

**COMPUTERISATION OF FRONT DESK
ACTIVITIES IN CAPITOL HOTEL, KAFANCHAN.**

BY

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PGD/MIC/92/085

**DEPARTMENT OF MATHEMATICS/STATISTICS/
COMPUTER SCIENCE FEDERAL UNIVERSITY OF TECHNOLOGY
MINNA.**

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A PROJECT SUBMITTED TO THE DEPARTMENT OF
MATHEMATICS/STATISTICS COMPUTER SCIENCE
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
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ABSTRACT

This Project work was based on how computers can best improve in all work areas of the Capitol Hotel, especially those that are repetitive. To avoid boredom, eliminate mistakes and speed up activities.

In order to achieve this objective, a close look at the existing system was made to determine areas of bottleneck and a new system developed to overcome them.

The choice of the programme language used to meet this desire is Dbase.

ACKNOWLEDGEMENT

When a project of this magnitude of careful research, compilation, and debugging has come to conclusion, it is always very difficult to acknowledge adequately all those that offered inspiration, assistance in all its forms, encouragement and knowledge received during its development.

Notable amongst these is my Project Supervisor, **Prof K. R. Adeboye** who despite his tight schedule and limited time, was able to fit me into his schedules, and developed time in sharing with me his outstanding knowledge and reading through the chapters.

And **Prince R. Badamosi, Dr. S. A. Reju, and Mr Bankefa** for their inspiration and moral support.

My particular classmate **Simeon Mogba** for edging me on, not to leave for tomorrow what ever it is I could do today. And my family, **Mariat, Junior & Hadizat** though far away, had always been the source of my strength.

My very big thank you for all and God bless.

DEDICATION

TO MY CHILDREN

Yahaya Dantani Daudu Jr.

Hadizat Ladidi Daudu

CERTIFICATION

This is to certify that this work was carried out by **MESSRS YAHAYA DAUDU** in the Department of Mathematics/Statistics/Computer Science, Federal University of Technology, Minna.

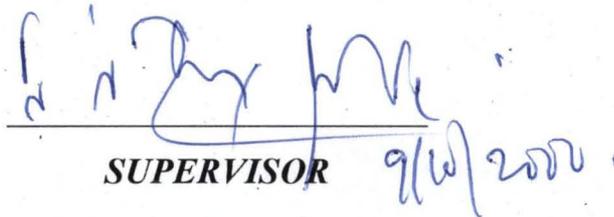
This project work has been read and approved by the undersigned as meeting the requirements for the award of the Post Graduate Diploma in computer Science of the Department of Mathematics/Computer Science, FUT Minna

This work has not been done or submitted elsewhere for another or similar purpose and all references fully acknowledged.

EXTERNAL EXAMINER

HEAD OF DEPARTMENT

(Dr. S. A. Reju)



A handwritten signature in blue ink, appearing to read 'K. R. Adeboye', is written over a horizontal line. To the right of the signature, the date '9/10/2000' is written in blue ink.

SUPERVISOR

(Prof. K. R. Adeboye)

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CHAPTER ONE

1.0

INTRODUCTION

1.1 COUNTING: Human beings have always needed to count. In the earlier times of pre-history people had to make do with counting on their fingers or scratching marks on other hard objects. i.e. wood, bone, stone etc. Many thousand years back, early civilizations had developed sophisticated numbering systems to keep track of commercial transaction, astronomical cycles and other matters.

Manual calculating tools then appeared later, such as abacus, which was one of the earliest important computing devices developed over two thousand years ago. There are different variations of the abacus; the most common being a series of beads that can be manually positioned along a set of wires. Each wire represents one position in a numerical system of notation, such as ones, tens, hundred, thousand, etc. By manipulating the beads on the wires, complicated calculations can be performed.

1.2 THE AGE OF COMPUTERS: The rise of the Computer had been swift and remarkable. Businesses began using large Computers as soon as they were made commercially available in the 1950s.

The use of Computers grew rapidly in business, industry and government circles. By the middle 1970s, these machines affected the lives of most people especially in the Western hemisphere, notably U.S.A., UK, and Japan in the east etc., yet few individuals had actually seen a Computer. This Change with the Introduction of the Micro-Computer, or better still, the personal Computer. (i.e. The PC).

During the last half of the twentieth century, history entered a new age, THE INFORMATION AGE.

A major shift is being made from a focus on manufacturing to a focus on managing information. It is Computers which have made this new age possible.

Every year, the personal Computer becomes smaller, more efficient and able to do more complex tasks. As computers become increasingly woven into our day to day lives, it is important to remember that it is people who control computers, computers are only tools to be used, and although they are complex tools, they are becoming easier to use even as they become more powerful.

Learning about computers and how to use them makes it possible to be more comfortable in this world of technology.

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1:3 NOTABLE CONTRIBUTORS: Pascal, The French Philosopher, Physicist, and mathematician. Blaise Pascal (1623-1662), designed and built one of the first adding and subtracting machines. One of the first in a series of computers. Pascal was only nineteen years old when he designed the Pascaline to assist his Father, a tax collector . This device, built in 1642, consisted of a complex assortment of gears, rods and dials.

CHARLES BABBAGE: In 1882 the British mathematician Charles Babbage (1792-1871) built a prototype of his “difference engine”. This device was an effort to make a machine capable of solving the repetitive computations required to compile mathematical tables. In 1838, Babbage radically changed his theoretical approach to the problem of constructing a computing machine. As a result, he devised plan for a device he termed the Analytical Engine. Although Babbage never completed his machine, he had envisioned an enormous array of cogged cylinders powered by a steam engine, his ideas were precursors of what would follow decades after his death; ***the computer machine.***

1.4 AIM AND OBJECTIVES:

1.4.1. AIM: The aim of this project is to introduce a new system of getting work done in the **Capitol** Hill Hotel.

In the Hotel Business, the Front Desk or Reception is the first port and usually the last port of call for would be patronizers. It thus follows that the lasting impression on customer is made here both at time of entry and exit. Good planning and efficient work place coupled with commensurate incentives can save unnecessary time wastage and provide optimal job satisfaction.

1.5 SCOPE: The scope of this project is the development of a new working system for the front desk employees of the Capitol Hill Hotel.

1.5:1 LIMITATIONS: In order to achieve a comprehensive result, some simulations will have to be applied due to limitations in the time available for the environmental and processing of essential documents.

In order to eliminate possible weaknesses of the present system, it is necessary to obtain facts that can reveal the strength or the weakness of the present system. During this facts finding exercise, an observatory will be set –up within the Capitol hill Hotel premises and also customers will be interviewed where necessary.

CHATER TWO

A WORLD COMPUTER

2:1 **OVERVIEW:** Victor Hugo a Scientist was once quoted for having said, "An invasion of armies can be the resisted, but not an idea whose time has come." In the month of July 1969 when the American astronaut Neil Armstrong realized the age-old human dream of reaching the moon, news of his achievement was instantaneously transmitted 240,000 miles across space to Houston, Texas, and then flashed to a waiting world. Television brought the scene into millions of living rooms, and news wires relayed particulars including, Armstrong's brief and eloquent speech, which make sense only to a computer, to the thousands of newspapers and magazines around the globe. Much of the information traveled from machine to machine in special codes. Late in 1941 shortly after the U.S. entered world war II the president of the International Business Machine Corporation sent telegram to the white house. Like many other corporation executives in that time of national emergency, offered to put the facility of his company at the disposal of the government for the duration. It was a sincere patriotic gesture, but he also knew he had little choice. All out war meant an unprecedented mobilization of industry and science to make conventional weapons and to develop the technology for unconventional ones. The president of the IBM knew that government would take what it needed and as his son put it, "he was making a virtue out of necessity."

The IBM facilities volunteered seemed to have little to do with battle. They were generally geared to the office, turning out typewriters, desk calculator and tabulating machine of the type devised by Herman Hollerith in 1890.

The President, a former cash-register salesman, had built the company into multimillion-Dollar concern by combining the intuition for the most promising new technology with an evangelical fervor for selling. With signs and banners he exhorted his employees to "THINK" and demanded from them a kind of religious commitments" YOU "HAVE TO PUT. YOUR HEART IN THE BUSINESS" "AND THE BUSINESS IN YOUR HEART" True to his pledge to the White House, IBM went to war. Thousands of tabulator the giant punch card sorting machine that would later be called data processors –helped untangle the snarls of paper work generated by full-scale mobilization. He even converted part of manufacturing facilities to the production of bombsights and rifles. But he had something else up his sleeve. Two years before the Japanese attack on pearl Harbour, he had invested heavily in the audacious plan of a young Harvard mathematician named Howard Aiken. Aiken who had been frustrated by the enormous number of calculation required for his doctoral dissertation, wanted to go beyond the sorter and calculators then available and build the kind of general purpose programmable computer Charles Babbage had first envisioned. Early in 1943, Aiken had successfully developed the Mark 1, leased to the U.S. Navy, by IBM, which used it to solve difficult ballistics problems under Aiken's supervision. The mark 1 could handle or crunch –numbers up to 23 digits long. It could add or subtract them in 3/10 of a second and multiply them in three seconds. Such speed, though only a little faster than Babbage had envisioned, was unprecedented at that time. In a single day the machine could whip through calculations that formerly required a full six months. Similarly, modern businesses go all way out to find new opportunities in the market place, they need to break through old boundaries and extend the enterprise. This extended enterprise calls for a new and unprecedented level of power. Power must be ready every where, every minute of every day.

After all, computing power is the fuel that drives today enterprise. Essential as electricity, it also must be reliable and available on demand.

Hotel business in Nigeria today, ever than before needed this computer power to ease the working environment of the tensions created by voluminous paper works especially at peak periods and seasons.

The objectives by most business enterprises for the requirement for this computer power is to:

- a. Improve on performance
- b. Minimize human error
- c. Instant provision of information
- d. Relieve professionals from administrative and clerical jobs and typist of Monotonous repetitive typing.
- e. Improve presentation of documents for reports for top management.

And so it is in virtually every corner of our computer power dependent world.

Ben Abruzzo an American Scientist said it all when he said “Unless frontiers are challenged from time to time, be it flying an air plane, writing a fine piece of literature or flying a hot air balloon, society does not move forward.”

2.2 NEED FOR COMPUTER: Over the years, micro-computing technology has gained the attention of many people in developing and developed societies.

This is because computers facilitate data analysis and decision making. The use of information technology in business economic management enhances efficiency in the management of both human and capital resources. In-fact human dependence on Computers has already become irreversible in developed countries as well as in developing countries. It is now clear that computers are indispensable in the process of economic growth and development of any organization. However, inspite of increasing recognition and acceptance of the importance of this tool in the management of business, computer usage is still in its infancy in the hotel industries

of this country, and in-fact, to some extent many hotels in Nigeria, unlike their international counterparts in the catering and tourism business have not been keeping abreast of development in the use of computers. In many instances, operations in such business organization are yet to be computerize to enhance efficiency. Besides, where computers have been acquired there is often under utilization of the machine due to shortage of skilled manpower to operate them. Thus in most hotels, quantitative task are largely being carried out manually.

With advancement in computer technology and introduction of the Internet, the world has been integrated into a global village. Any business enterprise can now lunch itself into the information super highway for possible national/international business transactions.

2.3 MODERN DAY HOTEL BUSINESS: The modern hotel business, a strictly service industry, like many other service businesses requires all the modern day advances in science and technology in an efforts to meet the requirements of its numerous customers.

This has continually place its proprietors in continuous search for the employment of highly skilled manpower for the successful running of such service industry and thus help to remain in the ever competitive environment of the industry. Training and retraining of staffs is also a feature in the hotel business. Services rendered in this business includes amongst others the following:-

- a. Lodgings for tourists & other guests.
- b. Catering services (Restaurant and Bar)
- c. Conference services (Seminars, commencements etc)
- d. Occasion handling services (Birthday, Marriage etc)
- e. Club facility services
- f. Sports facility services.

CHAPTER THREE

THE CAPITOL HILL HOTEL:-

3.1 **THE CAPITOL HILL HOTEL:-** The Capitol Hill Hotel was founded in the year 1989 by a transport business mogul Mr. Joseph Kato (J. P.) who recognized the need for the comfort of tourists.

It is situated in the Kafanchan plains on the highway to the Jos Plateau via Gidan Waya.

It occupies a total land area of 10.9 hectares with twenty executive suites and twelve other double chalets. There are plans for additional development of similar number of executive suites and chalets for future expansion. The only main imposing structure, houses the reception (Front Desk Operations), general administration, a public bar and a restaurant. On a section of the bar is a large special area where a billiard board and table tennis are arranged for the comfort of the guests, their visitors and other customers. The suites and chalets are built in cross rows along well paved road network within the complex with a very good drainage system and embankment lined with pines and other flowering plants along the walkways. There is a security outpost at the entrance, which collects vehicles data as they come in to the premises. There is a swimming pool, a lawn tennis-court and a squash court at the Sorrento night club on the eastern end of the complex. The night club generally caters for the needs for night crawlers with its blaring makosa music and dances. Every other space within the complex is either paved with concrete slabs or covered with well manicured Bahamas grass lawn looking ever so green.

Until 1989, the only catering and Hotel services was offered by the state Government through its catering rest house which in modern times appear grossly inadequate. It is in an effort to ameliorate this short coming in the catering

services in this area, in view of its high tourist attraction that gave birth to the capitol Hill hotel. Today, the area has several other standard hotels.

3.2 RELEVANCE OF COMPUTERS:- A careful study of the numerous applicable activities of the capitol Hill clearly shows the relevance of computer services.

With the press of the bottom, accurate and up to date information can be obtained from the front desk by visitors making enquiry or guests needing checking-out information or even management needing information on traffic flow to enable it plan and forecast requirements, the advantages derivable from computerization becomes clearly enormous and appreciative. The hotel business generally, due to its service nature which involves human interactions and exchanges of various kinds of legal tender, generates a large of data which requires careful sorting. An exercise, which though can be laboriously carried out manually is easier and more accurate using the computer. During check-in and check-out periods, the very high volume of date generated at the front desk, to be handle and processed often cause unnecessary delays and most times frustration of the customers and this readily brings to mind the need to challenge the frontiers by computerization, if the business is to remain competitive, relevant, and meet expectations.

3.3 AREAS OF APPLICATION:- Computer application can be effected in the following area:-

- (a) Personnel Records
- (b) Budgeting and Forecasting
- (c) Stores Control
- (d) Accounting and Finance
- (e) Front Desk Operation
- (f) Restaurant Service

- (g) Room Service
- (h) Telephone Room Operation.

The immediate benefits derivable from the use of computer in the identified area include:-

- (a) Savings in executive time
- (b) Minimization in material wastages
- (c) High measure of accuracy in statistical data
- (d) Simplified budgetary control and forecast
- (e) Excellent and efficient filing system
- (f) Efficient usage of man-hour.

CHAPTER FOUR **PROGRAMME**

4.0

HOTEL ACTIVITIES

4:1 **SYSTEM STUDY:** This is the process to determine whether the system in existence is satisfactory and meet the goals and objectives of the hotel.

4:2 **FEASIBILITY STUDY:** A careful study of the present mode of processing data and information and find out if there is a need for change in the system to enhance efficiency.

4:3 **SYSTEM INVESTIGATION:** This study is limited to the front desk operations (Reception), the investigative study shows that the existing system is not satisfying the goals and objectives of the hotel because delays in information reaching the front desk cause frustration sometimes outright embarrassment to the customers.

4.4 **DATA COLLECTION:** In order to justify the need for change in the system, structured and unstructured interviews to were carried out and relying mostly on experience in asking the best question to uncover some of the inherent problems and weaknesses of the existing system. All effective communication systems and excellent questioning skills were applied to both staffers customers alike to get to discover area of bottle neck.

4.5 **DATA ANALYSIS:** Collected data were carefully examined to determined the effectiveness and efficiency of the existing data processing system in term of information accessibility control and complexity. The cost of the

existing system was examined vis-à-vis the cost benefit of the new system to be introduced, for the changes will only affect the fixed cost, that is the cost of equipment, hard ware, software and so on, these have to be purchased to enhance the improvement that is needed. In considering the amount of money involved in computerising the front desk operations, the benefits to be derived cannot be quantified but can only be felt. With a data base and data base system, the volume of work load and urgency will be a thing of the past.

4.6 **SYSTEM DESIGN AND DEVELOPMENT:** The emphasis here is to develop a new system that the helps to achieve the aims and objectives of management thinking towards the capitol hotel and to overcome some of the shortcomings and limitations of the existing system. In order to achieve this, the front desk has to be computerised, that is by introducing computer system in every facet of activities being carried-our within the front desk operations. In the hotel environment the interactive is to be used because most computers allow for it, that is, personnel's directly interact with the computer system through computer terminals. The computer and the user respond to each other.

4.7 **DATE BASE SYSTEM:** Without data and the ability to process it, most organisations would not to able to survive. Returns on the days business and or requirement of the following day may be impossible to forecast by those saddled with decision making due to inability to get the essential information. In this proposed system, an integrated data base system will be created and used. This system when set up will maintain the data. Data base provides critical information to help in better control of operations.

4.7.1 **TYPES OF DATA:** There are basically two types of data. Numeric (N) and Alphanumeric (A) which can be constant or variables.

4.7.2 **TRANSFER OF INFORMATION:** Some of the data needed are to be got from the old manual system, files and records, this will be coded and transferred into the new system by key to disk storage technique.

4.8 **CHOICE OF PROGRAMME LANGUAGE:** This is the determination of the best programme language for the new system to be adopted. In order to arrive at a suitable language some important characteristics were considered. They include the followings:

- (a) The technique skills required of the computer programme
- (b) The availability of programmers for the various languages.
- (c) The type of processing to be used, that is batch or real time processing.
- (d) The availability of subroutine that may be used by the programs.
- (e) The efficiency of the compiler or language translator.
- (f) The support from the computer vendors in maintaining and up-dating the programs.
- (g) The ease with which the programs can be changed at a latter date should the need arise.

Some of the popular programming language in use today are:

- (a) Basic
- (b) Fortran
- (c) Pascal
- (d) Dbase
- (e) Cobol

After careful study and consideration of the different languages, Dbase programming language was chosen and recommended as the best suited for the new system to be adopted, for it is not too complex a programming language in comparison to others.

4.8.1 **PROGRAM WRITING:** This is the process of writing the necessary instructions in the language selected to solve the problems of the existing system.

4.9 **HARDWARE & SOFTWARE:** The proposed system which is Dbase management application system is to be run on a local Area Network (LAN) using several other microcomputer terminals, amongst which are the front desk office, duty manager, General Manager, telephone controls, Restaurants, Bar, Room service and information desk.

The LAN is to act as the postmaster which have a file serve that manages the network and its disc system which contain the shared program and data. Users will have their own terminals so as to key in information. The IBM 486 computer machine of 6MB memory storage that is expandable will be used. Database file are arranged independently of any particular application program or hardware. With this, minimizes or eliminates data redundancy. Access to files are quick due to the database management system (DBMS).

4:9 **CREATING A DATA BASE:** In creating a data base the overall structure of the data base is specified. That is, the number of field that will be used in each record,

name of field, width, in terms of column in each field and type of fields, be it Numeric or characters and they are to be entered as shown below:

STRUCTURE DBF. CUSTOMER. Dbf

FIELD	<i>FIELD NAME</i>	TYPE	WIDT H	DEC
001	CTM/NO	N	6	0
002	BILL NO	N	6	0
003	NAME	C	26	0
004	ARRIVAL DATE	D	6	0
005	DEPARTURE DATE	D	6	0
006	NATIONALITY	C	16	0
007	NO IN COMPANY	N	3	0
008	VEH.NO	AN	9	0
009	BILL SETTLEMENT	L	2	0

CHAPTER FIVE

5.0 SYSTEM IMPLEMENTATION

5:1 **IMPLEMENTING:** In order to implement the proposed new system without hitches, there are two basic activities that need be done.

5.1:1 **TRAINING:** The people to use the new system must have to be trained not only in the ability to use the new system but also to appreciate its contribution to the overall operation of the business. If however, all personnel involved cannot be trained at once, batch training can be introduced. The Suppliers of the computer components must be ready to hold training sessions for all categories of staff involved on agreed periods per week. In addition operators can be granted in-service training to where computer operators courses are available. Regular in-house training in computer should be started and intensified.

5.:1:2 CONVERSION: This is the process of changing from the old to the new system. Feedback on its workability should be instantaneous and any bottle neck immediately addressed.

5.2 CONVERSION PLAN: There is need for additional office furniture or to simply re-arrange the existing ones to make room for the computer system. Other items that are needed include air-conditioner and tiling of the floor.

Existing information and records requiring storage can be obtained from files and converted to computer files by the already trained operators. The computer programs will maintain and update them when the need arises.

5:3 INSTALLATION: This is the physical placing of the computer equipment and making it operational. The computer system recommended must be able to expand its storage capacity to accommodate the expected future expansion and capable of processing large scale information.

5:4 DBMS: The first Step to setting up a DBMS is to instruct the computer of all the relationship among the various data items that are to be stored in the database. That is scheme will be needed. Since all applications only have small portion of the total data stored in the data base, sub-scheme are to be developed. Scheme gives general description of the entire data base and shows all the records, types and their relationship to one another in the data base.

The **DBMS** is the physical storage device issued to retrieve the desired information from the database through the sub-scheme and the scheme.

Data description language are used to enter the schemer and sub-schemer into the computer. This allows data and the data relationship be contained in the scheme and the many subs to be used.

5:5 USING THE DBMS: Once DBMS has been installed, the system can be used by anybody authorised and trained in the specific command that can be used in various programming language accessible to the data base. With the installed database, anybody can be able to make queries such as LIST all customers that have stayed in this hotel between given period. This command is part of data manipulating language (DML). Its user has simple and immediate access to data contained in the database.

5:6 DATABASE APPLICATION: The use of data base system with personal computer is one of the most important and frequently used application for personal computer. There are many excellent data base packages for personal computers. Others includes **LOTUS 1,2,3**, Symphony etc are software packages that have dbase command.

5:7 DATA ANALYSIS: Problems of the Existing System: The record are incomplete, as some dockets cannot be found thereby distorting the exact true position of performance and for billing Cost of Changing the Existing System: The cost of changing the existing system is enormous, Computer equipments, hardware and software etc are very expensive but all other overhead costs will remain the same will little or no change.

BENEFITS

The benefits of changing to the new system includes:-

- | | |
|-------------------------|--|
| (a) Accuracy | (e) Efficient Information Storage |
| (b) Speed (Increased) | (f) Efficient time usage |
| (c) Consistency of data | (g) Increase in amount of Volume of work done. |
| (d) Minimize wastage | |

5.8

REPORT ON THE EXISTING SYSTEM

❖ BACKGROUND INFORMATION:

Capitol Hotel was found primarily to cater for the catering needs of tourist and locals alike with sporting activities and as a place for socialization.

❖ THE NEED STATEMENT: Due to the ever increasing number of customers patronizing this facilities, the need to meet their requirements and expectations efficiently also increases. Everyone who wants to spend his hard earned money, should be encouraged to do so happily by being offered efficient and speedy services.

❖ DATA COLLECTION: Structured and unstructured interview results.

❖ CUSTOMERS: Complained of slow checking in and checking out with several complaints on itemized expenditure during peak periods, this was found to be associated with the slow pace of information flow within the organisation and mistakes arising from simple calculations.

❖ STAFF: Staffers also complained that they want the existing system changed.

Since the work of one person depends on the work of another, slow flow of information always impedes on performance. Not one front desk officer could answer the question "How many guest stayed in the hotel last week?"

Decisions for hotel procurements and forecasts becomes very difficult indeed.

5.9

POST IMPLEMENTATION

After the implementation project is complete, post implementation is performed after six months or one year at maximum. Here, all the realized benefits and cost are again visited. Intangible benefits including improved operations, better services and better morale are also to be visited. All this is used to determine whether the project has been successful. If there are problems, the life cycle can be restarted so as to make necessary improvement.

6.0

CHAPTER SIX

6.1

RECOMMENDATIONS

From the above analysis, one can say without doubt that the benefits to be derived from introducing this new system far out-weight the cost, especially when one considers other uses the data can be put into. This system is not only for the present but is also aimed to meet future growth when the need arises.

In this respect therefore, it is strongly recommended that the news system be adopted, the organization will be better for it.

6.2

CONCLUSION

This project will not be complete without further revisiting what is meant by computerization and how it can affect the activity of an organization.

Computerization can be defined simply as the planned and articulated change from a manual system of doing work to an automated system of doing the same work using the computer, as a medium.

Computers are introduced to various organization for different and various reasons among which the major and most applicable ones to the capitol hotel are that they.

- (a) Enhance the capacity to assemble, analyze, and synthesize data pertaining to the whole range of functions within the organization.

- (b) Increase the efficiency of service delivery by cutting administrative costs, avoiding data complications and duplication and offering greater management control and accountability. With the set-up as it is now i.e. dbase and dbase management system, terminals are provided at the various department starting with the chief executive all through using LAN.

As the need to grow demands, data communication system can be introduced. This is one of the important development in the ever growing field of personal computers. Despite the exhaustive planning sessions to provide a satisfactory and well improved work environment that should naturally accompany in the installation of this new system people are generally frightened of change therefore, the implementation is being carefully executed this allowing for gradual change of behaviour.

APPENDIX A

STRUCTURED INTERVIEW TO CUTOMERS

1. Do you enjoy your stay in this hotel?
2. Would you say the services is great:
3. Would you recommend any change?
4. Was the checking-in/checking-out fairly quick?
5. Do you visit other hotels of this kind?
6. Would you say this hotels compares in efficient service?
7. Was the checking out fairly quick?
8. Would you normally crosscheck your bills?
9. Have you ever discovered any irregularity in your bill?
10. Would you say it was a mistake or otherwise?
11. Have any of your visitor complained of difficulty locating you in the hotel?
12. Did you ever make a reservation that was not honoured?
13. Would you stay in this Hotel again during your next visit?
14. Please comment freely and advice.

All questions are answered by a Yes, No or reserved except the last question)

```

*****
* Author.....: Mall. Yahaya Daudu          *
* Program.....: Guest.Prg                  *
* Date.....: 12-06-99                      *
* Notes.....: This is the Main program that call on *
* .....: other programs during running.   *
* .....: This program is in partial fulfilment for *
* .....: the award of PG.D Computer Science *
*****

```

```

SET TALK OFF
SET STATUS OFF
set color to w+
do while .t.
  clear
  yn=' '
  @ 3,22 TO 22,52 DOUBLE color rg+
  @ 4,27 SAY " Main Menu"
  @ 6,26 SAY "[0] Exit to DOS"
  @ 8,26 SAY "[1]"
  @ 8,30 SAY "Register Guest"
  @ 10,26 SAY "[2]"
  @ 10,30 SAY "Update Guest Record"
  @ 12,26 SAY "[3]"
  @ 12,30 SAY "Delete Guest Record"
  @ 14,26 SAY "[4]"
  @ 14,30 SAY "Print Guest Receipt"
  @ 16,26 SAY "[5] Print General Report"
  @ 18,26 say "[6]"
  @ 18,30 say "Check Guest"
  @ 20,26 say "[7]"
  @ 20,30 say "Number of Guest"
  @ 21,24 SAY "Make A Chioce Please" get yn
  read
  do case
  case yn='0'
    quit
  case yn='1'
    do datain
  case yn='2'
    do editdata
  case yn='3'
    do delrec
  case yn='4'
    do rept1
  case yn='5'
    *report form genreport to print

```

```
case yn ='6'  
  do mquery  
case yn ='7'  
  do mquery1  
endcase  
Enddo
```

```

*****
* Author...: Mall. Yahaya Daudu *
* Program...: Datin.Prg *
* Date.....: 12-06-99 *
* Notes....: A data entry form program to be fill on arrival *
* .....: of a Guest into the Hotel *
*****

```

```

clear
set talk off
set status off
set color of fields to rg/gb+
store space(20) to mName
store space(4) to mroomno,mpaymethd
store space(8) to mvehno
store space(13) to mnationalit
store space(12) to mpassportNo
store space(14) to mtypeofacco
store space(3) to mnoofoccup,mnoofdays
store ctod(" / / ") to mdatearrive,mdatedepart
store 0.00 to mdeposit
use guest1
do while .t.
  store "Y" to yn
  @ 2,27 SAY "Data Entry Form At Front Desk" color rg+/n
  @ 4,6 TO 17,70 DOUBLE color rg
  @ 6,12 SAY "   Name"
  @ 6,26 SAY "   Date Arrived Type of Accommodation"
  @ 7,10 GET mName PICTURE "!!!!!!!!!!!!!!!!!!!!!!"
  @ 7,33 GET mDatearrive
  @ 7,51 GET mTypeofacco PICTURE "!!!!!!!!!!!!!!!!!!!!!!"
  @ 9,10 SAY "Room No"
  @ 9,24 SAY "No of Days"
  @ 9,40 SAY "Passport No"
  @ 9,55 SAY "Veh. Reg No"
  @ 10,11 GET mRoomno PICTURE "!!!!"
  @ 10,29 GET mNoofdays PICTURE "XXX"
  @ 10,39 GET mPassportno PICTURE "!!!!!!!!!!!!!!!!!!!!!!"
  @ 10,57 GET mVehno PICTURE "!!!!!!!!!!!!"
  @ 12,9 SAY " Nationality"
  @ 12,23 SAY "No of Occup."
  @ 12,38 SAY "Pay Method"
  @ 12,53 SAY "Deposit"
  @ 13,9 GET mNationalit PICTURE "!!!!!!!!!!!!!!!!!!!!!!"
  @ 13,28 GET mNoofoccup PICTURE "!!!!"
  @ 13,41 GET mPaymethd PICTURE "!!!!!!!!!!!!"
  @ 13,52 GET mDeposit PICTURE "99,999.99"

```

```

@ 15,20 say "Are These Entries OK(Y/N) ?"
@ 15,48 get yn
read
if upper(yn) $'N'
    loop
else
    if upper(yn)$"Y"
        append blank
        replace name with mname,roomno with mroomno,noofdays with mnoofdays
        replace paymethd with mpaymethd,vehno with mvehno,nationalit with mnationalit
        replace passportno with mpassportno, noofoccup with mnoofoccup,datearrive with
mdatearrive
        replace datedepart with mdatedepart, deposit with mdeposit,typeofacco with
mtypeofacco
    endif
endif
yn='Y'
@ 15,20 clear to 15,60
@ 15,20 say "Add more Records (Y/N) ?"
@ 15,43 get yn
read
if upper(yn) $ 'Y'
    clear
    store space(20) to mName
    store space(4) to mroomno,mpaymethd
    store space(7) to mvehno
    store space(13) to mnationalit
    store space(12) to mpassportNo
    store space(14) to mtypeofacco
    store space(3) to mnoofoccup,mnoofdays
    store ctod(" / / ") to mdatearrive,mdatedepart
    store 0.00 to mdeposit
    loop
else
    if upper(yn) $'N'
        exit
    endif
endif
enddo
clear
return

```

** Delete guest

```
clear
set talk off
set color of fields to w/r+
use guest1
do while .t.
  mroomno = space(4)
  @ 6,15 say 'Delete Guest In Room No .' get mroomno
  read
  locate for roomno$mroomno
  if found()
  clear
  store "Y" to yn

@ 2,30 SAY "Delete Guest Record" color r+/n
@ 4,6 TO 19,70 DOUBLE color g+
@ 6,12 SAY "   Name"
@ 6,26 SAY "   Date Arrived Type of Accommodation"
@ 7,10 GET Name PICTURE "!!!!!!!!!!!!!!!!!!!!"
@ 7,33 GET Datearrive
@ 7,51 GET Typeofacco PICTURE "!!!!!!!!!!!!!!!!!!!!"
@ 9,10 SAY "Room No"
@ 9,24 SAY "No of To Days"
@ 9,40 SAY "Passport No"
@ 9,55 SAY "Veh. Reg No"
@ 10,11 GET Roomno PICTURE "!!!!"
@ 10,29 GET Noofdays PICTURE "XXX"
@ 10,39 GET Passportno PICTURE "!!!!!!!!!!!!!!!!!!!!"
@ 10,57 GET Vehno PICTURE "!!!!!!!"
@ 12,9 SAY " Nationality"
@ 12,23 SAY "No of Occup."
@ 12,38 SAY "Pay Method"
@ 12,53 SAY "Deposit"
@ 13,9 GET Nationalit PICTURE "!!!!!!!!!!!!!!!!!!!!"
@ 13,28 GET Noofoccup PICTURE "!!!!"
@ 13,41 GET Paymethd PICTURE "!!!!!"
@ 13,52 GET Deposit PICTURE "99,999.99"
@ 15,10 say 'Exp. Kitchen'
@ 16,11 get kitchen picture "99,999.99"
@ 15,25 say 'Breverages'
@ 16,25 get breverages picture "99,999.99"
@ 15,38 say "Other Expenses"
@ 16,40 get others Picture "99,999.99"
@ 15,56 say 'Date Depart'
```

```
@ 16,58 get datedepart
@ 18,23 say "Delete More Records (Y/N) ?"
@ 18,52 get yn
read
if upper(yn) $ 'Y'
  delete
  pack
else
  exit
endif
else
  if .not. found()
    clear
    @ 7,10 Say "No Such Record Exist In Database, Press any key to Continue..."
    set console off
    wait
    set console off
  endif
endif
enddo
clear
return
```

*Update data

```
clear
set talk off
set color of fields to w/b+
set color to w+/n
use guest1
do while .t.
  mroomno = space(4)
  @ 6,15 say 'Update Guest In Room No : ' get mroomno
  read
  locate for Roomno =mroomno
  if .not. found()
    clear
    @10,20 say "Room No does not Exist"
    wait +Space(20)+"Press any Key to Continue..."
    clear
    return
  Endif
clear
store Name to mname
store Roomno to mRoomno
Store Noofdays to mnoofdays
store paymethd to mpaymethd
Store vehno to mvehno
store nationalit to mnationalit
store passportno to mpassportno
store noofoccup to mnoofoccup
store datearrive to mdatearrive
store datedepart to mdatedepart
store deposit to mdeposit
store typeofacco to mtypeofacco
store kitchen to mkitchen
store breverages to mbreverages
store others to mothers
store "Y" to yn
@ 2,30 SAY "Update Guest Record" color gr+/n
@ 4,6 TO 19,70 DOUBLE color g+
@ 6,12 SAY " Name"
@ 6,26 SAY " Date Arrived Type of Accommodation"
@ 7,10 GET mName PICTURE "!!!!!!!!!!!!!!!!!!!!!!"
@ 7,33 GET mDatearrive
@ 7,51 GET mTypeofacco PICTURE "!!!!!!!!!!!!!!!!!!!!!!"
@ 9,10 SAY "Room No"
```

```

@ 9,24 SAY "No of To Days"
@ 9,40 SAY "Passport No"
@ 9,55 SAY "Veh. Reg No"
@ 10,11 GET mRoomno PICTURE "!!!!"
@ 10,29 GET mNoofdays PICTURE "XXX"
@ 10,39 GET mPassportno PICTURE "!!!!!!!!!!!!"
@ 10,57 GET mVehno PICTURE "!!!!!!!!"
@ 12,9 SAY " Nationality"
@ 12,23 SAY "No of Occup."
@ 12,38 SAY "Pay Method"
@ 12,53 SAY "Deposit"
@ 13,9 GET mNationalit PICTURE "!!!!!!!!!!!!"
@ 13,28 GET mNoofoccup PICTURE "!!!"
@ 13,41 GET mPaymethd PICTURE "!!!!!!"
@ 13,52 GET mDeposit PICTURE "99,999.99"
@ 15,10 say 'Exp. Kitchen'
@ 16,11 get mkitchen picture "99,999.99"
@ 15,25 say 'Breverages'
@ 16,25 get mbreverages picture "99,999.99"
@ 15,38 say "Other Expenses"
@ 16,40 get mothers Picture "99,999.99"
@ 15,56 say 'Date Depart'
@ 16,58 get mdatedepart
@ 18,23 say "Modify More Records (Y/N) ?"
@ 18,52 get yn
read
*append blank
replace name with mname,roomno with mroomno,noofdays with mnoofdays
replace paymethd with mpaymethd,vehno with mvehno,nationalit with mnationalit
replace passportno with mpassportno, noofoccup with mnoofoccup,datearrive with
mdatearrive
replace datedepart with mdatedepart, deposit with mdeposit,typeofacco with
mtypeofacco
if upper(yn) $ 'Y'
  clear
  loop
else
  exit
endif
enddo
clear
return

```

```

*****
**print guest receipt
*****

set device to screen
set safety off
clear
set talk off
set color of fields to w/b+
set color to w+/n
use guest1
set device to screen
*do while .t.
  mroomno = space(4)
  @ 6,15 say 'Enter Guest In Room No :' get mroomno
  read
  locate for Roomno =mroomno
  if .not. found()
    clear
    @10,20 say "Room No does not Exist"
    wait +Space(20)+"Press any Key to Continue..."
    clear
    return
  Endif
clear
store Name to mname
store Roomno to mRoomno
Store Noofdays to mnoofdays
store paymethd to mpaymethd
Store vehno to mvehno
store nationalit to mnationalit
store passportno to mpassportno
store noofoccup to mnoofoccup
store datearrive to mdatearrive
store datedepart to mdatedepart
store deposit to mdeposit
store typeofacco to mtypeofacco
store kitchen to mkitchen
store breverages to mbreverages
store others to mothers
t =1
m =0
set device to file "tt.txt"
do while t<=3
  @ m+2,30 SAY "Receipt"
  @m+3,2 say replicate(" ",68)
  @ m+6,12 SAY "  Name"

```

```

@ m+6,26 SAY "    Date Arrived Type of Accommodation"
@ m+7,10 say mName PICTURE "!!!!!!!!!!!!!!!!!!!!!!"
@ m+7,33 say mDatearrive
@ m+7,51 say mTypeofacco PICTURE "!!!!!!!!!!!!!!"
@ m+9,10 SAY "Room No"
@ m+9,24 SAY "No of Days"
@ m+9,40 SAY "Passport No"
@ m+9,55 SAY "Veh. Reg No"
@ m+10,11 say mRoomno PICTURE "!!!!!"
@ m+10,29 say mNoofdays PICTURE "XXX"
@ m+10,39 say mPassportno PICTURE "!!!!!!!!!!!!!!"
@ m+10,57 say mVehno PICTURE "!!!!!!!!!"
@ m+12,9 SAY " Nationality"
@ m+12,23 SAY "No of Occup."
@ m+12,38 SAY "Pay Method"
@ m+12,53 SAY "Deposit"
@ m+13,9 say mNationalit PICTURE "!!!!!!!!!!!!!!"
@ m+13,28 say mNoofoccup PICTURE "!!!!"
@ m+13,41 say mPaymethd PICTURE "!!!!!!"
@ m+13,52 say mDeposit PICTURE "99,999.99"
@ m+15,10 say 'Exp. Kitchen'
@ m+15,25 say 'Breverages'
@ m+15,38 say "Other Expenses"
@ m+15,56 say 'Date Depart'
@ m+16,11 say mkitchen picture "99,999.99"
@ m+16,25 say mbreverages picture "99,999.99"
@ m+16,40 say mothers Picture "99,999.99"
@ m+16,58 say mdatedepart
@m+17,2 say replicate("!",68)
t =t+1
m=m+18
Enddo
set device to screen
!edit tt.txt
return

```

This procedure checks guest

```
SET TALK OFF
set device to screen
set exact off
CLEAR
store space(20) to mname
USE GUEST1
@10,20 say "Enter Name of Guest " get mname pict "@!X"
read
locate for Name = mname
if .not. found()
  clear
  @10,20 say mname+ " is not in this Hotel"
  wait +space(20)+"Press any key to continue.."
  clear
  return
endif
clear
@10,20 say "Please check Room "+Roomno +" for your guest"
@12,20 say "Thanks"
wait+space(20)+"Press any key to continue.."
clear
return
```

** This procedure checks the number of guest in the Hotel

```
set talk off
clear
@10,20 say "Total Number of Guest in this hotel are "+str(reccount())
@12,10
wait+space(20)+"Press any key to continue.."
clear
return
```

CAPITOL HOTEL
KAFANCHAN

GENERAL REPORT AS AT 12/09/99

NO	GUEST NAME	NATIONALITY	ROOM NO	DAYS SPENT	AMT. PAID
1	NLH MUHAMMED KOGI	NIGERIAN	1001	4	4,000.00
2	JOHN GALADIMA	NIGERIAN	1002	2	2,000.00
3	TIJANI MAMMAN	NIGERIAN	1003	3	3,000.00
4	GANA ALIYU	NIGERIAN	1004	3	3,000.00
5	BABA MUHAMMADU	NIGERIAN	1005	4	4,000.00
6	DANIEL IBRAHIM	NIGERIAN	1006	2	2,000.00
7	IBRAHIM DAN K	NIGERIAN	1007	3	3,000.00
8	MUSTAPHA NDAGUYE B	NIGERIAN	1008	3	3,000.00
9	LADAN IBRAHIM	NIGERIAN	1009	2	2,000.00
10	ALH MUHAMMED KOGI	NIGERIAN	1001	4	4,000.00
11	JOHN GALADIMA	NIGERIAN	1002	2	2,000.00
12	TIJANI MAMMAN	NIGERIAN	1003	3	3,000.00
13	GANA ALIYU	NIGERIAN	1004	3	3,000.00
14	BABA MUHAMMADU	NIGERIAN	1005	4	4,000.00
15	DANIEL IBRAHIM	NIGERIAN	1006	2	2,000.00
16	IBRAHIM DAN K	NIGERIAN	1007	3	3,000.00
17	MUSTAPHA NDAGUYE B	NIGERIAN	1008	3	3,000.00
18	LADAN IBRAHIM	NIGERIAN	1009	2	2,000.00
19	ALH MUHAMMED KOGI	NIGERIAN	1001	4	4,000.00
20	JOHN GALADIMA	NIGERIAN	1002	2	2,000.00
21	TIJANI MAMMAN	NIGERIAN	1003	3	3,000.00
22	GANA ALIYU	NIGERIAN	1004	3	3,000.00
23	BABA MUHAMMADU	NIGERIAN	1005	4	4,000.00
24	DANIEL IBRAHIM	NIGERIAN	1006	2	2,000.00
25	IBRAHIM DAN K	NIGERIAN	1007	3	3,000.00
26	MUSTAPHA NDAGUYE B	NIGERIAN	1008	3	3,000.00
27	LADAN IBRAHIM	NIGERIAN	1009	2	2,000.00
28	ALH MUHAMMED KOGI	NIGERIAN	1001	4	4,000.00

Receipt

Name	Date Arrived	Type of Accommodation	
GANA	02/06/99	SINGLE	
Room No	No of Days	Passport No	Veh. Reg No
1009	6	AA544646	AA345MKA
Nationality	No of Occup.	Pay Method	Deposit
NIGERIAN	2	CHEQ	5,000.00
Exp. Kitchen	Breverages	Other Expenses	Date Depart
0.00	0.00	0.00	/ /

Receipt

Name	Date Arrived	Type of Accommodation	
GANA	02/06/99	SINGLE	
Room No	No of Days	Passport No	Veh. Reg No
1009	6	AA544646	AA345MKA
Nationality	No of Occup.	Pay Method	Deposit
NIGERIAN	2	CHEQ	5,000.00
Exp. Kitchen	Breverages	Other Expenses	Date Depart
0.00	0.00	0.00	/ /

Receipt

Name	Date Arrived	Type of Accommodation	
GANA	02/06/99	SINGLE	
Room No	No of Days	Passport No	Veh. Reg No
1009	6	AA544646	AA345MKA
Nationality	No of Occup.	Pay Method	Deposit
NIGERIAN	2	CHEQ	5,000.00
Exp. Kitchen	Breverages	Other Expenses	Date Depart
0.00	0.00	0.00	/ /

*****→

GLOSSARY

Abacus: ancient calculating device composed of a frame of rods, representing decimal columns, and beads that are moved on the rods to form digits.

Accumulator: a circuit in the central processing unit of a computer that can perform arithmetical or logical operations.

Adder: a circuit that performs addition.

Address: the location of a specific cell in a computer's memory.

Bus: the wires in a computer that carry signals used to locate a given memory address; see bus.

Circuitry that routes signals along an address bus to the appropriate memory cells or chips.

Alphanumeric: pertaining to the characters (letters, numerals, punctuation marks and signs) used by a computer.

Analog: the representation of a smoothly physical variable (temperature, for example) by another physical variable (such as the height of a column of mercury).

Arithmetic Logic Unit: a part of the central processor that performs arithmetic operations such as subtraction and logical operations such as TRUE-FALSE comparisons.

ASCII: the acronym for American Standard Code for information interchange, a widely used system for encoding letters, numerals, punctuation marks and signs as binary numbers.

Binary: having two components or possible states.

Binary Code: a system for representing things by combinations of two symbols, such as one and zero, true and false, or the presence or absence of voltage.

Binary number system: a number system that uses two as its base and expresses numbers as strings of zeros and ones.

Bit: the smallest unit of information in a computer equivalent to a single zero or one. The word "Bit" is a contraction of binary digit.

Byte: a sequence of bits, usually eight, treated as a unit for computation or storage.

Central processing unit (CPU): The part of a computer that interprets and executes instructions. It is composed of an arithmetic logic unit, a control unit and a small amount of memory.

Chip: an integrated circuit on a fleck of silicon, made up of thousands of transistors and other electronic components.

Circuit: a closed network through which current can flow.

Circuit Board: the plastic board on which electronic components are mounted.

Command: a statement, such as PRINT or COPY, that sets in motion a preprogrammed sequence of instructions to a computer.

Computer: a programmable machine that accepts, processes and displays data.

Control bus: the wires that carry timing and control pulses to all parts of a computer; see bus.

Control unit: the circuits in the CPU that sequence, interpret and carry out instructions.

Cursor: the movable spot of light that indicates a point of action or attention on a computer screen.

In a computer that carry data to and from memory location; see bus.

Digit: a character position in a number (the number 344, for example, has three digits), or any one of the numerals from zero to nine.

Disk: a round magnetized plate, usually made of plastic or metal, organized into concentric tracks and pie- shaped sectors for storing data.

Disk Drive: the mechanism that rotates a storage disk and read or records data.

Electromechanical: composed of both electrical and mechanical, or moving, parts, most early computers were electro-mechanical devices.

Electronics: the science or use of electron-flow devices, such as vacuum tubes and transistors, with no moving parts.

Floppy Disk: a small, flexible disk used to store information or instructions.

Hardware: the physical apparatus of a Computer system.

Hard-Wired: built in by the manufacturer and therefore incapable of carry digit, see adder.

Input: Information fed into a computer or any part of a computer.

Input/Output (I/O) (prt: an outlet on a computer circuit board for attaching input or output devices such as keyboards or printers.

Instruction: An elementary machine-language order to the central processing unit of a computer, a sequence of such instructions forms a program.

Integrated Circuit (IC): an electronic circuit all of whose components are formed on a single piece of semi conductor material, usually silicon.

Kilobyte (Kbyte): 1,024 bytes(1,024 being one K, or two to the 10th power); often used as a measure of memory capacity.

Language: a set of rules or conventions to describe a process to a computer.

Liquid Crystal Display (LCD): a digital display mechanism made up of character-forming segments of a liquid crystal materials and-wiched between polarizing and reflecting pieces of glass.

Machine language: a set of binary-code instructions capable of being understood by a computer without translation.

Mainframe Computer: the largest type of computer, usually capable of serving many users simultaneously, with a processing speed about 100 times faster than that of a microcomputer.

Memory: the storage facilities of a computer; the term is applied only to internal storage as opposed to external storage, such as disks or tapes.

Micro computer: a desktop or portable computer, based on a microprocessor and meant for a single user; often called a home or personal computer.

Minicomputer: a mid-sized computer smaller than a mainframe and usually with much more memory than a microcomputer.

Modem: a device (modulator/demodulator) that enables data to be transmitted between computers, generally over telephone lines but sometimes on fiber-optic cable or radio frequencies.

Monitor: a television-like output device for display data.

Nibble: half byte, or four bits.

Number crunching: the rapid processing of large quantities of numbers.

Operating System: a complex program used to control, assist or supervise all other programs that run on a computer system, known as DOS (disk operating system) to most microcomputer users.

Output: the data returned by a computer either directly to the user or to some form of storage.

Ports: connectors for attaching peripherals to a computer's main alternating current into the direct-current voltages needed to run a computer's electronic circuits.

Program: a sequence of detailed instructions for performing some operation or solving some problem by computer.

Program counter: a register that indicates the memory address of the next instructions in program to be executed by the central processing unit.

Programmable: capable of responding to instructions and thus of performing a variety of tasks.

Random-access memory-(RAM): a form of temporary internal storage whose contents can be retrieved and altered by the user; also called read-and-write memory.

Read: the process by which the central processor of a computer examines data in memory or transfers data to memory from an input medium such as a floppy disk.

Read only memory (ROM): permanent internal memory containing data or operating instructions that cannot be altered in any way by user.

Simulation: a computer program that manipulates the most significant variables that affect the results; a recreation of the situation by means of realistic sound and visual displays.

Software: instructions, or programs, that enable a computer to do useful work, contrasted with hardware, or the actual computer apparatus.

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