Lecture no. 12
Department: Information and Library Science
Subject: Information Storage & Retrieval
Name of the lecture: Databases
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4.1. Data Base: A collection of interrelated files in a computer system that is created and managed by database manager software. These files are organized so that parts with a common element can be retrieved easily. (In brief, it is a group of related files).

***File**: Collection of related records. An example of a file is collected data on every student in the same school, including all names, addresses and ID numbers interrelated files make up a database.

***Record**: is the information contained in a database relating to one document or item. For example, in a cataloguing database a record may contain all of the information relating to one book. In source database, a record may contain the contents of directory entry, or articles in a journal.

*** Field**: unit of data consisting of one or more characters (bytes). Examples of field are your name, your address, your ID (identification card number) , Collection of fields make up a record.

Kinds of Files:

1. Sequential File (sometimes called: document system, item entry, main file). It includes all records with their fields .They are arranged in sequential numeric order .The newest entries are added to the end of the file.

The main advantages are:

1. It is easy to implement.
2. It provides fast access to the next record using the numbering order.

Its disadvantages are:

1. It is difficult to update, inserting a new record may require moving a large proportion of the file.
2. Random access is extremely slow.

2) Inverted file: (sometimes called aspect system or term entry system). It is a file structure in which you can locate all documents containing a given term. In another word it is arranged by terms, and next to each term to search term all documents numbers which include the term will appear during searching the file.