

## 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:** 1. Package-tracking for logistics companies. 2. Employee timekeeping system

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

**ANS:** DBMS is a system that enables users to define, create, maintain and control access to the database. File Management System: Apps read/write their own files directly; data definitions live inside programs. Contrasts:

- Centralized & Data independence
- Query language & views vs. fixed reports/proliferation of programs.
- Built-in security, concurrency, recovery and little/none by default.
- Reduced redundancy control and duplication and inconsistencies

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

**ANS:**

- Advantages: redundancy control, better consistency, data sharing, security, arbitrary query and response, higher productivity, data independence, concurrency control, backup & restore, standards, economies of scale.
- Disadvantages: complexity, large size, licensing and maintenance costs, additional hardware needs, migration costs, some performance overhead compared to custom file systems, greater impact when the central database management system fails.

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

**ANS:** Hardware, software, Data, Procedures, 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**

MUM-DBMS