Database Management System – cs422 DE

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:

1. **Buying a car:**

   When we purchase a car from car showroom. They have their system where they were entering our(buyers) details with Car's VIN numbers and if they also have financial service, they also save our financial details. During saving the details their system is connected to database system where all the details are saved, and the details can be extracted whenever necessary.

2. **Ordering a pizza:**

   During ordering a pizza, they give us a pizza menu where we can see pizza size, toppings type etc. From there we can choose a pizza according to our taste. Counter guys ask about table number and save those details on their POS system. If we pay via card they also check for amount and add tax amount on their system and during this process each and all details are saved on their system on databases. On the other side pizza shop also have another system where they can track of each sales and card fraud detection and report statements.

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

ANS: File Management system is old approach of storing data where data are stored in a physical file, and they can be stored in different cabinets and for security reason those cabinets can be stored in secured locations. Whenever we stored data on file-based system then file can be in large number and managing those cabinets were difficult. Data can be possibly lost, misplaced, and duplicated.
To overcome these limitations the new approach came that is Database Management System. The database management system is application programs which store data separately and independently. Database is a single, possibly large repository of data which can be simultaneously used differently. Database can hold the operational data and can be shared to any department. Data can be stored and accessed in easy manner by multiple users. DBMS provided many security features to multiple level.

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

ANS:
DBMSs has its own security feature by this DBMS is less vulnerable that file system. By storing data on DBMS, we can improve data integrity meaning we can validate the stored data. We can easily share a data in between systems. We can make sure that in DBMS we can control data redundancy not duplication of data. DBMS has lots of advantages, but it also has disadvantages as well. DBMS is more complex than file system. To design, operate DBMS office need a professional man which may hike the operational cost as

well. To operate we also need extra hardware system, If user increased then we also need to pay extra cost to maintain DBMS. DBMS is written to be more general so the overall performance is may not good for all programs and at last in market we have lots of DBMS are available and if we will change a system or by any means we need to change the DBMS system, then the data conversion is not that easy.

(4) What are the 5 major components of the DBMS environment?

ANS: The 5 major components of DMBS are Hardware, Software, Data, Procedure, People.

(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: B

(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: A

(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