

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:

Online Flight Booking System: Customers search for flights, system checks seat availability, reserves seats, and handles concurrency to prevent double bookings.

Online Shopping Cart System: Customers add items to cart, system checks inventory, updates it upon purchase, and manages concurrency to avoid overselling.

(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 software that facilitates efficient storage, retrieval, and manipulation of structured data. It ensures data integrity, provides concurrency control, and supports complex queries. In contrast, a File Management System (FMS) deals with basic file operations and lacks the advanced features of a DBMS, such as data organization, indexing, and relational operations.

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

ANS:

Advantages:

- Data integrity and security
- Data sharing and consistency
- Data recovery capabilities

Disadvantages:

- High cost
- Complexity in implementation and management
- Performance overhead
- Single point of failure
- Potential vendor lock-in

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

ANS:

1. Hardware
2. Software
3. Data
4. Procedures
5. Users

(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