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

Department: Computer Science

Program: Computer Science

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Subject: Database – OOP Lab Projects

Code: CS123 - CS103

Specialization: 1st Level (Credit)

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## Fourth Project: E-Book Bookstore Database:

## Consider the following information about an E-Book bookstore database:

- Books (identified by ISBN (International Standard Book Number), with title, type, page-count and price attributes) at E-Book bookstore are recorded.
- Information about publisher (identified by Publisher-Code with name, city and phone attributes)
- The author (identified by Author-ID with first-name and last-name attributes) will also be recorded to make sure that the process of searching for the book is easier.
- One publisher can publish many books
- One book can only be published by one publisher.
- One book can be written by many authors
- One author can write many books.

## **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.