Ministry of Higher Education
Modern Academy for Computer
Science and Management Technology
Department: Computer Science
Program: Computer Science

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Academic Year: 2022-2023
Subject: Database – OOP Lab Projects
Code: CS123 – CS103
Specialization: 2nd Level (Credit)
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Seventh Project: Mail Order Database:

Consider a MAIL_ORDER database in which employees take orders for parts from customers. The data requirements are summarized as follow:

- The mail order company has employees, each identified by a unique employee number, first and last name, and ZIP code.
- Each customer of the company is identified by a unique customer number, first and last name, and ZIP code.
- Each part sold by the company is identified by a unique part number, a part name, price, and quantity in stock.
- Each order placed by a customer is taken by an employee and is given a unique order number. Each order contains specified quantities of one or more parts.
- Each order has a date of receipt as well as an expected ship date. The actual ship date is also recorded.

Requirements:

1. Draw the Entity Relationship (ER) model.
2. Draw the referential constraints schema.
3. Draw UML diagrams with the following criteria:
   - Draw the use case diagram representing all the functions of your system.
   - Draw the UML diagrams (use case scenario, activity, sequence and communication diagrams) for only one function of the system. i.e. insert or update or search for a record.
   - Draw the class diagram of the whole system showing the relationships among the classes, if any.
4. Design a user-friendly interface to access the database you applied
   - Your interface should contain at least buttons, text fields, and frames.
   - You should apply your knowledge of event handling, method overriding and other basic characteristics of OOP.
   - Your user interface should allow the user to insert, update, delete and search for records in the database.