VIDYA BHARTI

PARAM COMPUTER

सा विद्या या विमुक्तये
विद्या भारती

Step By Step

VIDYA BHARTI

School Computer Series

From Basics

5

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P A R A M
C O M P U T E R

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2nd Edition

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Preface

This book **'Vidya Bharti Param Computer'** deals with the child friendly IT learning skills. The sole purpose of this series is to make the learning of Computer interesting and comprehensive for the young beginners.

Writing this book made me think a lot more than the material it covers, I considered different innovative ways to present the material and different design method. The language used to explain the contents is simple and lucid. Its practical approach towards the subject will make the computer learning a wonderful experience for the children. Colourful illustrations enhance the feel of learning computers even during their theory class.

In a nut shell, this series is totally dedicated to computer education of the primary students. Initially, when the task of writing the books was assigned by the revered **Sh. Surinder Attri ji and Sh. Ravi Kumar ji** it was like a herculean task but by dint of efforts made by my colleagues it became possible to produce these books. We will welcome suggestions and feedback from the readers and teachers for further improvement of the series.

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Contents

1 Evolution of Computer

Hello Students. In this chapter you will be able to know which type of devices were used earlier for calculation before the invention of computer.

❖ Abacus

❖ Pascal's Adding Machine

❖ Difference Engine & Analytical Engine

❖ ENIAC

❖ UNIVAC

We are living in the modern era of technology, but we have to look back to know the history of computer. In ancient time, different devices were used for the purpose of calculation. People always wanted a machine that could calculate and store the data.

Children do you know ?

❖ How did people calculate numbers ?

❖ Did they use sticks ?

❖ Did they use stones ?

❖ Did they use their fingers ?

The Answer is

❖ They used all these.

❖ Mostly fingers were used for the purpose of calculation.

❖ That is why our number system is based on number 10.

Initially these methods were used but with the advancement of human mind, number system developed for counting and calculations. Need for fast and accurate calculation became the base of invention of computer.

300- BC ABACUS

❖ It was First calculating device

❖ It was developed in China

❖ It was made up of wooden frame With rods having beads

❖ Designed for addition, multiplication and division.
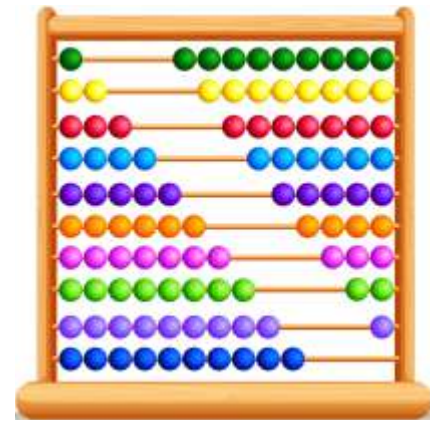
ABACUS

1617 – NAPIER'S BONES

❖ It was made by John Napier, a Scottish Mathematician

❖ It was made for simplifying calculations.

❖ It was made of bones.

❖ It made multiplication a lot easier

❖ Concept of decimal point, square root and cube root was introduced.


NAPIER'S BONES

1642 – PASCALINE

❖ Blaise Pascal was a French Mathematician who developed first Mechanical Calculator in 1642.

❖ Gears, Wheels and Dials were used for calculation.

❖ Numbers were displayed with the rotation of wheels.

❖ It was used for addition and subtraction

PASCALINE

1822- DIFFERENCE ENGINE, 1833- ANALYTICAL ENGINE

❖ Charles Babbage, a British mathematician is known as 'Father of computer' had invented Difference Engine in 1822 and Analytical Engine in 1833

❖ Input, Output, Mill, Store and Control were the five Units of Difference Engine.

❖ Analytical Engine is the base of today's Computer
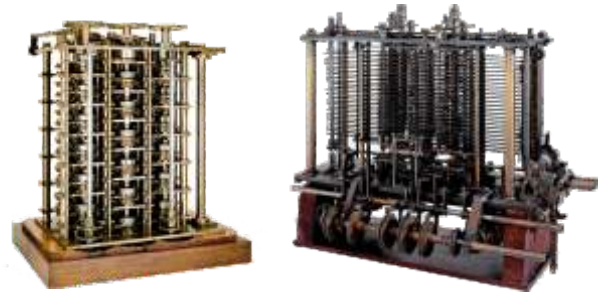
DIFFERENCE ENGINE   ANALYTICAL ENGINE

1850 - GEORGE BOOLE'S BOOLEAN LOGIC

❖ George Boole was an English mathematician who helped to establish modern symbolic logic.

❖ Now a days it is known as Boolean Algebra

❖ It is a basic to the design of digital computer circuits.

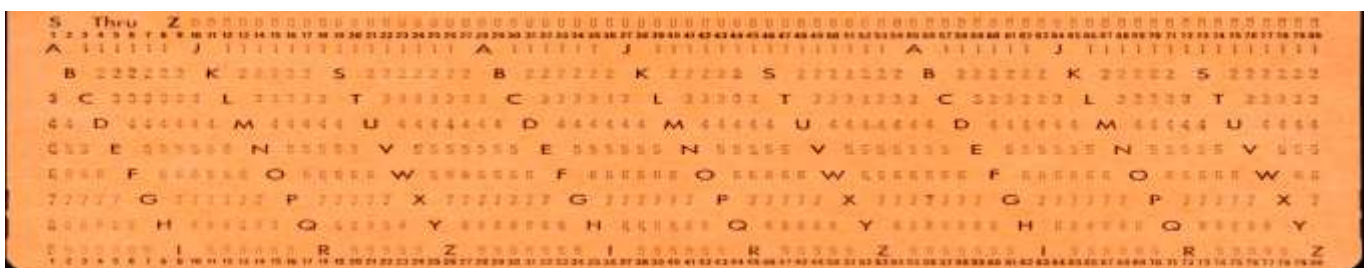❖ It solved the mathematical problem by taking 1 for positive and 0 for negative.

NAPIER'S BONES

1880- TABULATING MACHINE

❖ It was invented by Dr. Herman Hollerith, an American Scientist.

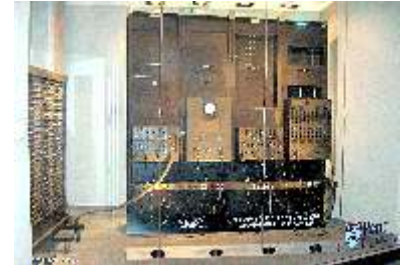❖ Reading data--- processing--- producing of output were done by punched cards

TABULATING MACHINE

PUNCHED CARD

1946- ENIAC

❖ Full form of ENIAC is – Electronic Numeric Integrator And Calculator was invented by John Mauchly and J. Presper Eckert .

❖ It was the first electronic digital computer.

❖ 18000 vaccum tubes were the main part of this computer.

ENIAC

1951- UNIVAC -1

❖ Full form of UNIVAC is Universal Automatic Computer

❖ It was the first commercial electronic computer.

❖ It was developed by J. Presper Eckert and John Mauchly in 1951

UNIVAC I

TYPES OF COMPUTER

❖ The computer which you see at home, office , school etc. were introduced in 1982.

❖ These are known as PC means Personal Computer.

❖ These can be categorized according to size, speed , storage capacity and cost etc.

❖ Broadly computers are classified into four categories

    (1) Micro Computer   (2) Mini Computer

    (3) Main Frame Computer   (4) Super Computer

SUPER COMPUTER

MICRO COMPUTER

❖ These computers are smaller in size in comparison to other computers.

❖ The cost is relatively less.

❖ These are designed for personal use.

❖ These are specially used in homes, offices, schools, banks etc. Example IBM PC

Micro Computer

MINI COMPUTER

❖ They are bigger in size in comparison to Micro Computer

❖ They are costly and having more speed than Micro Computer

❖ Many users can use it at the same time.

❖ They are specially used in small organizations.

❖ **For example :** PDP-8

MINI COMPUTER

MAINFRAME COMPUTER

❖ These computers are very powerful.

❖ They are big in size with a large memory in comparison to Micro and Mini

❖ They are used in Banks, Airports, Railway Station etc.

❖ **For Example :** IBM 390, PDP-10 etc.

MAINFRAME COMPUTER

SUPER COMPUTER

❖ They are the most powerful computers in the world.

❖ They are having more processing speed.

❖ They are specially used in weather forecasting, space research, defence

❖ **Example :** Cray, PARAM, ANURAG

SUPER COMPUTER

- ➤ Abacus was the first calculating device .
- ➤ Pascaline was the first Mechanical Calculator.
- ➤ Charles Babbage was known as "Father of Computer".
- ➤ ENIAC was the first electronic digital computer.
- ➤ Full form of UNIVAC is Universal Automatic Computer.
- ➤ Computer can be categorized according to size, speed, storage capacity and cost etc

Brain Storming Session

A.   Fill in the blanks : (main frame, 300BC, 1642, analytical engine, John Napier)

1. Abacus was invented in _____.
2. Concept of decimal was introduced by _____.
3. Pascaline was invented in _____ year.
4. _____ the base of today's computer.
5. _____ computers are used in Banks, Railways etc.

B.   Match the Devices with their inventors

Name of Device	Name of Inventor
1. ABACUS	Dr. Herman Hollerith
2. PASCALINE	John Napier
3. NAPIER'S BONES	Charles Babbage
4. TABULATING MACHINE	Chinese
5. DIFFERENCE ENGINE	Blaise Pascal

C.   Very Short Answer Questions:

- ❖ Name two example of SUPER Computer.
- ❖ Which type of computer is used in small organization?

D.   Short Answer Questions:

❖   Differentiate between Mainframe and Super Computer

❖   Differentiate between Micro and Mini Computer.

E.   Write Short Note on the following .

(1)   ENIAC,

(2)   UNIVAC-1

Project

1.   Collect the pictures of Different types of Computers and paste them on your notebook.

2.   Paste the picture of Different Inventors mentioned in your chapter . Also write their inventions.

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