Computer in Business and Industry

Office Automation System

- Is defined as using computer and communications technology to help people better use and manage information.
- Includes all types of computers, telephones, electronic mail and office machines that use microprocessors of other high- technology components.
- People who use office automation are often called knowledge workers – senior executives, managers, supervisors, analysts, engineers and other white- collar office workers
- These systems keep track of the information originating in various operations throughout the company, such as order processing, accounting, inventory and manufacturing.
- Provides knowledge workers with the information – producing systems to collect, analyze, plan, and control information about the many facets of the business, using text, voice, graphics and video display technology.
- People
- Ergonomics
    - The study of how to create safety, comfort and ease of use for the people who use machines.
    - Office tasks involve a great deal of thinking and decision making so it is different from factory automation.
    - Office systems must be flexible and versatile; moreover they must be designed so any knowledge worker, regardless of background can easily use them.
    - With the advent of computers, ergonomics engineers became particularly interested in office automation systems, furniture and environments for the knowledge workers,
    - Best design of keyboards, set eye fatigue level for monitor and specified desk, seating design.
    - Ergonomics has played a significant role in helping people use technology more effectively.

Office Automation Technologies

- Five primary technologies used in managing information in office automation.
    - Text or written words
    - Data, as in numbers or non- text formats
    - Graphics, including drawings, charts and photographs
    - Audio, as in telephone, voice mail or voice recognition systems
    - Video, such as captured images, videotapes or teleconferencing
- In past these forms of information was created using different technologies.
    - Text – conventional typewriters or word processing
    - Data - such as sales report was provided by central computers
    - Graphs and charts – hand written or creating using slide photography.
- It was not possible to combine all those things.
- Computer made it possible to combine them.
- Computer produces electronic documents, which is self- contained works, conveying information that has been created by a knowledge worker and stored in a computer system.

- Electronic documents can be simple as text file or more complex which contained graphics or even audio and video
- Data, sound and images can all be entered into a computer, stored and translated into the kind of output we need.
- Groupware
- The center of this integration are networking and communication systems

Office Automation Systems

- Uses computer – based systems to provide information to help knowledge workers make decisions that benefit the business.
- Comprise of many subsystems.

Text Management Systems

- Computer system designed to work with the written or typewritten word.
- Includes all kind of typewriters, word processing systems, PCs with word processing, desktop publishing and text editing system.
- Are used for tasks like writing documents simple and complex documents comprise of reports, memos, notices etc.

Business Analysis Systems

- Provides data that, when used with the proper software, helps its users better understand the business environment and make more effective decisions.
- Different software tools for performing analysis are
  - Decision Support System (DSS)
    - Helps the knowledge worker to extract information from the various MIS database and reporting systems, analyze it and then formulate a decision or a strategy for business planning
  - Expert System
    - Is a computer system that can store and retrieve data with special problem solving expertise.

  - Executive Support System
    - Is an information system that consolidates and summaries ongoing transactions with the organization.
    - It provides the management with all the information it requires at all times from internal as well as external sources.

Document Management Systems

- Aid in filing, tracking and managing documents, whether they are paper, computer based, micrographics or purely electronic.

Network and Communication Management Systems

- Includes telephone, electronic mails, voice messaging systems, teleconferencing and fax machines. Pbx (private branch exchange)

Management Information System

- A general term for all automated hardware and software used to provide and maintain information
- is the discipline covering the application of people, technologies, and procedures — collectively called information systems — to solving business problems
- can be any organized combinations people, hardware, software, communications networks, and data resources that collects, transforms and disseminates information in an organization
- The term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e.g. Decision Support Systems, Expert systems, and Executive information systems.