

# Data Processing

- Data Processing:
  - An application of the input-processing-output cycle
    - Input: data is collected either by a human recorder or an electronic sensor
    - Processing: The data is processed and analyzed according to the desired algorithms
    - Output: Results are displayed and or printed
  - Vital activity in the areas of business, medicine and research
  - The first era of computational history
    - 1940s to the 1970s
- Digital computers used for data processing
  - Developed during WWII for military use
  - Massive and expensive
    - Acquired only by governments, large corporations, and research facilities
  - Data stored on magnetic tapes
  - Operated by trained technicians

- Often very specific in function and use
- Headless main computer
  - Interaction occurred via a secondary connection using the keyboard and terminal display
- Performed centralized computing
  - All data is held and processed by the main computer, but data is entered and displayed from multiple terminal connections (as many as the system allows)
  - Data display, printing and storage were connected via cables to the main computer
  - Primary technology model during the early years of computation
- Very limited public accessibility
  - Factors included
    - Size
    - Terminal interface and data entry
      - Used punch cards
    - Specialization

