1814ICT & 2814ICT – DATA MANAGEMENT
7003ICT – DATABASE DESIGN
1011ICT – APPLIED COMPUTING
School of Information & Communication Technology

Assignment Part 2:
Implementing a Database for a*Fashion

Aims

- To analyse and comprehend a given ER diagram and Relational Database schema
- To implement a database based on the given ER diagram and Database schema
- To write required SQL statements to query the database
- To write SQL statements to manipulate the data in the database

Learning Objectives

In the process of this assessment task you will:
- plan, schedule & execute project tasks to improve your personal/group productivity;
- gain awareness of the typical challenges related to the practical implementation of databases;
- learn how to use Data Definition statements to implement a database from a given ER diagram and the corresponding Database schema
- learn how to use Data Manipulation statements to query a database, and insert and update data in the tables

Guideline:	Only one member submits: • An electronic copy of your assignment as a **.pdf** file • The three files: Create.txt; Insert.txt; Query.txt Please **do not** zip your submission.
Late submission:	Any submission after the due date will receive a deduction of **5% per calendar day**. Standard university policy will apply for all late submissions. See the course website/profile for detail.
Marks:	Group submission: This assignment is worth 20% out of the total assessment.
Authorship:	This assignment is a **Group assignment**, and it shall be completed by **the students in each group** only. The final submission must be identifiably the work of the individual group members. Breaches of this requirement will result in an assignment not being accepted for assessment and may result in the offending student or students being required to present before the Disciplinary Committee.

Assignment Specification

The a*Fashion now requires a partial implementation of the design made in Assignment Part 1. To keep consistency between the assignments, database specification containing the ER diagram and the corresponding schema are provided with this document. You should create your database according to this documentation. Make sure that your implementation is consistent with this design, i.e., your table names, field names, and data types are according to the specifications provided in this document.

The implementation phase includes: writing SQL statements to create a database and its tables, populating the tables with appropriate test data, and writing several queries to create reports that can be used by the management team. You need to *insert at least five records* in each of the tables and *ensure that each of the query* *returns at least one record*.

Implementation of the Database and Manipulation of the Data

You are required to perform the followings tasks:

1. **Task 1:** Create a text file named Create.txt that will contain SQL statements to:
   I.   Create a database named aSFashion_<GroupNumber>.
   II.   Create all the tables for the database according to the Database schema given with this document (separately attached).

2. **Task 2:** Create a text file named Insert.txt that will contain SQL statements to:
   I.   Insert *at least five records* in each of the tables. The test data inserted into the table must ensure that each of the queries, specified in Task 3, outputs *at least one record*.

3. **Task 3:** Create a text file named Query.txt that will contain all the queries to display the following:
   I.   List of names of all staff sorted by their hourly salary.
   II.   The date on which the 2nd oldest customer order has been made. The customer's name who made the order and the date of the order will be sufficient.
   III. List of all the store names and their manager names, appointment levels and hourly rates, sorted in the highest to the lowest of managers' hourly rate.
   IV.   A list of all products that have been sold. Displaying product number, description, type, size, and total quantity sold of each product will be sufficient. Note that products that have been ordered but not picked up are considered not sold yet.
   V.   A list showing each product sold (picked) on or before May 20, 2024. Show product number, description, type, and total quantity sold, sorted by product number and then total quantity sold.

Additional queries for 7003ICT students only:

   VI.   A list of supervisors who also work as store managers. Show their information (staff ID, name) and the number of staff each manager supervises in their store.
   VII. A list containing the products that are currently in shortage. For such a product, regardless of stores, the total current orders, which have not been fulfilled yet, will be higher than the total quantities on hand (to fulfill the current and future orders). Display only product number, description, and total shortage of the product.

Note: Tasks 1 to 3 are for all students, only 7003ICT students should do Queries VI and VII in Task 3.

You are required to adhere to the following output formatting conventions:
- Any query requiring names of people should be printed as GivenName FamilyName (e.g. John Wang) in a column labelled Full Name; and
- All monetary values should be printed with a dollar symbol ($), two digits after the decimal point.

What to submit?

An electronic copy of your assignment should be submitted online and should include a copy of your report and the three files described in Tasks 1 to 3 above. Upload all of the files onto Canvas.

Your report should include:
- Use the supplied template for your Assignment Report.
- An appropriate title page that includes an acknowledgement of all students you have spoken to about the assignment.
- A table of contents and page numbers.
- Sections containing SQL command for Task 1 and Task 2
- A report of the results from running the SQL queries (Task 3), please see the sample submission.

For the submission, you need to submit these **four** files:
- The above report as a .PDF file.
- Create.txt
- Insert.txt
- Query.txt

Assessment Criteria
- Adherence to our standards. We will assess how clear and well organised your presentation is. You should write all the queries in consistent style and use indent format (look at the sample report).
- Data correctness and quality. Please use appropriate data for your examples (e.g., do not use inappropriate person names)
- Please refer to the provided marking guide (below) to see the distribution of marks.

Assignment Resources
Find the following information in attached files:
- The logical ER Diagram, and
- Relational Database Schema.
- Report Template
- Sample Submission
- Slides on how to create PK and FK

Assessment Criteria and Marking Overview (may be *subject to change*)

ITEM	Marks
1. Presentation How clear and well-presented your submission is.	10
2. Creation of database and tables (Task 1) Create the relevant tables: Database correctly named and created, includes all the PKs and FKs in the database. No evidence that tables have been created using the GUI. They work properly.	24
3. Insertion (Task 2) Successfully inserts data into the tables. NO evidence exporting from GUI. They work properly.	24
4. Query (Task 3) Use of appropriate query statements. They work as intended. Each query should output at least one row of valid data.	42
Total	**100**