

PENANG SANGAM HIGH SCHOOL
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LESSON NOTES 17

Year/Level: 11 Subjects: Computer Studies

Strand:	CE 3 Information management
Sub-strand:	CE 11.3.1 Storing, managing and retrieving information
Content Learning Outcome:	Information retrieval, advantages and disadvantages of database

Lesson Notes

Information Retrieval

This section will focus on databases which is the most widely used data storage, manipulation and retrieval tool.

Database

- Is a collection of related files that can be retrieved when needed
- It is usually stored in a secondary storage device e.g. hard disk or magnetic tape.

File

- Is a collection of data stored in secondary devices
- It is composed of a number of related records each containing information about a particular subject e.g. a file of students" grade will contain a record for each student.

Record

- Contains a number of fields which are related
- A field is usually an important feature of the subject whose data is stored in a record

Key field

- Is a field that can be used to locate one particular record
- It uniquely identifies the record

Advantages of a Database

Sharing

- ❖ In organizations, information from various departments can be readily shared with other departments and users.

Security

- ❖ Enables user's proper and authorized access to only the kind of information they need to know.

Fewer files

- ❖ Mean less storage requirements.

Data Integrity

- ❖ Data integrity is when changes made in one file to a particular data, updates are made in other files which contain the same data as well.

Disadvantages of Databases

Increased costs

- ❖ For maintaining database systems since it requires sophisticated hardware and software

Management complexity

- ❖ Are the systems interfacing cost in terms of company's resources and culture as well as the security issues prevalent must be assessed constantly

Maintaining currency

- ❖ Is keeping the system current, up-to-date and personnel training costs tend to be significant.

Vendor dependence

- ❖ With the heavy investment related to DB systems, companies might be reluctant to change vendors. This leads to limited choice of database system components.

Frequent upgrade/replacement cycles

- ❖ Occur when vendors frequently upgrade their products which companies have to keep

Questions

- 1) Define database
- 2) One advantage and disadvantage of database?
- 3) List two reasons why the organization would still prefer to use traditional file rather than a database to store information?