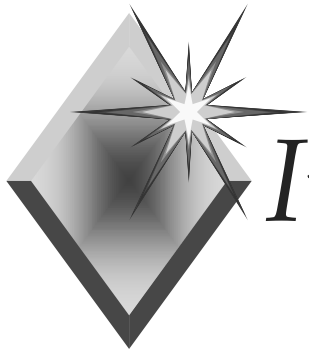


ELECTRONIC DATA PROCESSING (EDP)

- ▼ Need for EDP
- ▼ Examples of EDP
- ▼ Effects of introducing computers in data processing systems
 - ▼ Stages of computerization
 - ▼ System flowchart



Introduction

- ▼ data processing was possible a long time before the invention of the computer, e.g., using
 - ▼ *abacus* - manual data processor
 - ▼ *old-fashioned cash registers* - mechanical
- ▼ when an electronic device (computer) is used to process data, this is called **electronic data processing (EDP)**



Need for EDP

- ▼ Advantages over other ways as computer operates
 - ▼ faster
 - ▼ more accurately
 - ▼ more reliably
 - ▼ more economically
- ▼ Characteristics of data processing tasks
- ▼ How computers can help



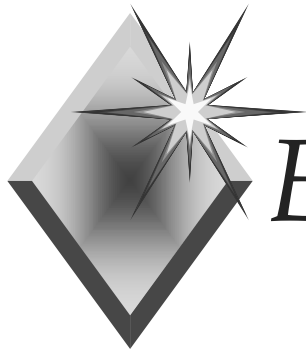
Characteristics of data processing tasks

- ▼ accurate records must always be maintained
- ▼ high speed processing is required
- ▼ large volumes of records are handled
- ▼ calculations are often routine & repetitious
- ▼ much of the work is very tedious, e.g., sorting & searching



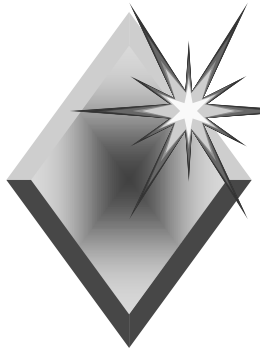
How computers can help?

- ▼ accuracy
 - ▼ provided that instructions & data are correct
- ▼ speed
- ▼ consistency
 - ▼ same results can be produced with same data, instructions & process
- ▼ storage capacity
 - ▼ stored on various media
- ▼ automation
 - ▼ human work is not needed during the process



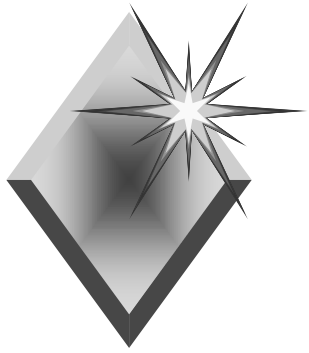
Examples of EDP

- ▼ Payroll system
- ▼ Mailing list
- ▼ Stock control system
- ▼ Ticket buying (URBTIX) system
- ▼ Point-of-sale system
- ▼ Electronic fund transfer
 - easy pay system(EPS)



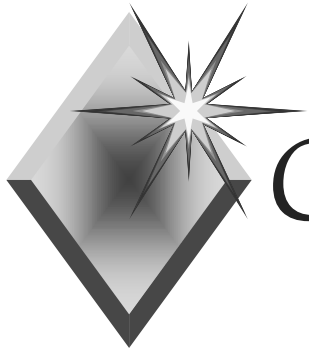
Effect of Introducing Computer Data Processing Systems

- ▼ Advantages
 - ▼ save time, save money
 - ▼ save staff for some routine work
 - ▼ better control over an organization
 - ▼ better knowledge & better reaction
 - ▼ better customer services



▼ Disadvantages

- ▼ extra cost in employing specialists
- ▼ staff may find this unacceptable due to the changing of working procedures
- ▼ extra cost in equipment, office space & furniture



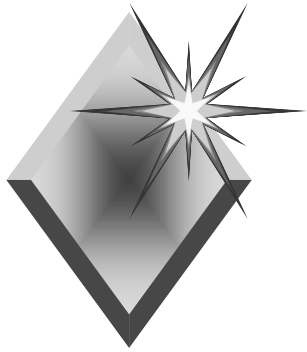
Criteria for Computerization

- ▼ What is the problem of in the existing system?
- ▼ Can the problem be solved using a computer
- ▼ It is cost-effective?
- ▼ Is the use of computers acceptable to the staff?



Stages of Computerization (8)

- ▼ preliminary study
- ▼ feasibility study
- ▼ system analysis
- ▼ systems design
- ▼ program design, coding & testing
- ▼ systems implementation
- ▼ systems maintenance
- ▼ systems evaluation

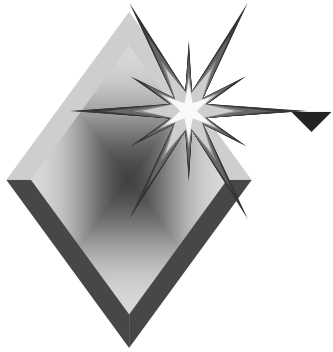


- ▼ Preliminary study

- ▼ investigates & identifies the areas that need to be computerized

- ▼ Feasibility study

- ▼ decide whether computerization is the best solution to the problem, the project needed to be process or not

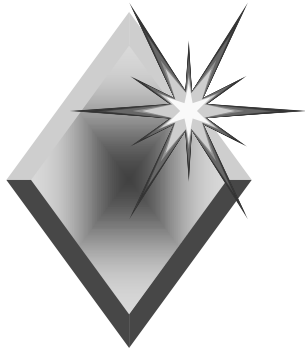


Systems analysis

- ▼ the present system is analysed

Systems design

- ▼ the type of hardware & software
- ▼ input & output format
- ▼ storage method, file structure
- ▼ processing specification & **system flowcharts**

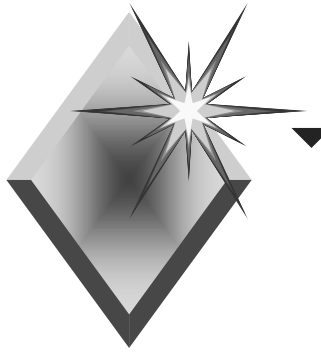


- ▼ Program design, coding & testing

- ▼ done by programmers

- ▼ Systems Implementation

- ▼ changeover from the existing system to the new one
- ▼ staff training, installation of hardware & software
- ▼ 4 common approaches of changeover: parallel, direct, phase, & pilot



- ▼ Systems maintenance

- ▼ the system is continually modified & maintained to meet the users' new requirements & fix the newly discovered bugs

- ▼ Systems evaluation

- ▼ to determine whether it is meeting initial requirements



Systems Flowchart

- ▼ a diagram uses symbols & interconnecting lines to show the data flow & sequence of operations
- ▼ help systems analysts & analyse & design systems
- ▼ symbols: manual operation, merge, manual input, document/report, punch card, magnetic tape, magnetic tape, a magnetic disk, display, communication link & process box