



BBA: Semester-II

BUSINESS INFORMATICS

GAUTAM BAPAT



NIRALI PRAKASHAN
the way to excellence

A Text Book Of

BUSINESS INFORMATICS

For
BBA Semester - II (Course Code: 206)
As Per Revised Syllabus
Effective from June 2013

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Preface ...

I take this opportunity to present this book entitled as “**Business Informatics**” to the students of Second Semester (BBA). The object of this book is to present the subject matter in a most concise and simple manner. The book is written strictly according to the Revised Syllabus.

The book has its own unique features. It brings out the subject in a very simple and lucid manner for easy and comprehensive understanding of the basic concepts, its intricacies, procedures and practices. This book will help the readers to have a broader view on Business Informatics. The language used in this book is easy and will help students to improve their vocabulary of Technical terms and understand the matter in a better and happier way.

I sincerely thank Shri. Dineshbhai Furia and Shri. Jignesh Furia of Nirali Prakashan, for the confidence reposed in me and giving me this opportunity to reach out to the students of management studies.

I thank Mr. Amar Salunkhe for his important inputs time to time and Mr. Akbar Shaikh who painstakingly attended to all the details to make this book appear good.

I also thank Ms. Chaitali Takale, Mr. Ravindra Walodare, Mr. Mahesh Swami, Mr. Vijay Shete, Mr. Sachin Shinde, Nikunj Joshi, Nilesh Deshmukh, Ashok Bodke, Moshin Sayyed and Nitin Thorat.

I have given my best inputs for this book. Any suggestions towards the improvement of this book and sincere comments are most welcome on niralipune@pragationline.com.

AUTHOR

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1.1 Introduction

- Now-a-days, computer are an integral part of our lives. They are used for the reservation of tickets for airplanes and railways, payment of telephone and electricity bills, deposit and withdrawal of money from banks, processing of business data, forecasting of weather conditions, diagnosis of diseases, searching for information on the internet, etc.
- Computer are also used extensively in schools, universities, organisations, music industry, movie industry, scientific research, law firms, fashion industry, etc.
- The term computer is derived from the Latin word 'compute'. The word 'compute' means to calculate.

- A computer is an electronic machine that accepts data from the user, processes the data by performing calculations and operations on it, and generates the desired output results.
- Computer performs both simple and complex operations, with speed and accuracy.
- A computer is a general purpose device that can be programmed to carry out a finite set of arithmetic or logical operations.
- A computer is an electronic device that manipulates information or data. It has the ability to store, retrieve, and process data.
- A computer is a programmable machine. The two **principal characteristics of a computer** are:
 1. Computer responds to a specific set of instructions in a well-defined manner, and
 2. Computer can execute a pre-recorded list of instructions (a program).

1.1.1 What is a Computer? / Meaning of Computer [April 16, 17]

- A computer is an advanced electronic device that takes raw data as input from the user and processes these data under the control of set of instructions (called program) and gives the result (output) and saves output for the future use.
- A computer can process both numerical and non-numerical (arithmetic and logical) calculations.
- A computer has following functions:
 1. **Input (Data):** Input is the raw information entered into a computer from the input devices. It is the collection of letters, numbers, images etc.
 2. **Process:** Process is the operation of data as per given instruction. It is totally internal process of the computer system.
 3. **Output and Storage:** Output is the processed data given by computer after data processing. Output is also called as Result. We can save these results in the storage devices for the future use.

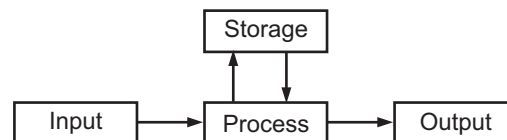


Fig. 1.1: Functions of a Computer

1.1.2 Definition

- A computer is a programmable machine that can store, retrieve, and process data.
- OR**
- A computer is an extremely fast and accurate electronic data processing machine that receives data as input, performs arithmetic and logical operations on them according to a program stored in the memory and produces the desired output.

OR

- Computer is an electronic machine made up of various electronic devices (parts) to process the data to produce useful information.

OR

- A computer is an electronic device which is capable of receiving information (data) in a particular form and of performing a sequence of operations in accordance with a predetermined but variable set of procedural instructions (program) to produce a result in the form of information or signals.

1.1.3 Generations of Computers

- Generation in computer terminology is a change in technology a computer is/was being used.
- A generation in computer talk is a step in technology. Computer developed after ENIAC have been classified into five generations depending upon the technology used, processing techniques, computer languages, memory systems.

1. First Generation Computer (1942-1955):

- The first generation computer were using Vacuum Tubes and machine languages were used for giving instructions. The computer of this generation were very large in size and their programming was a difficult task.
- The first commercial electronic digital computer capable of using stored programs was called "Universal Automatic Calculator" (UNIVAC) built by Macuchy and Eckert in 1951. Punched cards were used for feeding and retrieving of information.
- The major first generation computer were UNIVAC-1, IBM-701, IBM-650, ENIAC, EDVAC, EDSAC, etc.



(a) 1st generation computer



(b) Vacuum tube

Fig. 1.2

- First generation computer were the fastest calculating devices of their time. They could perform computations in milliseconds. Vacuum tube technology made possible the advent of electronic digital computers.

Advantages:

- (i) First generation computer were fastest calculating devices of their time.
- (ii) Support parallel processing.

Disadvantages:

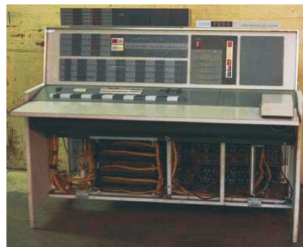
- () Air conditioning is required.
- () Bulky in size (required large rooms) for assembly on installation.
- () Vacuum tube required very high power consumption.
- () Commercial production of these computer was difficult and costly.
- () Time consuming for assembling and installation.
- () These computer required very high constant maintenance.
- () Difficult to use and programming.

Application:

- They were used for scientific applications as they were the fastest computing device of their time.

2. Second Generation Computer (1955-1964):

- Computer are entered into second generation by the introduction of Transistors.
- Vacuum tubes were replaced by tiny solid-state components called transistors.
- Transistors were highly reliable, requires less power and faster than vacuum tubes. High Level Languages such as FORTRAN, COBOL, BASIC etc. were introduced.
- The practice of writing programs in Machine languages were replaced by High Level Languages.
- Punched cards were used for input-output operations.
- Major second generation computer were IBM-1400 series, 7000 series, Honeywell 200, CDC 3600, UNIVAC 1108 etc.



(a) 2nd generation computer



(b) Transistor

Fig. 1.3

Advantages:

- () They used transistor technology as transistor are faster than vacuum tube.
- () More reliable.
- () Cheaper.
- () Smaller in size.
- () Less power consumption.
- () Support parallel processing.

Disadvantages:

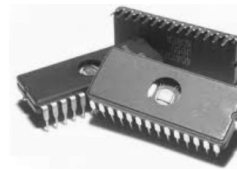
- () Time consuming for assembly and installation.
- () Air-conditioning required.
- () Difficult for commercial production.
- () Costly for commercial production.
- () Maintenance is high.

3. Third Generation Computer (1964-1975):

- The third generation computer used the new technology, Transistor Integrated Circuits (IC) intended by Jack and Noyce in 1958.
- All electronic components like transistors, resistor and capacitor were fabricated on silicon chips. Computer were designed by making use of ICs.
- IC has higher speed, larger storage capacity and smaller size. Operating systems were introduced for use in computers.
- Significant advances in hardware technology made the introduction of keyboards and monitor for data input and output. More high level languages like Pascal, RPG were also introduced.
- Major third generation computer were IBM -360 series, ICL -1900 series, CDC's CYBER - 175, TDC-316, IBM 370/168 etc.



(a) 3rd generation computer



(b) ICs

Fig. 1.4

Advantages:

- () Required small space (portable).
- () More reliable.
- () Faster in speed.
- () Support high level languages.
- () Commercial production is raised.
- () Installation is required in less time.
- () Low maintenance.

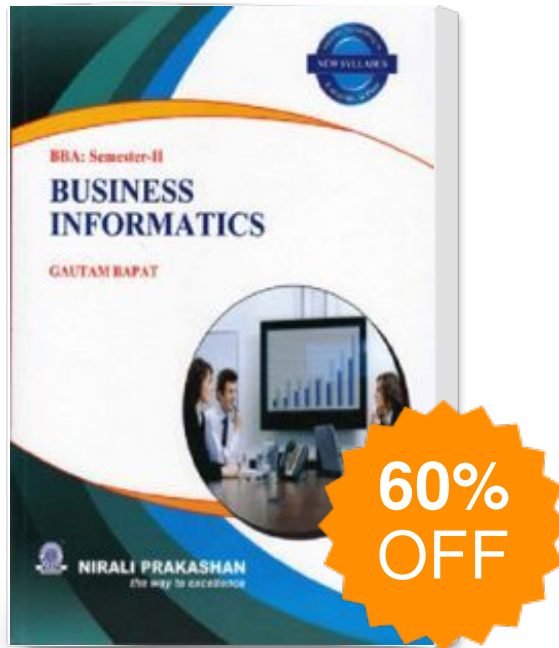
Disadvantages:

- () Air-conditioning required.
- () Cost is more than fourth generation computers.
- () Highly sophisticated technology required for the manufacturing chips.

Application:

- Computer became accessible to mass audience. Computer were produced commercially and were smaller and cheaper than their predecessors.

Business Informatics



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