ITS 1012 – Database Management Systems

Quiz 1 – SQL Fundamentals

Time: 1 hour

Instruction to student

The main restriction for an open-book assessment is that the work must be Students' own work to avoid plagiarism and collusion. See following guidance on plagiarism for further information.

- During the assessment you must not be helped by any other person to answer any questions. Collusion will be treated as an academic offence.
- DON'T use another student's work, or submit someone else's work as your own.
- DON'T pay other students or someone outside to do your work.
- DON'T use copy and paste to take text from another source. Instead, you should do paraphrasing and summarising.

If someone violates any of the terms above, all the parties who are involved in plagiarism will be given zero marks.

Students can type their answers in a word editor (ex: Google DOC, MS DOC) and convert to a single PDF file and submit to the Google Classroom

OR

Students can write answers by using a black or blue ink pen in white A4 papers and scan (or simply take photos if they have a good camera phone) the handwritten work to a clean, small-sized, black-and-white PDF (single file) and submit to the Google Classroom.
File Name format: <Your Full Name> - <Your Index Number>

Answer All Questions.

1. What are the main layers of a software and explain it using a diagram?

2. Imagine you have 1 million rupees to deposit on your bank account. To perform this task, the casher of the bank interacts with deposit UI of the system to save money on the account. As well as, cashier interact with view transaction UI of the system to check the history of transaction in the account. Explain a software has minimum three layers using above example.

3. In question 2, which computer hardware device is used to store the transaction details of the customers?

4. "Business consists of data and people" do you agree with this statement? Explain your answer.

5. Explain the following terms briefly.
    a. Multivalued Attribute, Derived Attribute, Descriptive Attribute
    b. Primary key, foreign key, Candidate Key
    c. Domain
    d. Entity
    e. Relationship
    f. Entity Set
    g. Relationship Set
    h. Binary (1:1, 1:M, M:M)
    i. Unary (1:1, 1:M, M:M)
    j. Participation Constrain
    k. Strong Entity
    l. Weak Entity
    m. Associate Entity
    n. Aggregation
    o. Ternary Relationship
    p. Referential Integrity Constraint
    q. Primary Key, Foreign key constraint