CHAPTER ONE

1.0 INTRODUCTION

E-learning refers to the use of various kinds of electronic media and information and communication technologies (ICT) in education. E-learning is an inclusive terminology that encompasses all forms of educational technology that electronically or technologically support learning and teaching. Depending on whether a particular aspect, component or delivery method is given emphasis, e-learning may be termed technology-enhanced learning (TEL), computer-based training (CBT), internet-based training (IBT), web-based training (WBT), online education, virtual education, or digital educational collaboration.

E-learning includes numerous types of media that deliver text, audio, images, animation, and streaming video, and includes technology applications and processes such as audio or video tape, satellite TV, CD-ROM, and computer-based learning, as well as local intranet/extranet and web-based learning. Information and communication systems, whether free-standing or based on either local networks or the Internet in networked learning, underlay many e-learning processes.

E-learning can occur in or out of the classroom. It can be self-paced, asynchronous learning or may be instructor-led, synchronous learning. E-learning is suited to distance learning and flexible learning, but it can also be used in conjunction with face-to-face teaching, in which case the term blended learning is commonly used.

It is commonly thought that new technologies make a big difference in education.[2] Many proponents of e-learning believe that everyone must be

equipped with basic knowledge of technology, as well as use it as a medium to reach educational goal.

1.1 Background of study

E-learning is an inclusive terminology for all forms of educational technology that electronically or technologically support learning and teaching. Bernard Luskin advocates that the "e" should be interpreted to mean "exciting, energetic, enthusiastic, emotional, extended, excellent, and educational" in addition to "electronic." This broad interpretation focuses on new applications and developments, and also brings learning and media psychology into consideration.

The worldwide e-learning industry was estimated to be over $48 billion in 2000 according to conservative estimates. Developments in internet and multimedia technologies are the basic enabler of e-learning, with consulting, content, technologies, services and support being identified as the five key sectors of the e-learning industry. Information and communication technologies (ICT) are used extensively by young people.

E-learning has given people in college accessibility to data, wherever one looks data of e-learning is there, there are many different sometimes mobile devices as well as their many ways that these benefit people around the globe anytime, anywhere access to data. This can improve interactions between students and their instructors for their classes, this can allow students with tools which they can use for different purposes and use independently supports problem base actions. There are also ways that it can deter people from actually learning as pointed out, it may make it easier to chat taking someone away from learning and into talking to someone through Face book it also gives them the ability to cheat through online test and quizzes having the ability to look for the

answer using Google it always a possibility. This also can give tech-savvy students an advantage over non-technical students. Over all e-learning through technology will most likely be seen more and more in today's college environment. Approaches to e-learning require a focus on students providing them with tools to support their shared activities and problem based activities

1.2 Statement of the study

Student in tertiary institution suffers a lot of setback in external exams due to the type of teaching system which they receive. They don't have access to the internet and lack knowledge of what is obtainable in the society.

1.3 Aims and objectives

1. To facilitate the development of information technology
2. To reveal the use and technology of wireless network to the user.
3. To provide alternative way of attaining education
4. To implement a system which reduce examination mal- practice

1.4 Significance of the study

E-learning provides benefit for the organizations and individuals involved it reduces the cost of learning, examination and result processing institutions, it create access thereby enables people from any part of the world to be educated E-learning also functions in improving standard of education which Helps to eliminate inadequate like examination malpractice .

1.5 Scope of the study

Design and implementation of e- learning (A case study of computer Science and information and technology, caritas university Enugu), this project is a tutorial and design with VB

1.6 Limitation of the study

The rate of technology is moving at rapid speed and not everybody Understand how some of the tools used for this education process are used. Some people find it difficult to afford this form of learning and measurement, especially towards the cost of accessing the internet.

1.7 Definition of the terms

E-learning conducted with various kinds of electronic media, especially via the internet.

ICT-Information communication technologies are mostly used by young people.

TEL- Technology enhance learning

IBT-Internet based training

VLE-Visual learning environment

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Within the United States and Canada, the phrase "e-learning" is often treated by users as a synonym for "online learning" – a more recent term, the very construction of which implies a fundamental relationship between e-learning practices and Web-based technologies like the Internet (Barbour and Reeves, 2009; Stewart, 2004). However, as many educational scholars have pointed out, the earliest examples of e-learning practice significantly pre-date the invention of the Web, beginning with the invention of email in the early 1970s and continuing with the establishment of innovative "virtual schools" in the early 1990s (Barbour and Reeves, 2009; Harasim, 2000). Consequently, most educational scholars have rejected the synonymous use of the terms "e-learning" and "online learning," and promoted instead the development of more inclusive e-learning definitions, such as "the use of new information and communication technologies in education" (Bates, 2001). This movement to come to some practical consensus about scope of e-learning suggests a significant step in the collocation, and hence development, of future e-learning research. In the late 1990s and early 2000s, interest in e-learning, both scholarly and commercial, increased substantially, particularly in the United States, Canada, and Australia. Studies of American students in virtual programs at both the elementary and secondary level led researchers to tout e-learning's many benefits, including but not limited to its flexibility in geography and scheduling, its ability to address various learning styles, and its overall expansion of educational access to people in remote communities (Kellogg and Politoski, 2002; Cavenaugh et al, 2006). While some of these studies have since been criticized for not being based on

"robust [enough] research" (Barbour and Reeves, 2009), the general impression of, and evidence for e-learning as Paradigmatic shift in the field of education (Harasim 2000) remains basically intact. Indeed, according to a 2009 report on the state of online-based e-learning in U.S higher education Seaman, 2010), over 4.6 million American students took at least one online course during the fall 2008 academic term – a 17 percent increase over the number of students reported in fall 2008. With student participation in e-learning increasing in this way, a number of educational researchers – particularly those interested in post-secondary education – have attempted to explore variations in e-learning programs' curriculum designs, delivery modes, social communities, and instructional training methods (Bawane and Spector, 2009; Maher, 2009; Stewart, 2004; Bates, 2001). Furthermore, over the past five years, such explorations have gradually but distinctly shifted the geo-cultural scope of e-learning discussions beyond the boundaries of the North American and Australian higher education systems, and into the higher-education options of students in regions such as South Asia (Bawane and Spector, 2009), Africa (Muhirwa, 2009), the Netherlands (Vander Meij and Boersma, 2002), East Asia (Hseih, 2010; Rye, 2009), and Latin America (Hamuy and Galaz, 2010; Scagnoli, 2009; Cambell, 2008; Stewart, 2004; Valente, 2003). As a result of this widening and deepening of twenty-first century e-learning research, more results have also emerged in critique of the so-called "benefits" of certain e-learning models and components. For example, several authors have published recent papers highlighting the hidden costs of bringing e-learning to new countries' higher education systems, from the cost of putting in place a widely accessible national telecommunications infrastructure (Bates, 2001) to those costs associated with the establishment of national accreditation agencies for e-learning programs and institutions (Bollag, 2001). Such discussions of cost are particularly significant to researchers investigating the potential and/or presence

of e-learning programs in the most economically-challenged developing countries, and will likely play an important role in bringing together researchers interested in e-learning pedagogy with those who are more broadly interested in ICTs and global socio economics. One of the key geo-cultural regions that is just starting to draw serious attention from both e-learning scholars and ICT researchers is that of Latin America – in particular Latin American countries with large universities such as Brazil and Chile, as well as those with explicit ties to foreign, for-profit e-learning programs. Indeed, over the past three to five years, a significant number of for-profit companies have established e-learning programs in Latin America, moving in response to the unmet demand for higher education in developing countries in general (Campbell, 2008). Such companies, which include Bermuda-based Whitney International University System and Baltimore-based Laureate Education, are essentially unregulated entities, yet they have still managed to establish partnerships with many Latin American campuses, such as the Technological University of Mexico and the Latin University of Costa Rica (Campbell, 2008). Simultaneously, several major Latin American universities, like the Universidad de Chile in Santiago, have been begun to invest heavily into interactive e-learning technologies such as course management systems (CMSs). While researchers in both e-learning and ICT have been aware these trends for several years, studies are have only recently begun to appear regarding the effectiveness of such programs from a pedagogical perspective (Hamuy and Galaz, 2010; Scagnoli, 2009). What's more, in several of these studies, researchers noted a complex mix of enthusiasm for and resistance to e-learning in Latin American higher education institutions – a paradox explained, according to some, by a strong cultural interest for the technologies of e-learning, but a moderate disinterest towards the new pedagogical processes associated with e-learning in North America and elsewhere (Hamuy and Galaz, 2010; Valente, 2003). Consequently, issues of geo-culture-based pedagogical flexibility, or how

to improve the utilization of current e-learning technologies in Latin American institutes of higher education, will likely be fruitful grounds for future e-learning research, if not research into educational ICTs.

2.2 Approaches to e- learning

E-learning has evolved since technology was first used in education. There is a trend to move towards blended learning services, where computer-based activities are integrated with hands-on, face-to-face, or classroom-based situations.

Bates and Poole (2003) and the OECD (2005) suggest that different types or forms of e-learning can be considered as a continuum, from no e-learning, i.e. no use of computers and/or the Internet for teaching and learning, through classroom aids, such as making classroom lecture PowerPoint slides available to students through a course web site or learning management system, to laptop programs, where students are required to bring laptops to class and use them as part of a face-to-face class, to hybrid learning, where classroom time is reduced but not eliminated, with more time devoted to online learning, through to fully online learning, which is a form of distance education. This classification is somewhat similar to that of the Sloan Commission reports on the status of e-learning, which refer to web enhanced, web supplemented and web dependent to reflect increasing intensity of technology use. In the Bates and Poole continuum, 'blended learning' can cover classroom aids, laptops and hybrid learning, while 'distributed learning' can incorporate either hybrid or fully online learning.

It can be seen then that e-learning includes a wide range of applications and it is often by no means clear, even in peer reviewed research publications, which form of e-learning is being discussed. However, Bates and Poole argue that when instructors say they are using e-learning, this most often refers to the

use of technology as classroom aids, although over time, there has been a gradual increase in fully online learning.

Two popular tools for E-learning are Blackboard Inc. and Module:

Blackboard Inc. has over 20 million users daily. Offering six different platforms: Blackboard Learn, Blackboard Collaborate, Blackboard Mobile, Blackboard Connect, Blackboard Transact, and Blackboard Analytics; Blackboard's tools allow educators to decide whether their program will be blended or fully online, asynchronous or synchronous. Blackboard can be used for K-12 education, Higher Education, Business, and Government collaboration. decide whether their program will be blended or fully online, asynchronous or synchronous. Blackboard can be used for K-12 education, Higher Education, Business, and Government collaboration. Module is an Open Source Course Management System. It is free to download and provides blended learning opportunities as well as platforms for distance learning courses. The Module website has many tutorials for creating a program or becoming a Module student. ICT expenditures in education have differed within and between countries. Finland, Norway, Belgium and Korea appear to make best use of educational ICT.

2.3 Computer-based training

Computer-based learning or training (CBT) refers to self-paced learning activities delivered on a computer or handheld device. CBT often delivers content via CD-ROM, and typically presents content in a linear fashion, much like reading an online book or manual. For this reason, CBT is often used to teach static processes, such as using software or completing mathematical

equations. Computer-based training is conceptually similar to web-based training (WBT), the primary difference being that WBTs are delivered via Internet using a web browser.

Assessing learning in a CBT is often by assessments that can be easily scored by a computer such as multiple choice questions, drag-and-drop, radio button, simulation or other interactive means. Assessments are easily scored and recorded via online software, providing immediate end-user feedback and completion status. Users are often able to print completion records in the form of certificates. CBTs provide learning stimulus beyond traditional learning methodology from textbook, manual, or classroom-based instruction. For example, CBTs offer user-friendly solutions for satisfying continuing education requirements. Instead of limiting students to attending courses or reading printed manuals, students are able to acquire knowledge and skills through methods that are much more conducive to individual learning preferences. For example, CBTs offer visual learning benefits through animation or video, not typically offered by any other means.

CBTs can be a good alternative to printed learning materials since rich media, including videos or animations, can easily be embedded to enhance the learning.

However, CBTs pose some learning challenges. Typically the creation of effective CBTs requires enormous resources. The software for developing CBTs (such as Flash or Adobe Director) is often more complex than a subject matter expert or teacher is able to use. In addition, the lack of human interaction can limit both the type of content that can be presented as well as the type of assessment that can be performed. Many learning organizations are beginning to

use smaller CBT/WBT activities as part of a broader online learning program which may include online discussion or other interactive elements.

2.4 Collaborative learning

Computer supported collaborative learning (CSCL) uses instructional methods designed to encourage or require students to work together on learning tasks. CSCL is similar in concept to the terminology, "e-learning 2.0".

Collaborative learning is distinguished from the traditional approach in which the instructor is the principal source of knowledge and skills For example; the neologism "e-learning 1.0" refers to the direct transfer method in computer-based learning and training systems (CBL). In contrast to the linear delivery of Content, often directly from the instructor's material, CSCL uses blogs, wikis, and cloud-based document portals (such as Google Docs and Drop box). With technological Web 2. 0 distances, sharing information between multiple people in a network has become much easier and use has increased. [1] One of the main reasons for its usage states that it is "a breeding ground for creative and engaging educational endeavors.

Using Web2.0 social tools in the classroom allows for students and teachers to work collaboratively, discuss ideas, and promote information. According to Sandal (2008), blogs, wikis, and social networking skills are found to be significantly useful in the classroom. After initial instruction on using the tools, students also reported an increase in knowledge and comfort level for using Web 2.0 tools. The collaborative tools additionally prepare students with technology skills necessary in today's workforce.

2.5 Technology

There are many types of technologies used in the education system. Most e-Learning situations now use combinations of these techniques, including blogs, collaborative software, portfolios, and virtual classrooms.

2.6 Audio

The radio has been around for a long time and has been used in educational classrooms. Recent technologies have allowed classroom teachers to stream audio over the internet. There are also webcasts and podcasts available over the internet for students and teachers to download. For example, iTunes has various podcasts available on a variety of subjects that can be downloaded for free.

2.7 Videos

Videos may allow teachers to reach students who are visual learners and tend to learn best by seeing the material rather than hearing or reading about it. Teachers can access video clips through the internet instead of relying on DVDs or VHS tapes. Websites like YouTube are used by many teachers. Teachers can use messaging programs such as Skype, or webcams, to interact with guest speakers and other experts. Interactive video games are being integrated in the curriculum at both K-12 and higher education institutions.

2.8 Computer, laptops, and tablets

Having a computer or laptop in the classroom allows students and teachers access to websites and other programs, for example, Microsoft Word, PowerPoint, PDF files, and images.

2.9 Blogging

Blogs allow students and teachers to post their thoughts, ideas, and comments on a website. Blogging allows students and instructors to share their thoughts and comments on the thoughts of others which could create an interactive learning environment.

2.10 Mobile devices

Mobile devices such as smart phones operate similarly to personal computers.

2.11 Learning managements

Learning management systems, for example, Blackboard or Module, are internet based applications that institutions used to reach their students. It allows educators to create and deliver course material using the internet. Educators can post announcements, grade assignments, check on course activity, and participate in class discussions. Students can submit their work, read and respond to discussion questions, and take quizzes.

2.12 Whiteboards

Interactive whiteboards ("smart boards") allow teachers and students to write on the touch screen, so learning becomes interactive and engaging. Webcams Video cameras that allow you to connect to the internet and see other internet users. Allows students to become engaging and be able to see who everyone is.

2. 13 Educational technology

Along with the terms *learning technology*, *instructional technology*, the term Educational Technology is generally used to refer to the use of technology in learning in a much broader sense than the computer-based training or

Computer Aided Instruction of the 1980s. It is also broader than the terms *Online Learning* or *Online Education* which generally refer to purely web-based learning. In cases where mobile Technologies are used; the term M- learning has become more common. E-learning, however, also has implications beyond just the technology and refers to the actual learning that takes place using these systems.

In higher education especially, the increasing tendency is to create a Virtual learning environment (VLE) (which is sometimes combined with a Management information System MIS to create a Managed Learning Environment) in which all aspects of a course are handled through a consistent user interface standard throughout the institution. A growing number of physical universities, as well as newer online-only colleges, have Begun to offer a select set of academic degree and certificate programs via the Internet at a wide range of levels and in a wide range of disciplines. While some programs require students to attend some campus classes or orientations, many are delivered completely online. In addition, several universities offer online student support services, such as online advising and registration, e-counseling, online textbook purchase, student governments and student newspapers.

E-learning can also refer to educational web sites such as those offering learning scenarios, worksheets and interactive exercises for children. The term is also used extensively in the business sector where it generally refers to cost-effective online training.

The recent trend in the E-learning sector is screen casting. There are many screen casting tools available but the latest buzz is all about the web-based screen casting tools that allow users to create screen casts directly from their browser and make the video available online so that the viewers can stream the video

directly. The advantage of such tools is that it gives the presenter the ability to show his ideas and flow of thoughts rather than simply explain them, which may be more confusing when delivered via simple text instructions. With the combination of video and audio, the expert can mimic the one-on-one experience of the classroom and deliver clear, complete instructions. From the learner's point of view this provides the ability to pause and rewind and gives the learner the advantage of moving at their own pace, something a classroom cannot always offer.

Research on the use of video in lessons is preliminary, but early results show an increased retention and better results when video is used in a lesson. Creating a systematic video development method holds promise for creating video models that positively impact student learning Blended teaching, learning, and techniques, blended learning is where students get their education through traditional learning in classrooms and instruction through computer or other tech devices, this is meant as a way to use both online and in class tools while gain the same knowledge without the need to always see your teacher or other classmates This still allows teachers to have some control over information given to students, blended learning combines teacher-led instruction and online instruction using computers and other such means of mobile devices. In addition to flexibility and convenience for students, according to research there is evidence that a blended approach can result in learning outcome gains for those using blended learning approach.

2.14 COMMUNICATIOAL TECHNOLOGY

Communication technologies are generally categorized as asynchronous or synchronous. *Asynchronous* activities use technologies such as blogs, wikis, and discussion boards. The idea here is that participants may engage in the exchange

of ideas or information without the dependency of other participants' involvement at the same time. Electronic mail (Email) is also asynchronous in that mail can be sent or received without having both the participants' involvement at the same time. Asynchronous learning also gives students the ability to work at their own pace. This is particularly beneficial for students who have health problems or have child care responsibilities and regularly leaving the home to attend lectures is difficult. They have the opportunity to complete their work in a low stress environment and within a more flexible time frame *Synchronous* activities involve the exchange of ideas and information with one or more participants during the same period of time. A face-to-face discussion is an example of synchronous communications. In an "E" learning environment, an example of synchronous communications would be a Skype conversation or a chat room where everyone is online and working collaboratively at the same time. *Synchronous* activities occur with all participants joining in at once, as with an online chat session or a virtual classroom or meeting. Virtual classrooms and meetings can often use a mix of communication technologies. One example of web conferencing software that enables students and instructors to

Communicate with each other via webcam, microphone, and real-time chatting in a group setting, is Adobe Connect, which is sometimes used for meetings and presentations. Participants in a virtual classroom can also use icons called emoticons to communicate feelings and responses to questions or statements. Students are able to 'write on the board' and even share their desktop, when given rights by the teacher. Other communication technologies available in a virtual classroom include text notes, microphone rights, and breakout sessions. Breakout sessions allow the participants to work collaboratively in a small group setting to accomplish a task as well as allow the teacher to have private conversations with his or her students.

The virtual classroom also provides the opportunity for studentsS to receive direct instruction from a qualified teacher in an interactive environment. Students have direct and immediate access to their instructor for instant feedback and direction. The virtual classroom also provides a structured schedule of classes, which can be helpful for students who may find the freedom of asynchronous learning to be overwhelming. The virtual classroom also provides a social learning environment that replicates the traditional "brick and mortar" classroom. Most virtual classroom applications provide a recording feature. Each class is recorded and stored on a server, which allows for instant playback of any class over the course of the school year. This can be extremely useful for students to review material and concepts for an upcoming exam. This also provides students with the opportunity to watch any class that they may have missed, so that they do not fall behind. It also gives parents the ability to monitor any classroom to ensure that they are satisfied with the education their child is receiving.

In *asynchronous* online courses, students proceed at their own pace. If they need to listen to a lecture a second time, or think about a question for awhile, they may do so without fearing that they will hold back the rest of the class. Through online courses, students can earn their diplomas more quickly, or repeat failed courses without the embarrassment of being in a class with younger students. Students also have access to an incredible variety of enrichment courses in online learning, and can participate in college courses, internships, sports, or work and still graduate with their class.

In many models, the writing community and the communication channels relate with the E-learning and the MIS learning communities. Both the communities provide a general overview of the basic learning models and the activities

required for the Participants to join the learning sessions across the virtual classroom or even across standard classrooms enabled by technology. Many activities, essential for the learners in these environments, require frequent chat sessions in the form of virtual classrooms and/or blog meeting

2.15 Learning management system

A learning management system (LMS) is software used for delivering, tracking and managing training/education. LMSs range from systems for managing training/educational records to software for distributing courses over the Internet and offering features for online collaboration. The creation and maintenance of comprehensive learning content requires substantial initial and ongoing investments of human labor. Effective translation into other languages and cultural contexts requires even more investment by knowledgeable personnel. An LMS allows for teachers and administrators to track attendance, time on task, and student progress. LMS also allows for not only teachers and administrators to track these variables but parents and students as well. Parents can log on to the LMS to track grades. Students log on to the LMS to submit homework and to access the course syllabus and lessons.

2.16 Computer –aided assessment

Computer aided assessment (also but less commonly referred to as e - assessment), ranging from automated multiple-choice tests to more sophisticated systems is becoming increasingly common. With some systems, feedback can be geared towards a student's specific mistakes or the computer can navigate the student through a series of questions adapting to what the student appears to have learned or not learned.

The best examples follow a formative Assessment structure and are called "Online Formative Assessment". This involves making an initial formative Assessment by sifting out the incorrect answers. The author/teacher will then explain what the pupil should have done with each question. It will then give the pupil at least one practice at each slight variation of sifted out questions. This is the formative learning stage. In LAMS V2.elearning has been replacing the traditional settings Learning design is the type of activity enabled by software that supports sequences of activities that can be both adaptive and collaborative. The IMS Learning design specification is intended as a standard format for learning designs and IMS LD Level A is supported due to its cost effectiveness.

CHAPTER THREE

3.0 METHODOLOGY AND ANALYSIS OF THE EXISTING SYSTEM

3.1 Introduction

In the analysis of the existing system , the information gathered were analyzed and restricted in a more relevant and useful data .Data analysis that was gotten was based on the identification of the basic needs and also the structure of project .The data gatherer shows that they are analyze restructured in a way that the subsystem were system achieve efficiently. Learning facilities were provided in this e-learning system which helps greatly in learning package .There are also facilities for testing of knowledge

3.2 Methodology of data collection

After achieving software requirement, the next step was to source for information relative to the subject. Information gathering can be gotten through different sources.

1. Checking of result and calculating of great point together with credit load.
2. Testing the ability of students.
3. Knowing the reasons and importance of e-learning.
4. Specifically in computer.
5. Opportunity of reading e-books with other relevant articles.
6. Personal observation.

3.3 Objectives of the existing system

The objective of the system is to develop a good E-Learning system that will help in teaching and acquiring knowledge in technology to the students.

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┌──────────────────────────────────────┐
│              Home page               │
└──────────────────────────────────────┘
                   │
          ┌────────────────────┐
          │   Student login    │
          └────────────────────┘
                   │
   ┌───────────────┼─────────────────────┐
   │               │                     │
┌──────────┐  ┌──────────────┐  ┌──────────────────┐
│Start Quiz│  │Result checking│ │ Computer books   │
└──────────┘  └──────────────┘  └──────────────────┘
```
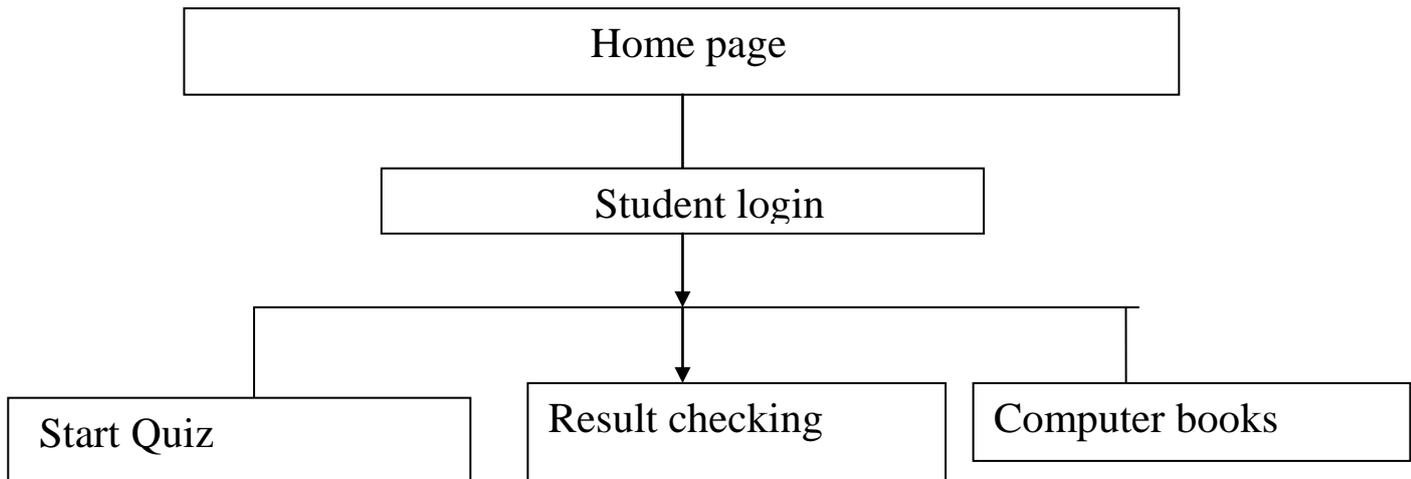
Fig 3.1 Information flow chart.

3.4 Input analysis

The student login forum is the input of the new system, the course registration, and the result checking and computer science courses these types of forums are gotten through the case study (Caritas University Computer Science).

3.5 PROCESS ANALYSIS

This is the process whereby you check for the correct answer and if you are unable to supply the answer, the software will then provide the correct answer for you.

3.6 Output analysis

E-learning is the major part of the output analysis.

3.7 Problem of the current system.

E-Learning plays a major role in education because without E-learning it will be very hard for people to understand and learn fast. Qualified teachers are very scarce. So there should be a system that can be used to train student in terms of learning.

3.8 Justifications for the new system

The organization and individuals benefit a lot from e-learningS because it provides student with the opportunity to learn fast and have a good knowledge with e-learning one can have access to the internet to be more acquainted globally which makes learning more obtainable, affordable.

CHAPTER FOUR

4.0 DESIGN AND IMPLEMENTATION OF THE NEW SYSTEM

4.1 Design standards

The new system is design to work with the standard software development procedure .It is software structural that designed to meet up with student's requirements and also has a structure that can detect every activity that takes place in the system. This e-learning is placed in VB 6.0 codes access the performance of students.

4.2 Output specification and design

The output from the system is in the VB 6.0 Potable Document File (pdf) format page and it is open for everybody that wants to have access to it and can also be printed out any time.

4.3 Input specification and design

The input to the system comes from three forms .the first one is the quiz form, secondly the checking of result and the last one is the computer science books.

Question	
Option A	
Option B	
Option C	
Answer	

Fig4.1 Question form

Question	
Answer	

Fig 4.2 Computer science books

Your name	
Your question	

Fig4.3 Result checking

4.4 File design

SQL was used in the design .There are four tables used in the design the student login, the admin login, the question structure, and forum structure

Field Name	Field Type	Collation
Id-	Int-(50)	
Username	Varcher(50)	Utf-general-ci
Password	Varcher(30)	Utf-general-ci

Fig 4.4: Student loging database structure

Field Name	Field Type	Collation
Id-	Int(11)	
Username	Varcher	Utf-general-ci
Password	Varcher	Utf-general-ci

Fig 4.5 Admin login

Field Name	Field Type	Collation
Id-	Int(11)	
Question	Varcher(60)	Utf-general-ci
Option 1	Varcher(60)	Utf-general-ci
Option2	Varcher(60)	Utf-general-ci
Option3	Varcher(60)	Utf-general-ci
Option4	Varcheer(60)	Utf-general-ci

Fig 4.6 Question structure

Field name	Field type	Collation
Id-	Int(50)	Utf-general-ci
Name	Varcher	Utf-general-ci
Question	Varcher	Utf-general-ci

Fig 4.7 class forum structure

Procedure chart

Home page

Student login

Class forum

Read book

Start quiz
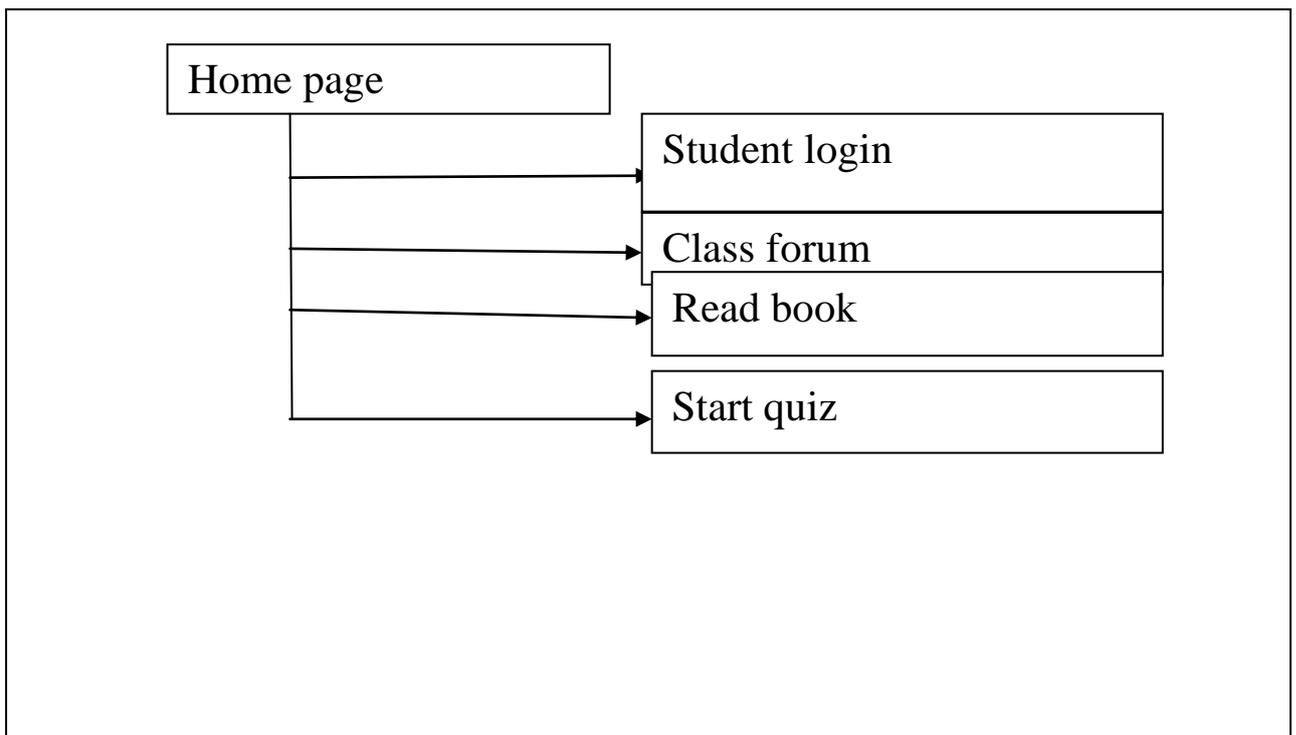
Fig4.8 Procedure chart

System Flowchrt
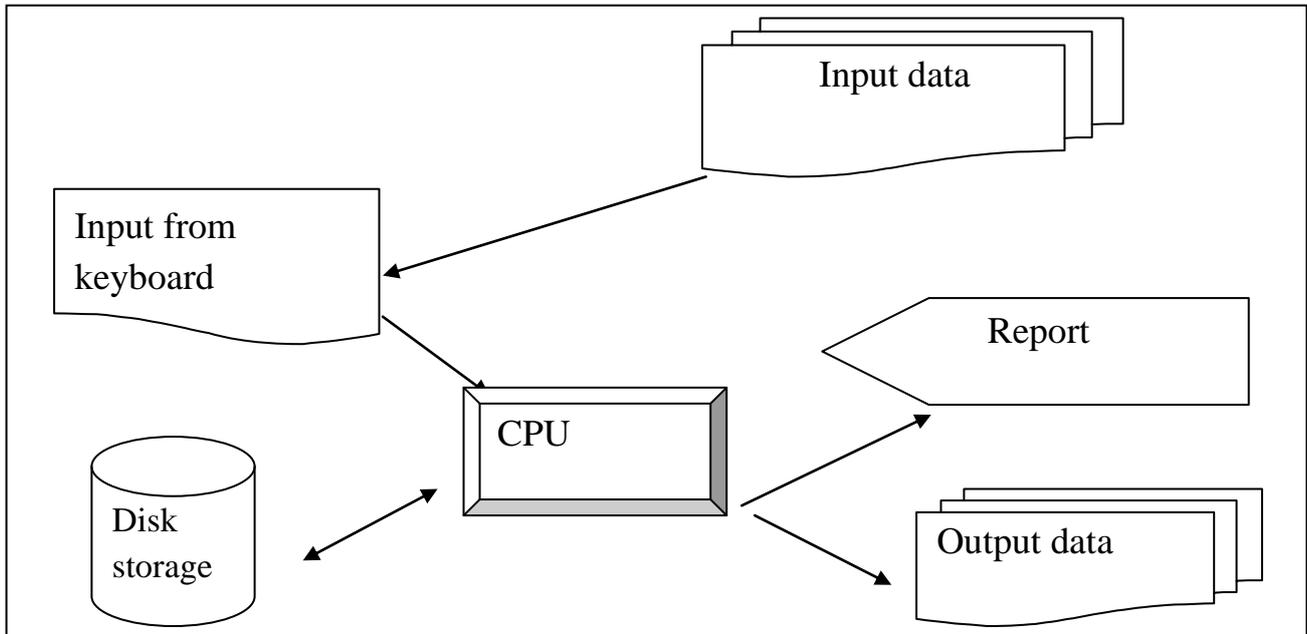
Fig 4.9 System Flowchart

4.5   System requirements

The new system was develop using the following software which can make it to function effectively

1. Intel core 13 computer system
2. 252 KB RAM
3. At least 40 GB hard disk
4. Enhanced keyboard
5. Color monitor
6. Uninterrupted power supple

4.6   Software requirements

The software was developed using the following

1. Visual Basic 6.0

2. Window XP

3. Graphical application

4 .7 Operational requirment

Visual Basic application is needed so that the new system can function effectively.

4.8 Personal   requirement

A computer system that has visual basic installed in it.

4.9 PROGRAM FLOW CHART
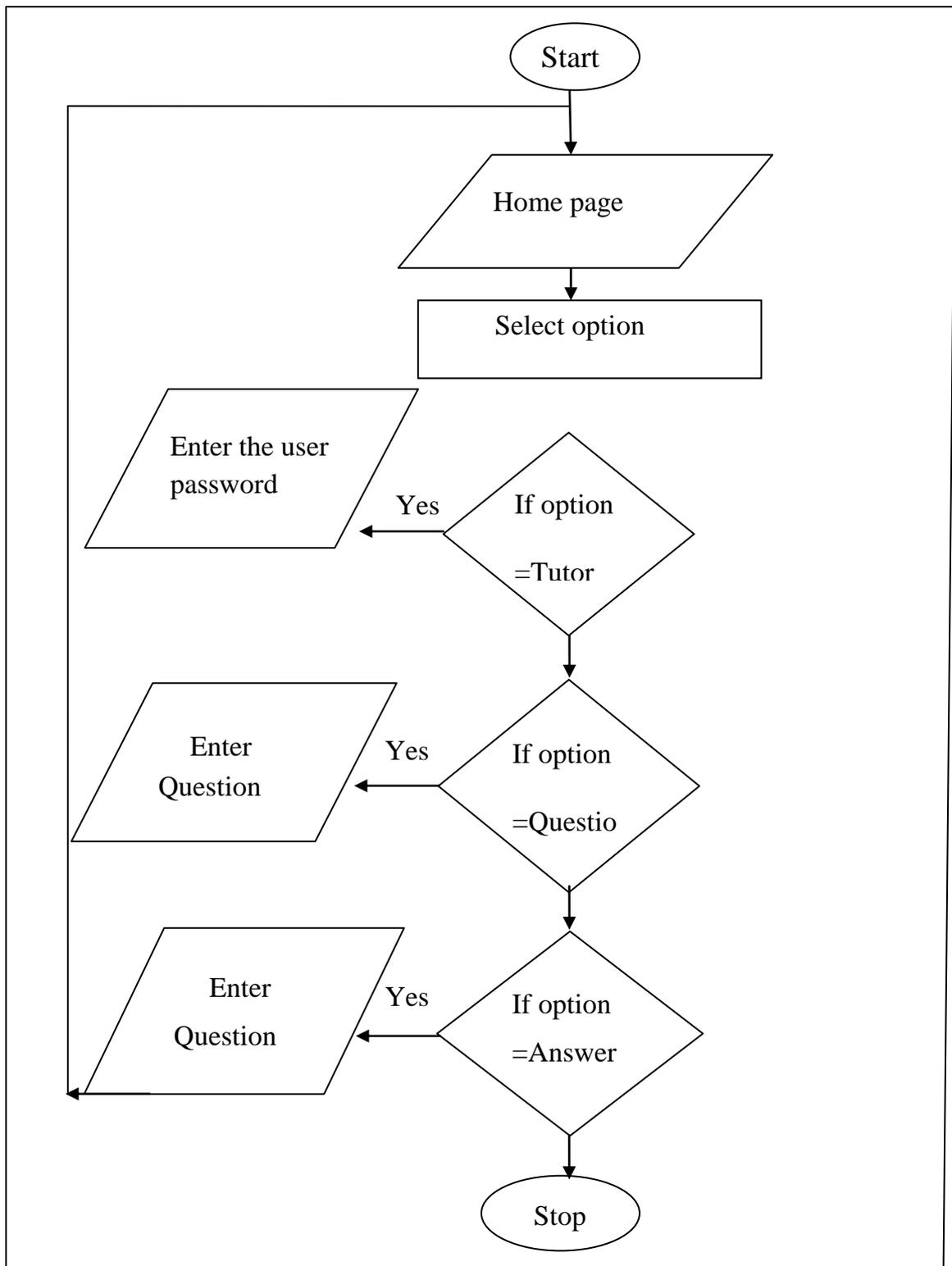
Fig 4.10 Program flow Chart
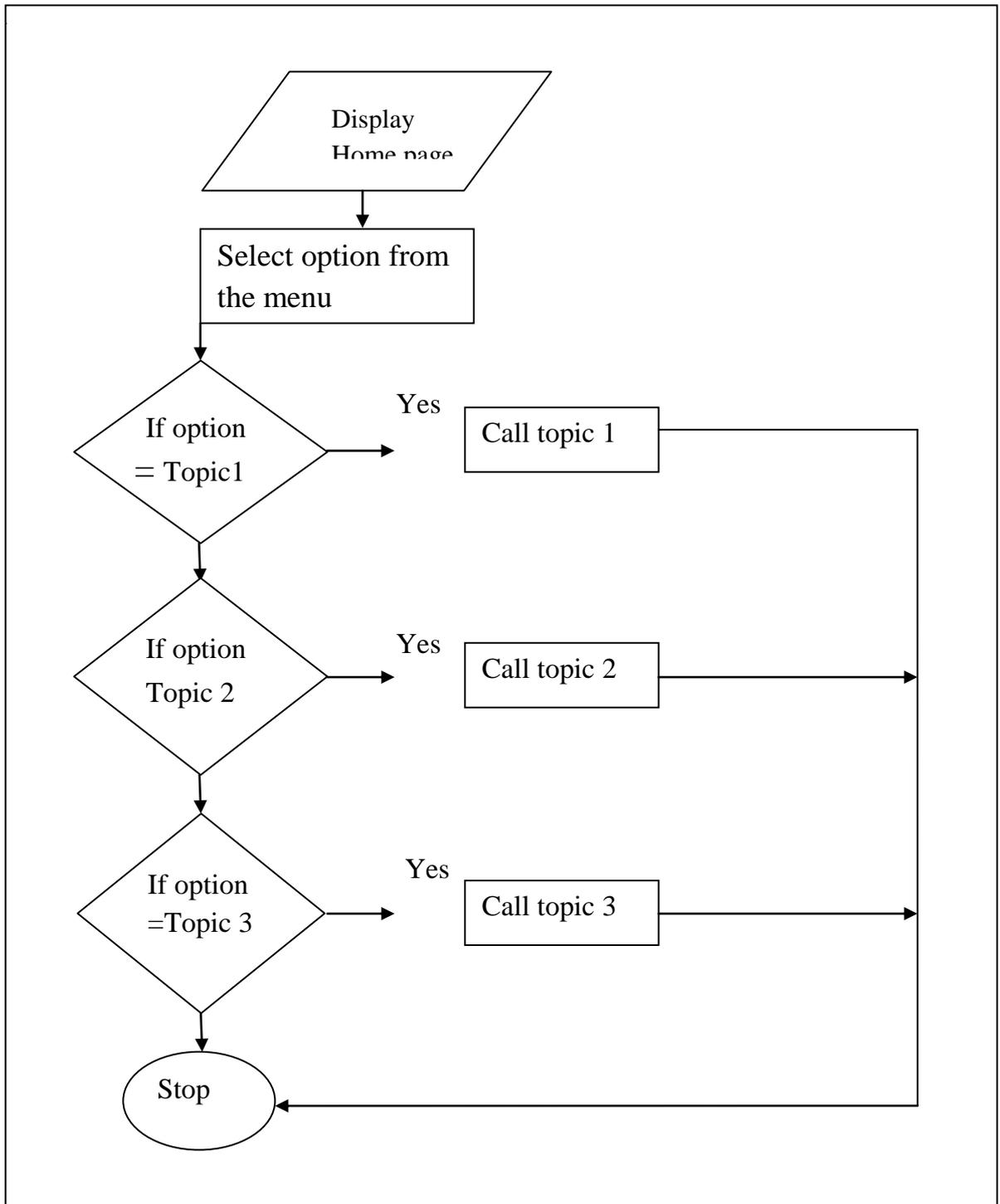
Fig 4.11 program flowchart

CHAPTER FIVE

5. O Summary, Conclusion and Recommendation

In the completion of this project work, the following achievements was made

1. Design and development of a computerized tutor.
2. Checking result was also design to help students check their results and also know their CGPA. You can as well test student's ability by answering the quiz question.
3. Computer science courses were also included to enable students to read courses and E-books.
4. The need of Visual basic is to design an application.

5.2 Conclusion

E-learning system as developed in this project will assist the user to test the knowledge of people around and means of accessing the understanding increases. With the advent of information in our developing and developed world, learning facilities are now on the increase .E-learning has added a lot of advantages to the training institutes as it teaches student and test their knowledge and add a lot of advantages to education standard as it reduces examination malpractice in our country.

5.3 Recommendation

E-learning should be use as part of teaching standard in education to enable the student to acquire more knowledge.

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Appendix A

Program source codes

```
Private Sub cmdcal_Click()

Dim intUnit1 As Integer

Dim intUnit2 As Integer

Dim intUnit3 As Integer

Dim intUnit4 As Integer

Dim intUnit5 As Integer

Dim intUnit6 As Integer

Dim intUnit7 As Integer

Dim intUnit8 As Integer

Dim intass1 As Integer

Dim intass2 As Integer

Dim intass3 As Integer

Dim intass4 As Integer

Dim intass5 As Integer

Dim intass6 As Integer

Dim intass7 As Integer
```

```
Dim intass8 As Integer

Dim intquiz1 As Integer

Dim intquiz2 As Integer

Dim intquiz3 As Integer

Dim intquiz4 As Integer

Dim intquiz5 As Integer

Dim intquiz6 As Integer

Dim intquiz7 As Integer

Dim intquiz8 As Integer

Dim intexam1 As Integer

Dim intexam2 As Integer

Dim intexam3 As Integer

Dim intexam4 As Integer

Dim intexam5 As Integer

Dim intexam6 As Integer

Dim intexam7 As Integer

Dim intexam8 As Integer

Dim curtotal1 As Currency
```

```
Dim curtotal2 As Currency

Dim curtotal3 As Currency

Dim curtotal4 As Currency

Dim curtotal5 As Currency

Dim curtotal6 As Currency

Dim curtotal7 As Currency

Dim curtotal8 As Currency

Dim curgrade1 As Currency

Dim curgrade2 As Currency

Dim curgrade3 As Currency

Dim curgrade4 As Currency

Dim curgrade5 As Currency

Dim curgrade6 As Currency

Dim curgrade7 As Currency

Dim curgrade8 As Currency

Dim curaverage As Currency

Dim curtotalunit As Currency

Dim curpoint1 As Currency
```

```vb
Dim curpoint2 As Currency

Dim curpoint3 As Currency

Dim curpoint4 As Currency

Dim curpoint5 As Currency

Dim curpoint6 As Currency

Dim curpoint7 As Currency

Dim curpoint8 As Currency

Dim curTotalpoint1 As Currency

Dim curTotalpoint2 As Currency

Dim curTotalpoint3 As Currency

Dim curTotalpoint4 As Currency

Dim curTotalpoint5 As Currency

Dim curTotalpoint6 As Currency

Dim curTotalpoint7 As Currency

Dim curTotalpoint8 As Currency

Dim curlblover As Currency

'If IsNumeric(txtu1.Text) Then

 If IsNumeric(txta1.Text) Then
```

```
intUnit1 = Val(txtu1.Text)

intUnit2 = Val(txtu2.Text)

intUnit3 = Val(txtu3.Text)

intUnit4 = Val(txtu4.Text)

intUnit5 = Val(txtu5.Text)

intUnit6 = Val(txtu6.Text)

intUnit7 = Val(txtu7.Text)

intUnit8 = Val(txtu8.Text)

intass1 = Val(txta1.Text)

intass2 = Val(txta2.Text)

intass3 = Val(txta3.Text)

intass4 = Val(txta4.Text)

intass5 = Val(txta5.Text)

intass6 = Val(txta6.Text)

intass7 = Val(txta7.Text)

intass8 = Val(txta8.Text)

intquiz1 = Val(txtq1.Text)

intquiz2 = Val(txtq2.Text)
```

```
intquiz3 = Val(txtq3.Text)

intquiz4 = Val(txtq4

intquiz5 = Val(txtq5.Text)

intquiz6 = Val(txtq6.Text)

intquiz7 = Val(txtq7.Text)

intquiz8 = Val(txtq8.Text)

intexam1 = Val(txte1.Text)

intexam2 = Val(txte2.Text)

intexam3 = Val(txte3.Text)

intexam4 = Val(txte4.Text)

intexam5 = Val(txte5.Text)

intexam6 = Val(txte6.Text)

intexam7 = Val(txte7.Text)

intexam8 = Val(txte8.Text)

curtotal1 = Val(lblt1.Caption)

curtotal2 = Val(lblt2.Caption)

curtotal3 = Val(lblt3.Caption)

curtotal4 = Val(lblt4.Caption)
```

```
curtotal5 = Val(lblt5.Caption)

curtotal6 = Val(lblt6.Caption)

curtotal7 = Val(lblt7.Caption)

curtotal8 = Val(lblt8.Caption)

curgrade1 = Val(lblg1.Caption)

curgrade2 = Val(lblg2.Caption)

curgrade3 = Val(lblg3.Caption)

curgrade4 = Val(lblg4.Caption)

curgrade5 = Val(lblg5.Caption)

curgrade6 = Val(lblg6.Caption)

curgrade7 = Val(lblg7.Caption)

curgrade8 = Val(lblg8.Caption)

curaverage = Val(lblscore.Caption)

curtotalunit = Val(lblunit.Caption)

curpoint1 = Val(lblp1.Caption)

curpoint2 = Val(lblp2.Caption)

curpoint3 = Val(lblp3.Caption)

curpoint4 = Val(lblp4.Caption)
```

```
curpoint5 = Val(lblp5.Caption)

curpoint6 = Val(lblp6.Caption)

curpoint7 = Val(lblp7.Caption)

curpoint8 = Val(lblp8.Caption)

curTotalpoint1 = Val(lbltp1.Caption)curTotalpoint2 = Val(lbltp2.Caption)

curTotalpoint3 = Val(lbltp3.Caption)

curTotalpoint4 = Val(lbltp4.Caption)

curTotalpoint5 = Val(lbltp5.Cap

curTotalpoint6 = Val(lbltp6.Caption)

curTotalpoint7 = Val(lbltp7.Caption)

curTotalpoint8 = Val(lbltp8.Caption)

End If

If IsNumeric(txta1.Text) Then

txta1 = Val(txta1.Text)

curtotal1 = intass1 + intquiz1 + intexam1

lblt1 = curtotal1

curTotalpoint1 = intUnit1 * curpoint1

lbltp1 = curTotalpoint1
```

```
End If

If lblt1.Caption <= 39 The

lblg1.Caption = "F"

lblp1.Caption = "0"

lblt1.ForeColor = vbRed

lblg1.ForeColor = vbRed

ElseIf lblt1.Caption <= 45 Then

lblg1.Caption = "E"

lblp1.Caption = "1"

lblt1.ForeColor = vbBlack

lblg1.ForeColor = vbBlack

ElseIf lblt1.Caption <= 49 Then

lblg1.Caption = "D"

lblp1.Caption = "2"

lblt1.ForeColor = vbBlack

lblg1.ForeColor = vbBlack

ElseIf lblt1.Caption <= 59 Then

lblg1.Caption = "C"
```

```
lblp1.Caption = "3"

lblt1.ForeColor = vbBlack

lblg1.ForeColor = vbBlack

ElseIf lblt1.Caption <= 69 Then

lblg1.Caption = "B"

lblp1.Caption = "4"

lblt1.ForeColor = vbBlack

lblg1.ForeColor = vbBlack

ElseIf lblt1.Caption <= 100 Then

lblg1.Caption = "A"

lblp1.Caption = "5"

lblt1.ForeColor = vbBlack

lblg1.ForeColor = vbBlack

Else

MsgBox "You cannot Score more than 100", vbOKCancel, "Check Your Score"

lblt1.Caption = ""

lblg1.Caption = ""

End If
```

```vb
Private Sub cmdcal_Click()

    Dim intUnit1 As Integer

    Dim intUnit2 As Integer

    Dim intUnit3 As Integer

    Dim intUnit4 As Integer

    Dim intUnit5 As Integer

    Dim intUnit6 As Integer

    Dim intUnit7 As Integer

    Dim intUnit8 As Integer

    Dim intass1 As Integer

    Dim intass2 As Integer

    Dim intass3 As Integer

    Dim intass4 As Integer

    Dim intass5 As Integer

    Dim intass6 As Integer

    Dim intass7 As Integer

    Dim intass8 As Integer

    Dim intquiz1 As Integer

    Dim intquiz2 As Integer

    Dim intquiz3 As Integer

    Dim intquiz4 As Integer

    Dim intquiz5 As Integer

    Dim intquiz6 As Integer

    Dim intquiz7 As Integer

    Dim intquiz8 As Integer
```

Appendix B
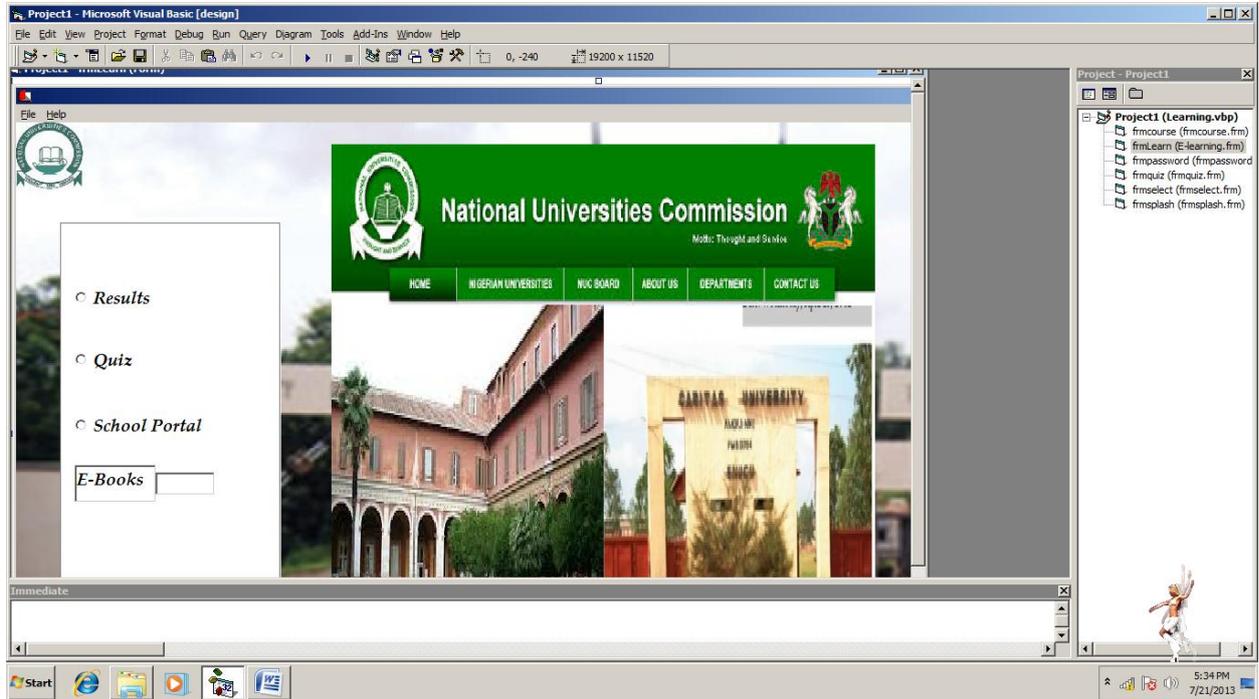
Homepage
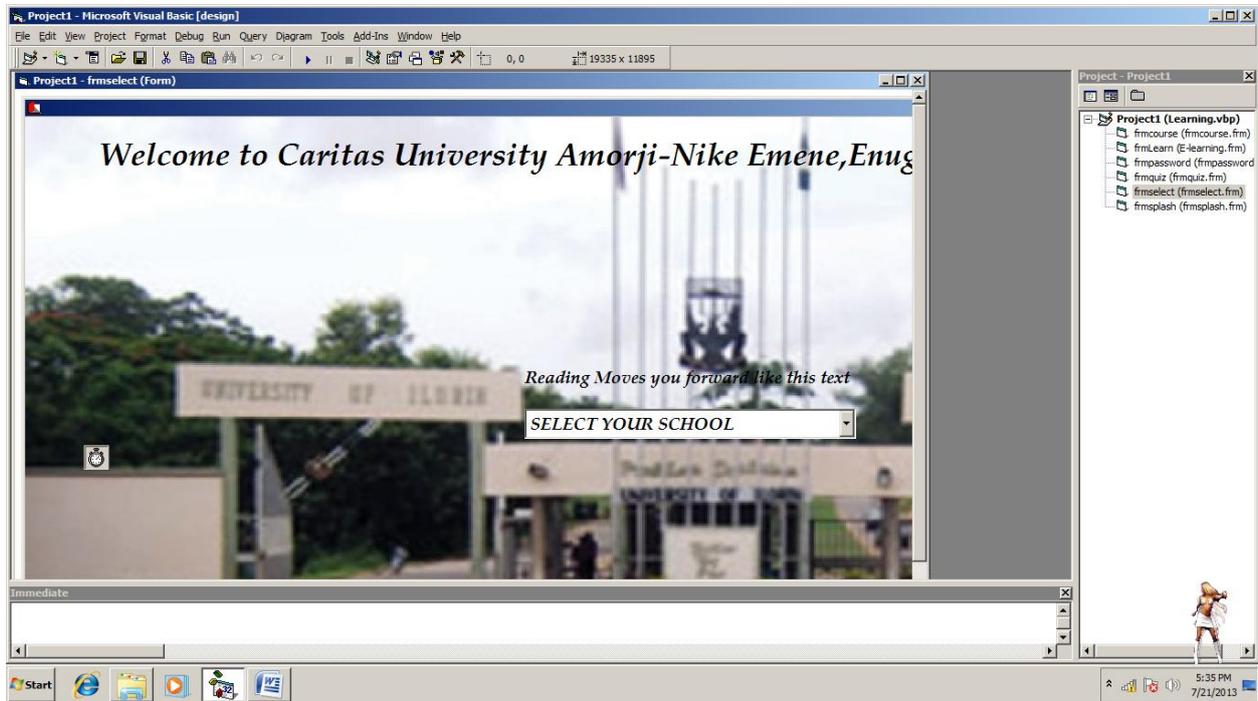
student login page
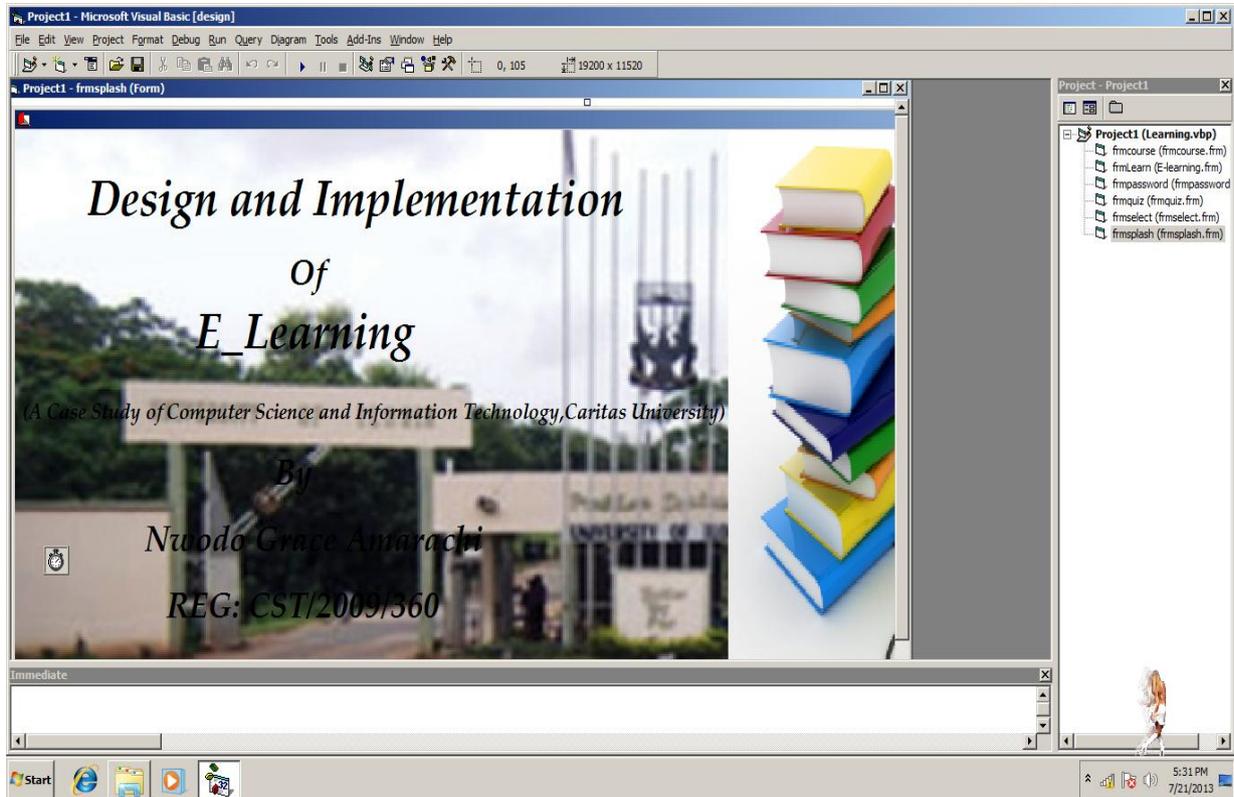
computer science books

Checking result