**Database Management System – cs422 DE**

**Assignment 1 – Week 1**

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**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.

1. **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.

1. **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

1. **What are the 5 major components of the DBMS environment?**

ANS:

1. Hardware
2. Software
3. Data
4. Procedures
5. Users
6. **A database management System (DBMS) is**
7. Collection of interrelated data
8. Collection of programs to access data
9. Collection of data describing one particular enterprise
10. All of the above

ANS: D

1. **The DBMS provides uncontrolled access to the database.**
2. True
3. False

ANS: B

1. **Disadvantages of File systems to store data is:**
2. Data redundancy and inconsistency
3. Difficulty in accessing data
4. Data isolation
5. All of the above

ANS: D

1. **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.**
2. True
3. False

ANS: A

1. **Data Manipulation language enables users to**
2. Retrieval of information stored in database
3. Insertion of new information into the database
4. Deletion of information from the database
5. All of the above

ANS: D

1. **Which of the following is Database language?**
2. Data Definition Language
3. Data Manipulation Language
4. Query Language
5. All of the above

ANS: D