Assignment 1 – Week 1

This assignment is based on lecture 1 (chapter 1).

○ Submit your *own work* on time. No credit will be given if the assignment is submitted after the due date.
○ Note that the completed assignment should be submitted in .doc, .docx, .rtf or .pdf format only.
○ In MCQs, if you think that your answer needs explanation to get credit then please write it down.
○ You are encouraged to discuss these questions in the Sakai forum.
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(1) **List two examples of database systems other than those listed in Section 1.1 of the book.**
    ANS:

   SqlLite(Android)

   Microsoft Access

   Applications examples:

   • Ecommerce Websites (Products, Users, etc….)

   • Social Media Applications (Facebook, Instagram) save user posts or feeds.

(2) **Explain what is meant by a database management system, and contrast it with a File Management System.**
    ANS:

   A database-management system (DBMS) is a collection of interrelated data and a set of programs to access those data. The collection of data, usually referred to as the database, contains information relevant to an enterprise. File Management System on the other hand is an abstraction to store retrieves management and updates a set of files.

   DBMS Solves The following Problems in File Management System:
   1. Data redundancy and inconsistency

      • Multiple file formats, duplication of information in different files

   2. Difficulty in accessing data

      • Need to write a new program to carry out each new task

   3. Data isolation — multiple files and formats

   4. Integrity problems

      • Hard to add new constraints or change existing ones

   5. Atomicity of updates

      • Failures may leave database in an inconsistent state with partial updates carried out

6. Concurrent access by multiple users

  • Uncontrolled concurrent accesses can lead to inconsistencies

7. Security problems

(3) Discuss advantages and disadvantages of DBMSs in short.
ANS:

Advantages:
  • Redundancy Control
  • Easy access for data
  • Good Security
  • provide an environment that is both convenient and efficient for people to use in retrieving and storing information.
  • store large bodies of information

 Disadvantages:
  • Cost of DBMS
  • Management complexity
  • Frequent upgrade

(4) What are the 5 major components of the DBMS environment?
ANS:
  • Hardware
  • Software
  • Data
  • Procedures
  • Database Access Language

(5) A database management System (DBMS) is
A. Collection of interrelated data
B. Collection of programs to access data
C. Collection of data describing one particular enterprise
D. All of the above
ANS:
   D

(6) The DBMS provides uncontrolled access to the database.
A. True
B. False
ANS:
   False

(7) Disadvantages of File systems to store data is:
A. Data redundancy and inconsistency
B. Difficulty in accessing data
C. Data isolation
D. All of the above
ANS:
   D

(8) The Database Administrator (DBA) is responsible for the management of the data resource including database planning, development and maintenance of standards, policies and procedures, and conceptual/logical database design.
   A. True
   B. False
   ANS:
      True

(9) Data Manipulation language enables users to
   A. Retrieval of information stored in database
   B. Insertion of new information into the database
   C. Deletion of information from the database
   D. All of the above
   ANS:
      D

(10) Which of the following is Database language?
   A. Data Definition Language
   B. Data Manipulation Language
   C. Query Language
   D. All of the above
   ANS:
      D