

Data

What is Data? The numbers, words, images and symbols which do not bear a meaning, when standing alone are called data.

Two types of Data **Quantitative Data** - Measurable Data. (Ex: Age, Price, Height, Weight etc.)

Qualitative Data - Data that cannot be measured. (Name, Telephone Number, Address etc.)

Processing

What is Processing? Converting Data into something meaningful (Information)

Two types of Processing 1. Manual Processing

2. Electronic Processing

Information

What is Information? The Processed Data.

Qualities of Information 1. Relevant

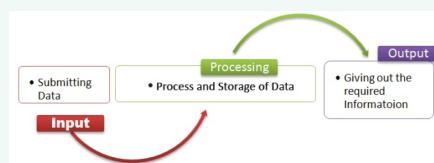
2. Complete

3. Accurate

4. Timeliness

5. Cost Effective

Components of a Computer System



Example: Finding the average of 9 subjects.

1. **Input** - Data (Marks of 9 subjects)

2. **Process** - According to the user need. (Get the sum and divide by 9)

3. **Output** - Information (Average)

Computer Generations History

Generation	Major Hardware Technology	Software Used	Characteristic
1st Generation	Vacuum Tubes	Machine Language	High Heat
2nd Generation	Transistors	High-Level Programming Language	Smaller in Size
3rd Generation	Integrated Circuits (IC)	Operating Systems (OS)	Faster Processing
4th Generation	Large Scale IC (LSIC)	OS with Graphical User Interface (GUI)	Portable
5th Generation	Ultra Large Scale Integration (ULSI)	Internet	Easy Operation

Applications of ICT (cont)

Health ICT in diagnosis	Applications
	CAT Machine - to make 3D images of different parts of body.
	MRI Machine - creates digitalized images of internal organs of the body by using strong magnetic fields and radio waves
	ECG Machine - Uses to monitor heart beat.
	Cardiac Screening Machine - displays the physiology and the movements inside the heart.
	EEG - record the activities of the brain.
Telemedicine	The use of ICT to examine and provide healthcare to a patient who is far away from the hospital is called Telemedicine.
Telesurgery (Remote Surgery)	the ability of a doctor to perform surgery on a patient in consultation with a specialist who is far away, using ICT.
Medical Teletraining	Specialists' consultation and training using ICT

e-Government	<i>Government to Citizen (G2C)</i>	Ex: Payment of Utility Bills
	<i>Government to Government (G2G)</i>	Ex: Diplomatic & VISA information
	<i>Government to Business (G2B)</i>	Ex: Payment Services
	<i>Government to Employees (G2E)</i>	Ex: Gazettes, Circulars
Education	<i>In the classroom</i>	Ex: Presentations, Experimental Videos, Online Information collection etc.
	<i>Serves as a teaching aid</i>	Ex: Making presentations, organize lessons using a computer etc.
	<i>Learning Management System (LMS)</i>	Ex: Online Assignments (for students), Online lessons (for teachers)
	<i>Distance Learning</i>	Ex: Digital Library Facility, Web Based Teaching etc.



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Applications of ICT - 2

Agricu- ltural Industry	Meteorological Devices
	Automated Insect Control Device
	Field conditions measuring devices
	Crop harvesting using Robots
Manufa- cturing Industry & Business	Using Robots - 24 hour service, Never get tired, Efficiency, Accuracy, Hygiene
	Video Conferencing
	Human Resource Management (HRM)
e- Banking System	ability to withdraw cash anytime using ATMs
	inter banking or transactional activities.
	pay utility bills, inter-banking transactions, or checking the account balance using mobile phones.
Online Shopping	Open 24 hours a day

Applications of ICT - 2 (cont)

	able to see things and order at one's convenient place.
	ability to pay using the electronic payment methods
	home delivery of goods. (Saving Transport cost and time)
Entert- ainment	Digital Photography
	Social Network
	Watching Movies
	e-news & e-books

Demerits of ICT

Addiction	Building unsuitable friendships through social media
	Computers could become infected by virus due to improper use of internet.
	Negative effects on psychology of a person by visiting improper websites.
	Publishing of edited photographs and videos of individuals affecting their personal lives.

Evolution of the Computer

Blaise Pascal	The Adding Machine
Charles Babbage	Analytical Engine
Ada Lovelace	First Programmer
Howard Aiken	MARK I



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