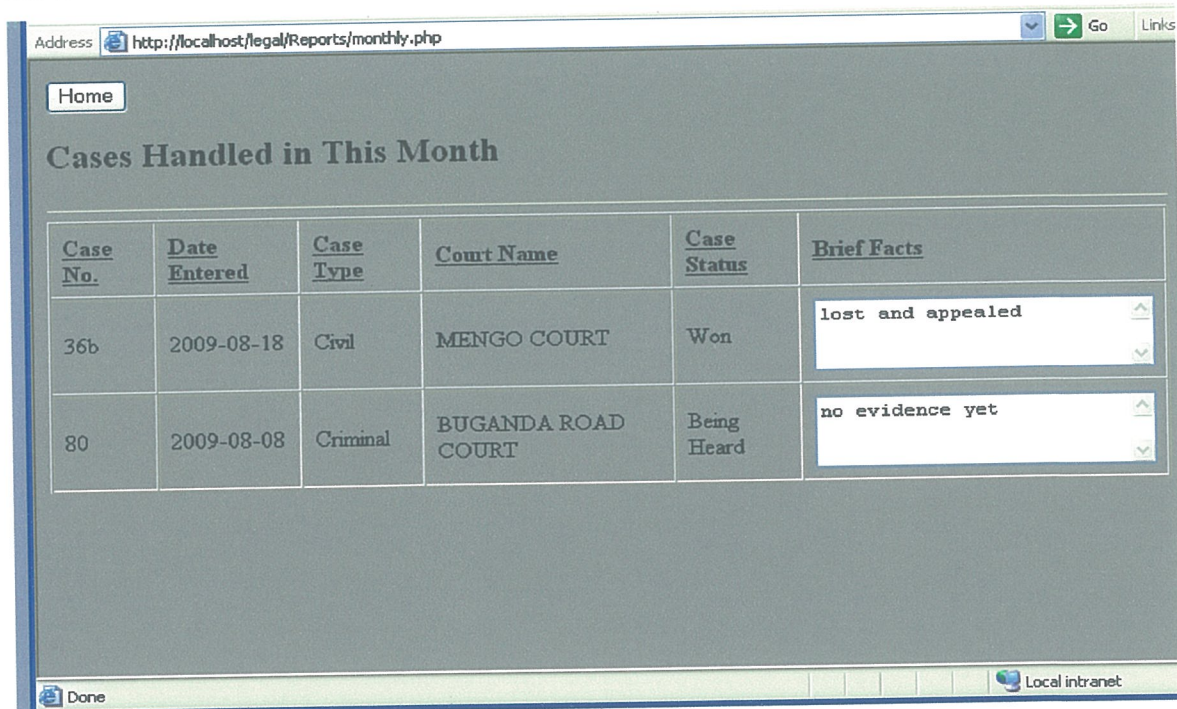
ID	Names	Address	Telephone	Case_No
1	semuju samuelju samue08	kireka	0784563	5
2	john77	kamokkya	07856777	5
3	torotih ken09	kamokkya	678444	5
4	musoke erieza89	sembabule	666666666	5
5	katongole Denis5	PO box 30 kira	0782568875	5
6	kiplagat tom09	mbale	0773215673	90d
7	haruna samuson02	bweyogerere	0784566387	BRTS456
8	bogere samuson02	wandegeya	02274658	5
9	kakungulu denmark08	mukuju	0946577458	5
10	opolot pius90	tororo	077456848	88h
11	kiposang dickson87	kitale	254678934	ul1204

Table 5.3 showing a list of witnesses to different cases

The SQL result above is used to capture the details of all the witnesses who have been aligned up by the clients to give substantive information to assist the lawyers in evaluating the cases of there clients. These can be used to easily access them since the give information like there names, addresses, telephone numbers and the cases that they are to give witness to.

5.5.4 Reports

The system also generates monthly and weakly reports that helps the of Odokol to make decisions and analyze the progress of deferent staff. The snap shots of these reports are shown below



Address <http://localhost/legal/Reports/monthly.php> Go Links

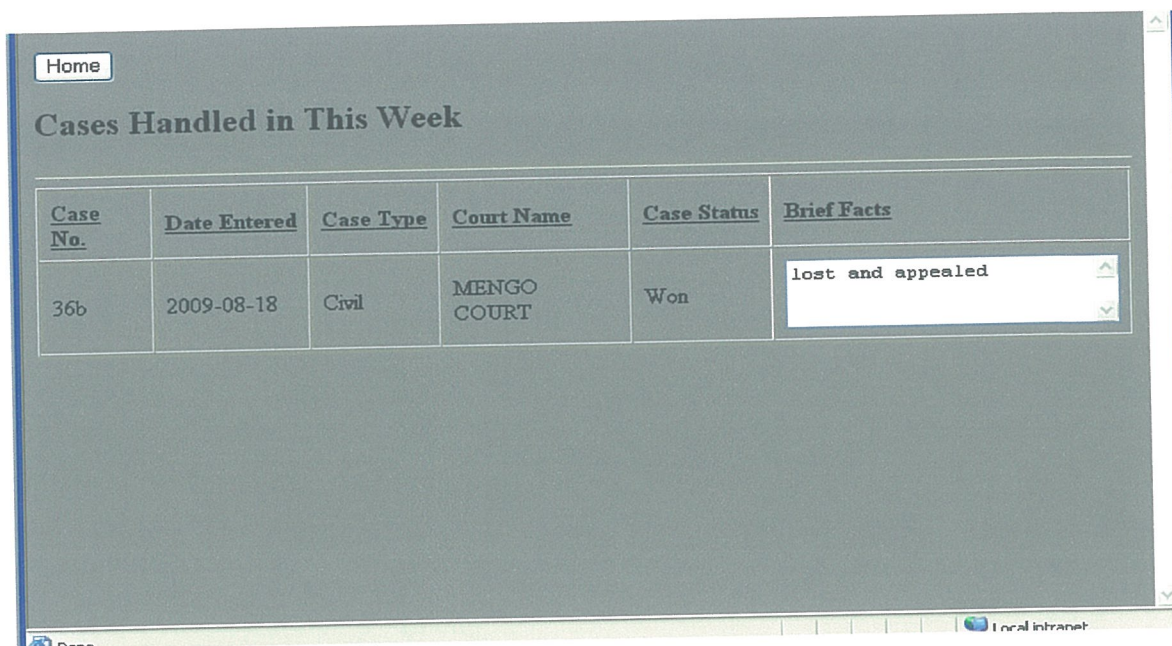
Home

Cases Handled in This Month

<u>Case No.</u>	<u>Date Entered</u>	<u>Case Type</u>	<u>Court Name</u>	<u>Case Status</u>	<u>Brief Facts</u>
36b	2009-08-18	Civil	MENO COURT	Won	lost and appealed
80	2009-08-08	Criminal	BUGANDA ROAD COURT	Being Heard	no evidence yet

Done Local intranet

Fig 5.10 showing the monthly reports



Home

Cases Handled in This Week

<u>Case No.</u>	<u>Date Entered</u>	<u>Case Type</u>	<u>Court Name</u>	<u>Case Status</u>	<u>Brief Facts</u>
36b	2009-08-18	Civil	MENGO COURT	Won	lost and appealed

Fig 5.12 Showing the weekly reports

5.6 System evaluation and user training

5.6.1 System testing

Before actually implementing the new system, a test run of the system was done to remove bugs. After coding the whole programs of the system, a test plan was developed and run on a given set of test data. The output of the test run matched the expected results. Using the test data the following test run was carried out

- Unit testing
- System testing

During test the programs (forms) were individually tested with the prepared test data. any undesirable happenings were noted and debugged. After carrying out the unit test for each of the programs of the system and ensuring that the errors are removed, the system test was carried out using actual data.

After ensuring that the system is running error free, the users were called with their own actual data so that the system could be shown running as by their requirements. The main users were involved all through the testing process.

5.7 Debugging corrections

Syntax errors which were detected by the compiler were corrected. These were detected through warning messages and the errors were fixed.

Some build up errors that arose from using object files that had not been rebuilt after a change that affects the program were dealt with by rebuilding the project so that the dependencies involved in the project were accurately reflected.

5.8 User and Technical documentation

System documentation in form of manuals is provided so that the software can be easily used to meet user requirements. Control menus are explained very well such that the user is not alarmed by the system outputs e.g. in case of failing to adhere to, data integrities. As part of documentation, a defined scope about what the system is able to accomplish has been included so that in case the system has to be improved or changes made to it, the developer can make reference.

The users of the system should be well trained concerning the working of the system. Data entrants should be made aware of the possible errors of insertion arising from invalid data entries. The Database Systems Administrator must be let known of all the database specifications and validations including data integrities and all triggers involved in the database. Training of staff is estimated to take between 1-2 weeks.

5.9 System Maintenance

The system will be continuously used and therefore requires periodic maintenance to avoid failure through overloads, malicious code and hardware failure. To avoid such occurrences, the following should be done;

- Having power supplied to computers through stabilizers and Uninterrupted Power supplies gadgets.
- Computers should be regularly scanned for malicious code like viruses, Trojan horses and worms.
- Control measures should be set regarding insertion of external storage devices from outside computers.
- Software upgrades and updates should be done following a change in technology so as to keep the system compatible to latest developments.

- Preventative maintenance which includes dusting/blowing of the hardware components should be done so as to reduce possible effects of dust that builds up on components

CHAPTER VI

RECOMMENDATIONS AND CONCLUSIONS

6.1 Introduction

The findings of this research as presented and interpreted in chapter four strongly suggest that, “IT is a strategic driver to organization transformation and development in the judiciary sector”. However the study also suggests that the Odokol law firm and advocates has not fully utilized IT opportunities for organization development. Hence recommendations for the way forward for the full exploitation of IT facilities for development.

6.2 Conclusions

The management of organizations for development requires an open mind ideology. The key obstruction to changes that are caused by introducing new information technologies is the “people”. The people must be a major focus for organizational transformation and development. Therefore the law firm should involve in activities like developing innovative ways to measure, motivate and reward performance and disgracing programs to recreate and train employees in the core competences required in a changing workplace.

Funds to support to support the wide access and the dissemination of information with better results of experimental and commercial application are very important if full benefits of ICT are to be realized most especially in the judiciary.

Managing organizational information technology requires planning for changes in the goals of the company, process structures and technologies. Planning is a vital process for transformation of organizations. Planning may involve evaluating organizations internal and external environments, forecast new developments, establish an organizations IT strategic vision and mission, goals and objectives. Planning helps organizations

Maintenance will be necessary to eliminate errors in the system during its working life and to tune the system to any variations in its working environment. Otherwise the system was successfully developed to meet all user requirements.

However the findings of this study reveals that most of these factors are not taken into consideration in process of planning and dissemination of information by the different law firms most especially in the institution of study(Odokol law firm and

advocates). Apart from the fact that the majority of the community do not have access to use ICT facilities and are unable to use it because of the lack of necessary skills, there is also very little involvement of users and professionals trained in the use of ICT and their roles are undermined and not clearly defined and therefore do not future very much in the process of ICT use and growth.

6.3 Recommendations

Because of the increasing need of ICT use by the judiciary, in both accessing and disseminating information to their clients, acted as a compelling force to the researcher to carry out this study and its on the basis of this findings that this study recommends the following measures and strategies to Odokol and company advocates to undertake in order to realize maximum benefits of ICT.

- The law firm should use IT for both efficiency improvement and process reengineering. Other than using IT to improve only on the storage of documents and printing of documents.
- Odokol and company advocates law firm should work towards increasing people's capabilities to absorb knowledge. Most especially making sure that all its employees are computer literate and if not take people for refresher courses in the field of ICT. These will ensure that most of the personnel realize the importance of the current technology.
- Promoting and financing investments in the ICT departments these will see to it that many ICT facilities will be availed to its users
- Odokol law firm should develop clear sample and powerful tool to focus its employees and its information technology platform on serving its clients in the most appropriate and responsive ways.
- Odokol law firm and advocates should put to use extensive use of internet technologies for innovative internets, intranets and website and services for its clients and facilitators should be the main focus of the law firm. Further still the law firm should work towards the use of electronic mail for communication with the staff and its clients.

6.4 Areas of future future study

The research was not limited to the topic of study only but due to limited resources and time that I limited the scope. It's therefore the researcher's suggestion that future research can be done on the following topics;

1. The design and implementation of a database management system to handle employee records.
2. Investigate the challenges and the opportunities that information and communication technology can offer.

Find out the measures to be taken in order to adopt ICT as a tool to trigger organizational transformation.

6.4 limitations of the study

- 1 The study was constrained by security sensitivity of the case study since it is a law firm, it handles many cases which require a lot of privacy of information .these made some sections of the law firm inaccessible and hence some information could not be provided due to fear of compromise.
- 2 The research was so costly since the researcher is a student and therefore made it so difficult to go to the company frequently
- 3 ICT begin a newly born innovation in the developing countries, the accessibility of literature was a big task to overcome.
- 4 Many have very little knowledge about ICT and these made it hard for the researcher to get adequate information

Appendix A-QUESSIONNAIRE

KAMPALA INTERNATIONAL UNIVERSITY

SCHOOL OF COMPUTER STUDIES

Preamble;

The purpose of this questionnaire is to find information regarding the use, benefits and availability of management information systems in the judiciary

Confidentiality

All the information provided herein will be treated with strict confidentiality for the benefit of our respondents

Instructions

Please kindly complete the questionnaire with as accurate information as possible to ensure accuracy in the out put.

These are the list of questions that are to be used to get information fro the staff of the Odokol law firm and advocates.

1. What is your name?
2. For how long have you been working for this law firm?
3. What is your job description?
4. Are you able to do the work assigned to you effectively? Please be free to explain your answer.
5. Is it easy for you as staff to capture your client's information? If yes where do you find difficulties?
6. Rank numerically in order the areas that you do find difficulty in capturing client's information?

☐

Registration of clients

☐

Capturing of witness information

☐

Typing of long documents

☐

Analyzing of documents

7. Do you think the current system is efficient enough? Give reasons?
8. Would you recommend a system that will help you accomplish your daily work?
9. How is the client's information stored?
10. Do you think the stored information is secured?
11. With the current data storage mechanism, do you think it is easy to update the information?
12. What is your annual expenditure on information and communication technology?
13. Does your organization have a website?
14. When you receive a new information system what are your preferences for finding information? Please rate from (1) most preferred to (5) less preferred
 -Audio
 -Printed documents
 -Web based tutorials
 -Commercial adverts
 -Others

QUESTIONNAIRE USED TO CAPTURE DATA FROM THE CLIENTS

1. What is your name?
2. What type of case do you have?
3. How long has your case taken?
4. Rank numerically the speed at which your cases are attended to
 -extremely slowly
 -very slowly
 -good
 -very fast
 -excellent
 -not secure
- 5 On average how often do you meet with your lawyer?
- 6 Do you experience any problems with the way your data is handled?
7. Do you think your documents are stored efficiently? If no explain your answer.
8. Have you ever had any problem of lost documents with your lawyer?
9. Do you get enough time to express all your information to your lawyer?
10. Do you get time with your lawyer to go through your file stored in the law firm?
11. Rank the efficiency of the current system in retrieving information
 - Poor
 - Fair
 - Average
 - Good
 - Very good
 - Excellent
12. Would you be happy if the law firm you subscribe to comes up with a new system that is computerized? Yes or No.

References

1. Barnard, M. (1999), "Law society Gazette-Focus", www.lawgazette.co.uk/archives/1999-10-8/00000012.html,
2. Bindman, D. (1999), "Law society Gazette-News-InfoTech", www.lawgazette.co.uk/archives/1999-12-20/00000059.html
3. Boudreau, M.C., Geffen, D., Straub, D.W. (2001), "Validation in information systems research: a state-of-the-art assessment", *MIS Quarterly*, Vol. 25 No. 1, pp. 1-16.
4. Croft, T. (2000), "Lexcel helps solicitors to excel", *The Times*, .
- Henning, J.F. (1992), *Total Quality Management for Law Firms*, Practising Law Institute, Chicago, IL.,
5. Edwards, D.L., Mahling, D.E. (1997), "Toward knowledge management systems in the legal domain", *Proceedings of the International ACM SIGGROUP Conference on Supporting Group Work Group '97*, The Association of Computing Machinery ACM, pp. 158-66.
6. Galanter, M., Paley, T. (1991), *Tournament of , The Transformation of the Big Law Firm*, The University of Chicago Press, Chicago, IL, .
7. Legal Marketing Services UK www.lmsuk.com/html/site/legal-marketing-services.html,
8. Hunter, L., Beaumont, P. and Lee, M. (2002), "Knowledge management practice in Scottish law firms", *Human Resource Management Journal*, Vol. 12 No. 2, pp. 4-21.
9. Montana, J.C. (2000), "The legal system and knowledge management", *The Information Management Journal*, No. July, pp. 54-7.
10. Mountain, D. (2001), "Could new technologies cause great law firms to fail?", *Journal of Information, Law & Technology*, No. 1,
11. Susskind, R. (2000), *Transforming the Law*, Oxford University Press, Oxford, .
12. Tiwana, A. (2000), *The Knowledge Management Toolkit – Practical Techniques for Building a Knowledge Management System*, Prentice Hall, Upper Saddle River, NJ, .
13. Avgeron, C., and Cornford, T. (1993). *Developing information systems: concepts, issues and practice*, London: Macmillan.
14. Dogobert, S. (1985). *organization information: principles of database and retrieval systems*, California: academic press, inc.

15. Lucy, T (1991). Management information systems, 6th edition. London: DP publications.
16. Nora, S.R., and Mink, A.(1980). The computerization of society, Cambridge, Massachusetts: MIT press.