# Unit 04 – Database Design and Development

# Part 2: Database Development and Evaluation (P2, P3, P4, P5,M2, M3, M4, M5, D1, D2, D3)

# I. Implementation (P2)

* Code snippets to create each table
* Code snippets to insert some sample data for each table
* Generated Database Diagram of your Implementation
* Explanations about any changes comparing to your design (if there is)

# II. User Interfaces & Queries (P3)

* With each user interface, add:
* Queries to support the functionalities (insert, update, delete)
* Queries to support the enhancement of the interface to the above functionalities (search, validate data, load data to populate the selection controls e.g., combobox, list box, etc)

(M2) Implement a fully functional database system which includes system security and database maintenance. Your queries need to include:

* Procedures
* Triggers

# III. Development Evaluation (M3, D2)

(M3)Explain how your queries fit with the system requirements which support business decisions (such as statistical reports: e.g Numbers of orders based on day/month/years; Numbers of top products,etc…)

*(D2):* Evaluate critically whether your solutions can fit with the requirements, and explain if the solution can help to improve the business better (more effective, save time, ….)

# IV. Testing (P4, M4)

Produce a test plan and execute it. You must include:

* Normal scenario
* Data validation
* Extremes of data
* Query execution (the queries to execute the test cases)

M4: You will need to critically review the actual outcomes of the tests against your expected outcomes; were your tests adequate and appropriate; did they cover all user requirements?

# V. Evaluation (M5, D3)

M5: Explains why, and how, validation/verification were used, or could have been used, in your final solution (from the screens designed and the supporting queries)

D3: Assess any future improvements that may be required to ensure the continued effectiveness of the database system.

# VI. Technical Document (P5)

* Introduction
* ERD
* Possible and realistic improvements
* Current version number
* Date last changed and implemented

# VII. User Document (P5)

* The user interfaces
* Step by step how to achieve the functionality provided, for all paths through your solution.
* Data validation needed (e.g name – 30 characters, quantity <1000, etc.)