Application of Information & Communication Technologies

Lecture-1

Course Outline

- The course will consist of :
  - 32 lectures
  - 3-6 assignments
  - 2 exams (1 midterm and 1 final)
  - 3-6 Test
- Grading Criteria:
  - One Midterm: 30 %
  - Final Exam: 40%
  - Assignments: 15%
  - Test/Quizzes : 15%

Textbook

- “Understanding Computers: Today and Tomorrow, Comprehensive”, 15th Edition by Deborah Morley & Charles S. Parker
- “Introduction to Computers” 6th Edition by Norton,P.

Overview of Lecture 1

- Introduction to Computers & Computer in Life
- Data vs Information
- Generation of Computer

“Can you imagine a day without your phone or laptop?”

What is a Computer?

- A computer is an electronic machine.
- It can take data (input), work on it (processing), show results (output), and save it (storage).
- A computer only does what a program (set of instructions) tells it to do.

How a Computer Works: Input, Process, Output, Storage

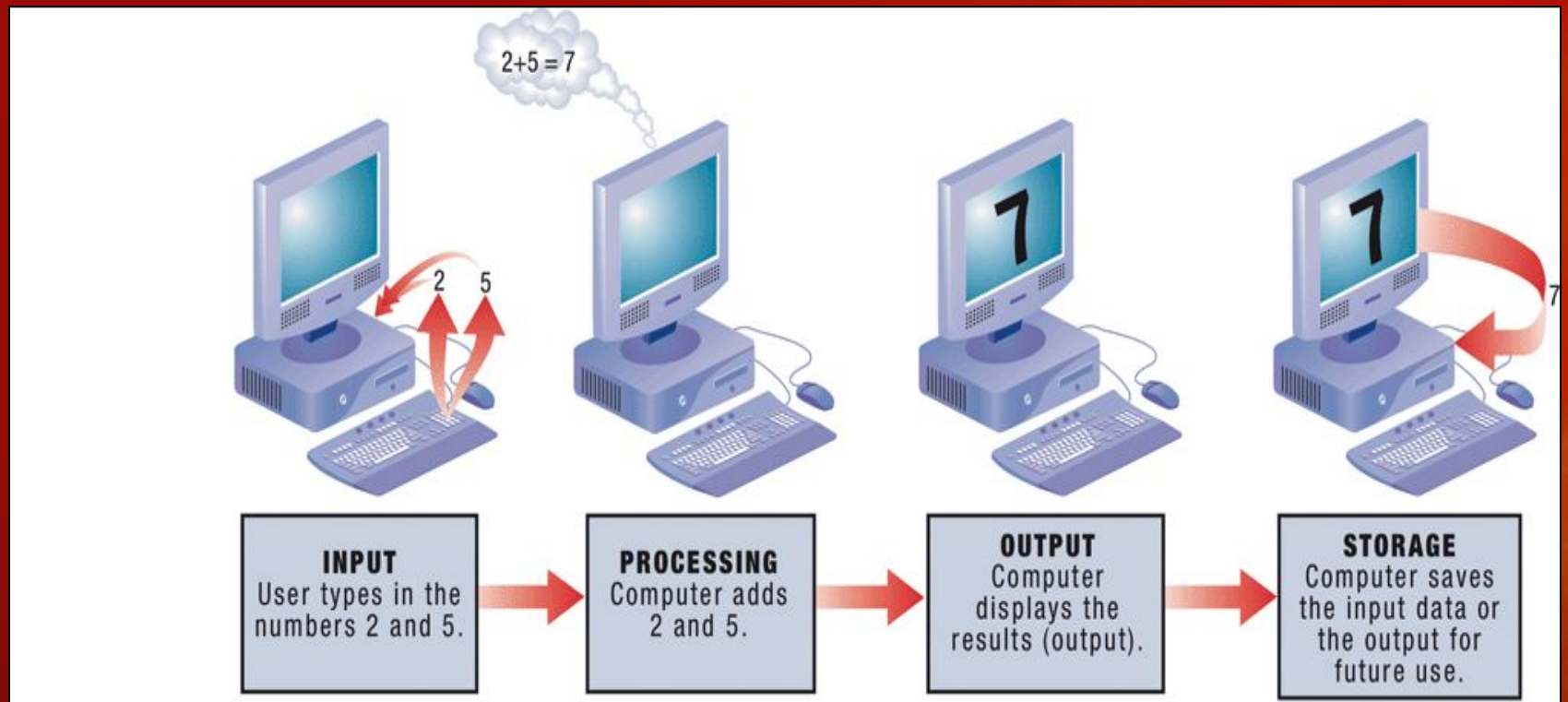

FIGURE 1-6
The information processing cycle.

Computers in Our Daily Life

- Education (online classes, digital libraries)
- Business (banking, online shopping)
- Communication (WhatsApp, email, video calls)
- Entertainment (games, YouTube, movies)

Data vs Information

- Data = Raw facts (e.g., numbers, marks, words).
- Information = Processed, meaningful result (e.g., average marks, report).

Generations of Computers

- 1st Generation (Vacuum tubes – big, slow)
- 2nd Generation (Transistors – smaller, faster)
- 3rd Generation (ICs – integrated circuits)
- 4th Generation (Microprocessors – personal computers)
- 5th Generation (AI, robotics, smart systems)

Assignment#1

- Task: Create a comparison table of the Five Generations of Computers.
- Format: 4 columns → Technology, Size & Speed, Input/Output, Example.
- Deadline: Next class.
- Information Technology IT

Summary

- Introduction to Computers & Computer in Life
- Data vs Information
- Generation of Computer

Suggested Reading

- Introduction chapter , “Understanding Computers: Today and Tomorrow, Comprehensive”, 15th Edition by Deborah Morley & Charles S. Parker