



Learning Guide Unit 2

Programming Assignment

This assignment will assess your knowledge and skills about:

1. Describing the concept of a [conceptual data model](#).
2. Developing logical and [physical data models](#).
3. Creating [ER diagrams](#) defining entities, relationships, attributes, and keys.

Assignment Information

Imagine, you are a [database administrator](#) working for a small e-commerce company that sells a variety of products online. The company wants to **enhance its [database system](#)** to better manage its inventory, orders, and customers.

1. Considering the four entities namely Product, Customer, Order, and Inventory. Define the relationships between these entities and identify key attributes for each entity.
2. Translate the above four identified entities and attributes into tables with appropriate primary and [foreign keys](#).
3. Create an [Entity-Relationship \(ER\) diagram](#) that visually represents the structure of the e-commerce company's [database system](#). Include all entities, relationships, attributes, and keys identified in parts (a) and (b). Clearly indicate [cardinality](#) and participation constraints. Ensure the [ER diagram](#) is properly labelled and easy to understand.
4. Explain two differences between conceptual and [physical design](#) in this scenario, highlighting their respective roles in database development and implementation.

You can create [Entity-Relationship \(ER\) diagram](#) using any online [ER Diagramming tool](#). Refer to the list of [ER diagramming tools](#) provided below:

- [Lucidchart](#): Online diagram software for creating [ER diagrams](#).
- [EdrawMax](#): Online tool for [ER diagram](#) design.
- [dbdiagram.io](#): Tool for visualizing database relationships.
- [Flowchart Maker](#): Online software with [ER diagram](#) capabilities.

Submission Instructions

- Read the [rubric](#) on how you are going to be graded before you start to work on this assignment.
- Be sure to copy images ([ER diagram](#)) and paste them directly into your document.
- Submit the assignment in [MS Word](#).
- Your assignment should be:
 - At least **250** words and not more than **750** words (not including the reference list or the title).
 - **Double-spaced** in [Times New Roman](#) font, which is no greater than **12** points.



This assignment will be assessed by your instructor using the [rubric](#) available on the assignment page in the course homepage.

