

**Ministry of higher Education  
and Scientific Research  
University of Diyala  
College of Science  
Department of Computer  
Science**



## **Free Engineer System**

**This Research submitted to Diyala University / College of  
Science / Department of Computer Science As one of the  
requirements for obtaining a Bachelor's degree in Computer  
Science**

**By  
Ahmed Hammed  
Zahra Mahdi**

**Under The Supervision Of  
Dr.Jumana Waleed**

**1441 A.H.**

**2020 A.D**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿ وَلَوْ أَنَّمَا فِي الْأَرْضِ مِنْ شَجَرَةٍ أَقْلَمٌ وَالْبَحْرُ يَمُدُّهُ،

مِنْ بَعْدِهِ، سَبْعَةُ أَبْحُرٍ مَّا نَفَدَتْ كَلِمَاتُ اللَّهِ

فَإِنَّ اللَّهَ عَزِيزٌ حَكِيمٌ ﴿٢٧﴾

صدق الله العظيم

سورة لقمان آية ٢٧

## الاهداء

في مثل هذه اللحظات يتوقف اليراع ليفكر قبل ان يخط الحروف  
ليجعلها في كلمات تتبعثر الاحرف وعبثا ان يحاول تجميعها في  
سطور كثيرة تمر في الخيال ولا يبقى لنا في نهاية المطاف الا قليلا  
من الذكريات وصور تجمعنا برفاق كانوا الى جانبنا فواجب علينا  
شكرهم ووداعهم ونحن نخطو خطواتنا الاولى في غمار الحياة  
ونخص بالجزيل الشكر والعرفان الى كل من اشعل شمعة في  
دروب عملنا والى من وقف على المنابر واعطى من حصيلة فكره  
لينير دربنا الى الاساتذة الكرام والى الاصدقاء الاعزاء .

## شكر وتقدير

الحمد لله الذي انزل القرآن شفاء ورحمة للمؤمنين والصلاة والسلام على من اعطي  
السبع المثاني والقران العظيم وعلى اله اجمعين الذين رفعوا بهمهم العالية اعلام  
الدين وعلى اصحابه الذين امنوا به وازروه ونصروه واتبعوا النور الذي انزل معه  
الذين ابلوا البلاء الحسن بنصرته واقامة دينه.

وبعد...

احمد الله والثناء عليه جلت قدرته على توفيقه اكمال هذا الجهد العلمي المتواضع  
فيطيب لي ويهيج نفسي ان اتوجه بالشكر والامتنان الى الاهل الذين ساندونا وكانوا  
نعم العون في كل الظروف والشكر والتقدير أ.م. د جمانة وليد نسأل الله ان  
يجازيها خير الجزاء ولن تفي الكلمات بحقها فقد كانت نعم العون .

## ABSTRACT

The world is living now in a new world revolution, information revolution which is connecting with technology information age and the center of the world moved from revolution in to knowledge.

Today, the human societies base on knowledge on ton wealth, then the knowledge became the center of progress and extensive information dos not mean anything if society cannot used these information wisely.

Where programming languages and design have been used in this work which include JavaScript, CSS, HTML, JQuery.

So as to give the format and programming required

## Table of Contents

Subject Page	Page
<b>Chapter one INTRODUCTION</b>	
1.1 Introduction	<b>1</b>
1.2 What is ICT and Why	<b>2</b>
1.3 Problem Of The Current System	<b>2</b>
1.4 Research Objective	<b>3</b>
1.5 Research Scope	<b>3</b>
1.6 Expected Contribution / Benefit	<b>3</b>
<b>Chapter two LITERATURE REVIEW</b>	
2.1 Role Of Information Technology in The Academic	<b>4-6</b>
2.2 Data And Information	<b>6-7</b>
2.3 Technology enhance computer software Based Online Clearance System	<b>8-10</b>
2.4 Computer – Based Online Information System	<b>10-11</b>
2.5 Java-script	<b>11-12</b>
2.6 Hyper Text Markup Language (HTML)	<b>12</b>
2.7 CSS	<b>13</b>
2.8 JQuery	<b>13</b>

<b>Subject Page</b>	<b>Page</b>
<b>CHAPTER Three Practical part</b>	
3.1 Chapter Summary	<b>14</b>
3.2 Home Page	<b>15</b>
3.3 dictionary of definitions	<b>16</b>
3.4 Maps	<b>16</b>
3.4.1 Basic bulding steps.	<b>17</b>
3.4.2 Calculation of quantities.	<b>17</b>
<b>Chapter four Conclusions and suggestions</b>	
4.1 Conclusions	<b>18</b>
4.2 Suggestions	<b>18</b>
References	<b>19-20</b>



# **CHAPTER ONE**

## **INTRODUCTION**



## **1.1 Introduction**

The world is living now in a new world revolution, information revolution which is connecting with technology information age and the center of the world moved from revolution in to knowledge. Today, the human society's base on knowledge on ton wealth, then the knowledge Became the center of progress and extensive information dos not mean anything if society cannot use this information wisely [1].

The gap between advanced countries and developing or growing countries become a knowledge men gap because of huge information in revolution information technology and telecoms. The information became an important resource to the person and society; the electronic chips begin to play a basic role such a coal which is a basic thing in the past when the industrial revolution was so important. A technology gap approach to why growth rates differ [2].

The modern technology contains the digital technology in twenty-first century. This advanced shorten the time between any two areas on the earth because of using electronic network. The information revolution is connecting with information technology through using computer System and telecom system [1]

## **1.2 What is ICT and Why**

ICT (information and communications technology - or technologies) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. In general there are some important things as the requirements for the implementation of ICT, there are [3]:

1. The availability of tutor support services that can help The candidate when Learning difficulties.
2. The existence of government officials / managers of ICT.
3. The existence of the positive attitude of the candidates and educators on computer technology.
4. Availability of learning system design that can be learned / known by every the candidate.
5. Scientific Promotion System progress and feedback mechanisms Developed by the organizers.

## **1.3 Problem of the Current System**

Because of guesses, human errors and differing opinions among people, it may lead to giving false data and thus it will cause disasters, a lot problems are encountered which includes:

1. Solve the problem of delay
2. Unavailability and busyness of experts to give correct numbers

3. Giving false data causes not knowing the financial value required for construction.

4. Giving false data leads to an increase in work time and losses in time and money.

### **1.4 Research Objective**

The goal of the study is a free assistant to people in the building process in general, it provides numbers and quantities based on scientific measurements of the quantities of materials required for the construction process.

### **1.5 Research Scope**

The research focuses on improving the data given to citizens, thereby improving the amount of experience and information the citizen has for the construction process, as well as improving the financial perception of the project and the quantities of materials and expertise used for this project to complete the project in the best and fastest possible way

### **1.6 Expected Contribution / Benefi**

The contributions of this study are to provide support to people to implement modernized techniques of bulding management

The current System that are used needs to change it from traditional or manual system to technical or automated system. Finally, this study is specific to assist people to achieve their goals and strategy in reducing the time and efforts to provide unique products



# **CHAPTER TWO**

## **LITERATURE REVIEW**

## **2.1 Role of Information Technology in the Academic System**

The introduction of computer into information technology has massively improved the information need of organization; the success of this machine is dependent on the knowledge base. Therefore, one can be prompted to ask aloud “what is a computer” defined a computer as An electronic device that can perform automatically at a high speed of A sequence of logical operations according to instructions giving to it inform of pre-arranged program [4].

Define a computer as an electronic device capable of accepting data and instruction; process the data base on the instruction to generate result or output in such a manner that is yet to be equaled by any other known machine to mankind [5]. Define computer by saying that computers are looked upon as obedient servants who are ever ready to free man from tedious procedures and produce result as compared with human computing time [6].

Define a computer as a machine that is capable of accepting input data, store and process the data base on the instructions giving by the computer users and in this way produce expected result, generally called output [7].

World net describes an information system (I.S) as systems consisting of all communication channels used within an organization and include software and hardware. It may also be define as a system that collect and process data (information) and provide it to manager of all levels that use it for decision making, planning, program implementation and control.

The goal of the Free Engineer System is a free assistant to people in the building process in general, it provides numbers and quantities based on scientific measurements of the quantities of materials required for the construction process, whether building houses or rooms or anything else and provides this service free of charge and is available to all It is a website dedicated to building homes, it directs people step by step to building operations, and thus this system will reduce costs, making work lesser for the management. Information technology has been an integral part of academic system since almost four decades.

The world is entering an era in which technology will literally transform every aspect of business, every aspect of life and every aspect of society [8]. Since the arrival of internet technology, school system has taken a new shape style with a blend of convenience and satisfaction.

That computer base education includes both computer-assisted instruction programs that interact with peoples in a dialogue and a broader array of educational computer applications such as simulations or instructions in computer programming. Learning from a student bedroom, office or anywhere in the world has made its way into university system

With the advent of internet technology.

Information technology has always helped the world to educate peoples in better way. To explain few examples, This program provides us with accurate numbers and calculations of the required quantities and displays maps of the required spaces in a modern style and modern developments, and thus will provide free information and guidance

Approval is a time consuming process. Through the internet, this process is made much easier and sometimes the approval is made within minutes. This explains an efficient way of obtaining and saves time and money for the candidates [9].

## **2.2 Data and Information**

The concept of data and information are very important in understanding issues that go with development and implementation of a computer software based online clearance system. The term “data” and “information” are used interchangeably every day conversation as meaning the same thing. Too many manager and information specialist. However, these terms have distinct meaning.

Data simply consist of raw unprocessed facts while information is a data that have been processed by the computer [10]. Gives the following definition of data; a graphic or textual representation of facts concepts, numbers, letters, symbols or instructions suitable for communication, interpretation or processing.

Data is the basic element of information that is use to described objects, ideas, conditions or situations [11]. Defines data and information as Data is fact events, transactions and so on, which have been recorded.

They are the raw materials from which information is produced.

Information is data that has been produced in such a way as to be useful

to the recipient. Data are fact obtained by observation, counting, measuring, weighing etc.

Which are often records of day-to-day transactions of the organization. For example the date, amount, and other details of an invoice or Cheese, payroll details of payment, the number of a student living in a particular hostel and soon [10].

That concept of information in an organization sense is more complex and difficult than the frequent use of this common word would suggest [11]. That information is data that have been processed, transmitted by the recipient, interpreted and understood by the recipient.

Here it should be noted that the user, not just the sender is involved in The transformation of data into information. There is a process of thought and understanding involved and it follows that a given message can have different meaning to different people.

Based on this, one can conclude that data which has been analyzed summarized or processed in some other fashion to produce a message or report which is conveniently deemed “management Information” only becomes information if it is understood by the recipient. Therefore it the user who determine whether a report contains information or just processed data [12].



## **2.3 Technology enhance computer software Based Online Clearance System**

According to Jeremy v Ernest, a comparison of traditional and hybrid online system in communication technology Online system has become a central element of the discourse on higher education [17].

There seems to be an overall derive towards online system given the Mountain need for flexibility in scheduling and the daily emergency of communication technology and capabilities [9].

Online system is presented as a means of conveying instruction to an extensive learning community any place at any time. Indicate that adequate designate online learning as the driving force and model for transformation in teaching, learning and formal schooling online course has the potential to provide learner individualized attention by the instructor, otherwise impossible in a large classroom environment [11].

With the continued development of online system applications, many colleges and universities has begun to offer online courses as an alternative to traditional face-to-face instructions. 67% of colleges and universities agreed that online education is the most logical long term strategies for their institutions [7].

However, there are considerable hesitations rising predominantly related Quality and The candidate respectively to online system, just as their advantages there are also disadvantages to the online system instruction delivery method.

There is evidence through previous research that The candidate fill isolated or disconnected when not engaged in traditional face- to- face instruction, while other report indicate large success. There remains a lack of clarity whether online courses are as affective as traditional courses [8].

While there has been vast amount of research conducted on the advantages and the disadvantages of online system institution, little is known on how assessment is used in online classroom to monitor performance and progress (Liang and Jeremy v Ernest Jeremy\_ernest @ NCSU.edu) is an assistant professor in the department of mathematics science and technology education at North Carolina state university Ralugh.

Describe the evaluation of current online education system at three levels; the macro level, the mesa level and micro level. The macro level is an online evaluation that access an entire online program, the mesa level evaluation access individual online courses, and the micro level access the learning of the online student [7].

Free enginner system present educational experience very different from standard face-to-face environment. When conducting a micro level courses evaluation, interest commonly lies in learner perception of the course experience pertaining to the level of comfort, ability to Communicate with class mate and the instructor, as well as comparison to traditional face-to-face lecture.

Many times the only means of evaluating learner perception is in the form of a questionnaire or survey. Although perception of online system

can be extremely useful information, it is usually not sufficient to conclude the evaluation without expanding to learners understanding.

## **2.4 Computer-Based Online Information System**

An information specialist define computer based management information system as the combination of human and computer based resource that result in the collection, storage, retrieval, communication and use of data for the purpose of efficient management of operations And for business planning.

Computer based information system is a feature of all large organization nowadays. The literature identifies four kinds of computer based information: Transaction processing system (TPS), management information system (MIS), decision support system (DSS) and executive Support system (ESS). Some system record routine activities: Employees hired, material purchased or produced and the like. Such recorded events are called transactions.

Other system uses this recorded event to help managerial planning and control. The systems form a pyramid each primarily supporting one another level of management [10].

a. Transaction processing system (TPS): these system record day-to-day transactions such as customer order, bills, inventory levels and production output. The TPS helps supervisors by generating data base that act as foundation for other information system

b. Management information system (MIS). These summarize the detailed data of the transaction processing system standard report for middle level managers. Such report might include production schedules and budget summarizes.

c. Decision support system (DSS); The DSS provide the flexible tools for analyzes. The DSS help middle level managers and other in the organization analyze a wide range of problem, such as effect of event and trend outside the organization. Like the MIS, the DSS draws on the Detailed data of transaction processing system.

d. Executive support system (ESS): The ESS is easy to use systems that present information in a very highly summarized form. It helps top level management to oversee the company operation and develop strategic plans. The ESS combines internal data from TPS and MIS with External data.

## **2.5 Java-script:**

Is the object-oriented language created by James Golling during his work at Sun Microsystems Labs the Java language was developed by C ++, and when it was born, it was called "OAK" in the sense of an oak tree. It was the tree that he saw from the window of his office.

He worked in Sun Microsystems Labs , And then change the name to Java, this name (unusually in the naming of programming languages) is not the first letters of the words of a particular sentence or expression in a certain sense, but just the name of his Of its advantages:

1. The ease.
2. Supporting and directing entities.
3. Easy to get.
4. Safe.
5. Removable and operational.
6. Add motion and audio to web pages.
7. Write games and programs.
8. Create programs with graphical user interface.

Software design that benefits from all the advantages of the Internet. Java provides an interactive web environment and is therefore used to write Internet tutorials through computer simulation software for scientific experiments and virtual classroom software for e-learning and distance learning. Java is not only effective in the web, but also enables us to create programs for personal and professional use

## **2.6 Hyper Text Markup Language (HTML):**

Is a markup language used to create and design pages and websites, and is one of the oldest and most widely used languages in web page design. HTML describes the structure of a web page and gives the web browser a description of how it displays its contents. It teaches it to be a headline, a paragraph, and much more. HTML uses what is known as 'tags' to issue instructions to the browser

## **2.7 CSS:**

It is designed to isolate formatting (colors, fonts, buttons, etc.) on the content of the written document (e.g. in HTML). This applies to colors, fonts, images and backgrounds used in pages, flexibly and complete ease.

## **2.8jQuery:**

Is a JavaScript-specific library that summarizes many repetitive scripts and known tasks to facilitate programming.

# CHAPTER THREE

## PRACTICAL PART

### **3.1 Chapter Summary:**

- 1- Main page description.
- 2-dictionary of definitions.
- 3- Maps.
- 4-Basic bulding steps.
- 5- Calculation of quantities.



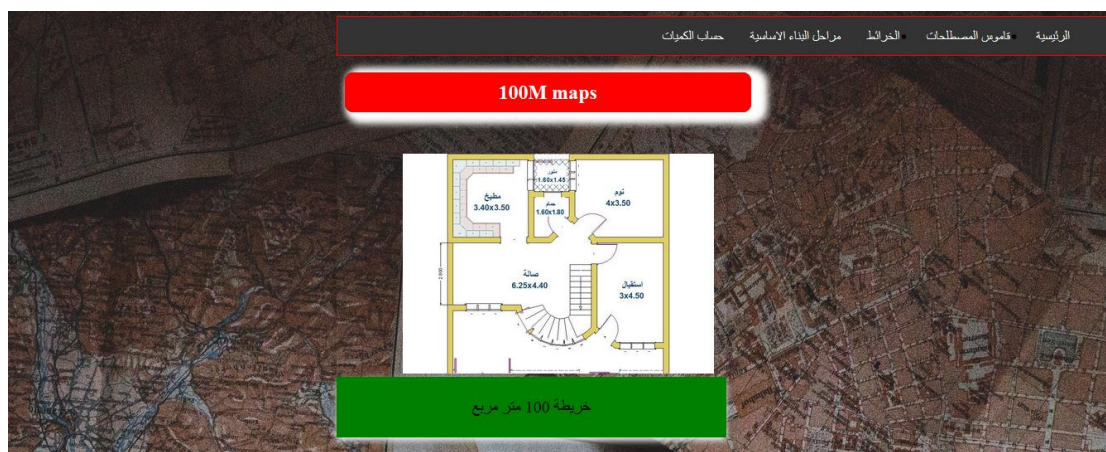
### 3.2 Home Page



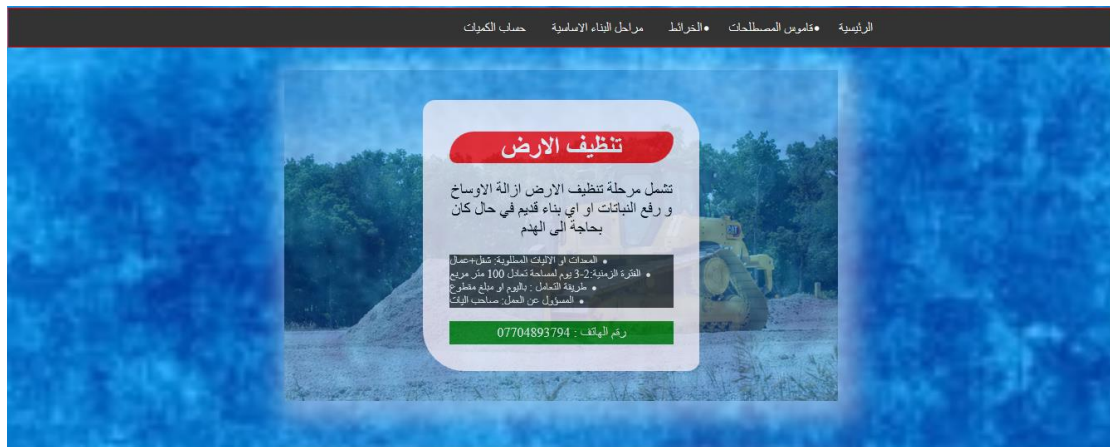
### 3.3 dictionary of definitions



### 3.4 Maps



### 3.4.1 Basic bulding steps.



### 3.4.2 Calculation of quantities.

الاساس الهيكل دفن الارض التسليح صب بناء الجدران

## الهيكل

height

width

المساحة = 112.5 متر مربع

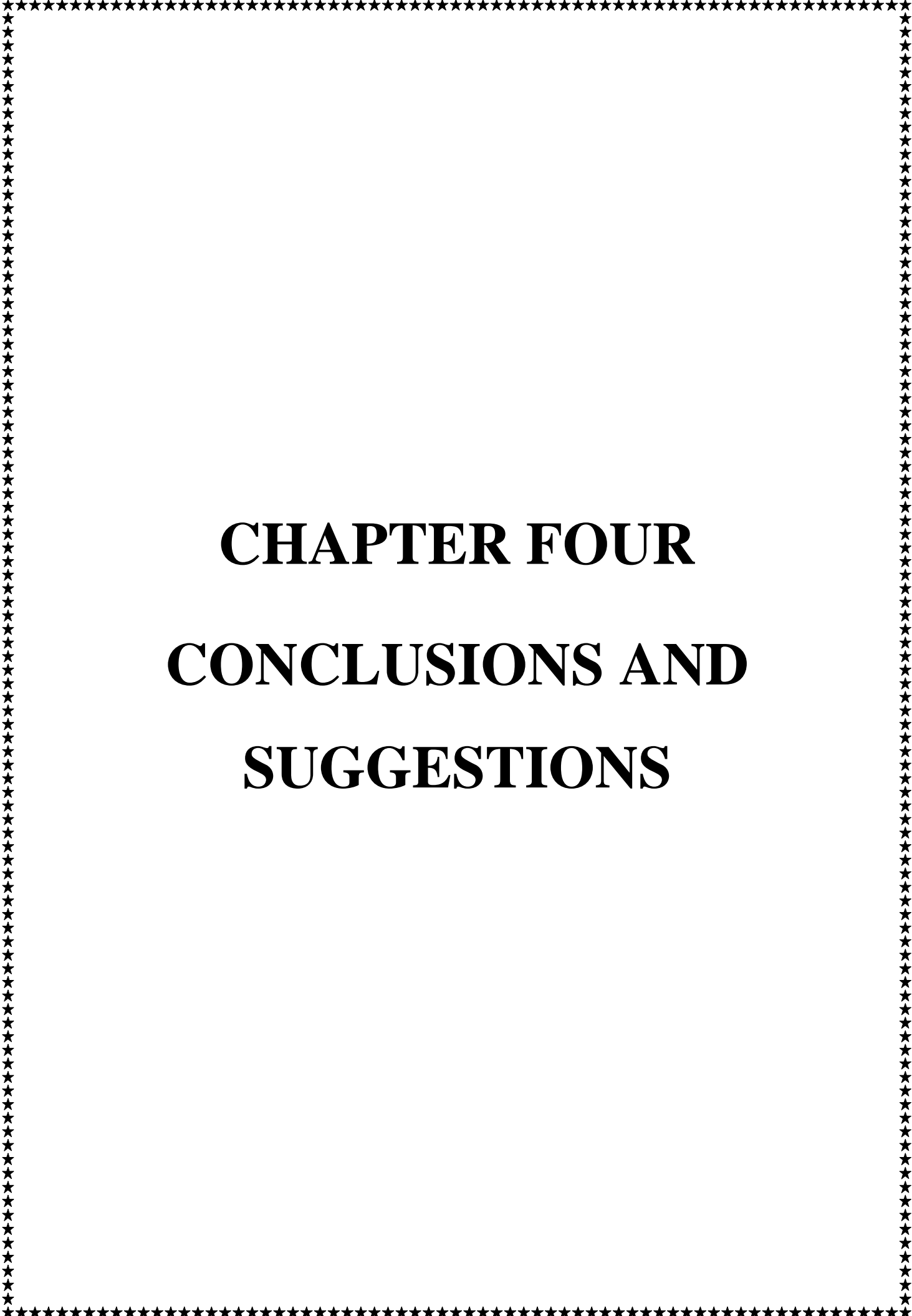
كمية الشيش = 2 طن

كمية الحصو = 18 متر مكعب

كمية الرمل = 22 متر مكعب

كمية السمنت = 10 طن

كمية الطابوق = 14625 طابوقة



# **CHAPTER FOUR**

## **CONCLUSIONS AND**

## **SUGGESTIONS**

## **4.1 Conclusions**

In this research we have built Free Engineer system at the internet using Java script application language, which added high flexibility in the data process providing data. Finally, our project is able to find the final result of the applicant or individual and then print the remote result. This ,application provides a convenient service for both applicants Time and effort in the submission process

## **4.2 Suggestions**

Our suggestions for future work are:

1. We aspire to add new tools for security .
2. Wish to adopt the system to be used at all world.

## References

- [1] Singhal, A., & Rogers, E. M. (1989). Indias information revolution.
- [2] Fagerberg , J. (1987). A technology gap approach to why growth rates differ. Research policy, 16(2), 87-99.
- [3] Sansanwal , D.N.: Information Technology and Higher Education. UNIVERSITY NEWS, Vol. 38, No. 46, 2000.
- [4] Funk M. (1980). Perspective in education planning. Ibadan, Nigeria Odun prints and pack, Agbowo.
- [5] Anigbogu G. (2000). Systematic planning for educational change. California: Mayfield publishing company.
- [6] Chimezie F. (2000). “Use of local area network in school. ERIC Digest” Syracus , NY: ERIC Clearinghouse on information resources.
- [7] Obilikwu N.(1995). Records management project Ibadan, Nigeria. Adeyomi printing press.
- [8] Hewlett M. (1993). The internet in education column: \*special issue+. “internet world”, 6 (10).
- [9] Tarlor M. (1980). Education and training achieve and records manager in the Africa. Ibadan, Nigeria: Odun publishing company.
- [10] Lucey I. (1991). Managing record in the Moden office. Training the wild frontier. Archivaria 39 (spring).
- [11] Enwere J.C. (1992). Records managements in Nigeria: to be or not to be?  
Nigeria library or information science review. Lagos, Nigeria: Akin publishing ltd.
- [12] Oketunji S.F.(2002). Information provision to academic research and

development organization in the 21<sup>st</sup> century.

The information manager 2 (1).

[13] Clifton E.B. (1983). Management of records in Nigerian Universities. Problems and prospect. The flectional library 23 (30).

[17] IDAutomation.com, Inc. | IDAutomation.com, Inc. and Benjamin Johnson, Technical Support & Development