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| **CSC-220– Database Management System- Assignment 1** | |
| CLO-[[1]](#footnote-1) | Deadline: 8th April, 2022 |
| Class: BSE-4A/4B | Total Marks 5 |

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1. A person wants to store information (names, addresses, etc). The volume of data compels him to buy a database system. To save money, he wants to buy one with the fewest possible features, and he plans to run it as a stand-alone application on his PC clone. Indicate which of the following DBMS features he should pay for; in each case, also indicate why he should/should not pay for that feature in the system he buys.

* + A security facility.
  + Concurrency control.
  + Crash recovery.
  + A view mechanism.
  + A query language.

**Answer:**

**A security facility:**

A security facility is necessary because Scrooge does not plan to share his list with anyone else. Even though he is running it on his stand-alone PC, a rival duckster could break in and attempt to query his database. The database’s security features would foil the intruder.

**Concurrency control:**

Concurrency control is not needed because only he uses the database.

**Crash recovery:**

Crash recovery is essential for any database; Scrooge would not want to lose his data if the power was interrupted while he was using the system.

**A view mechanism:**

A view mechanism is needed. Scrooge could use this to develop “custom screens” that he could conveniently bring up without writing long queries repeatedly.

**A query language:**

A query language is necessary since Scrooge must be able to analyze the dark secrets of his victims. In particular, the query language is also used to define views.

1. What are the major capabilities of DBMS and why is a relational DBMS so powerful?

**Answer:**

 DBMS usually deals with CRUD – Create Read Update and Delete – operations on Databases. The major capabilities of DBMS are as follows:

1. Data Storage.
2. Data Retrieval.
3. Data Deletion.
4. Data Updation.
5. Data Security.
6. Data Independence.

**Why relational database is so powerful:**

Relational databases are powerful because they require few assumptions about how data is related or how it will be extracted from the database. As a result, the same database can be viewed in many different ways. An important feature of relational systems is that a single database can be spread across several tables.

1. [↑](#footnote-ref-1)