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

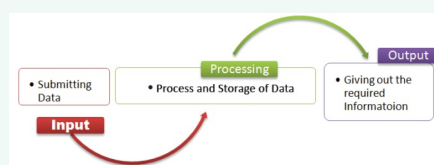|	
What is Processing?	Converting Data into something meaningful (Information)
Two types of Processing	1. Manual Processing
	2. Electronic Processing

Information

What is Information?	The Processed Data.
Qualitites 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 Generation
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

Applications of ICT (cont)

Health	*ICT in diagnosis*	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-Gove-rnment	*Government to Citizen (G2C)*	Ex: Payment of Utility Bills
	Government to Government (G2G)	Ex: Diplomatic & VISA inform-ation
	Government to Business (G2B)	Ex: Payment Services
	Government to Employees (G2E)	Ex: Gazettes, Circulars
Education	*In the classroom*	Ex: Presentat-ions, Experi-mental Videos, Online Inform-ation collection etc.
	Serves as a teaching aid	Ex: Making presentations, organize lessons using a computer etc.
	Learning Management System (LMS)	Ex: Online Assignments (for students), Online lessons (for teachers)
	Distance Learning	Ex: Digital Library Facility, Web Based Teaching etc.

Applications of ICT - 2

Agricultural Industry	Meteorological Devices	
	Automated Insect Control Device	
	Field conditions measuring devices	
	Crop harvesting using Robots	
Manufacturing 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)
Entertainment	Digital Photograhy	
	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