Connecting Intelligence

Institute of Computer Engineering Technology

iCET Certified Master

ASSIGNMENT

Assignement	WEEK 03 - DBMS
Name	Database Design
Ass. Date	25th November 2023

Please design Entity-Relationship (ER) diagrams for the provided real-world scenarios and add relevant attributes the Entities. Ensure that the cardinality ratios are appropriately marked.

1) **Person and Birth Certificate**
2) **Apartment and Parking Space**
3) **Customer and Order**
4) **Department and Employee**
5) **Student and Course**
6) **Author and Book**
7) **User and User Profile**
8) **Car and Registration Certificate**
9) **University and Department**
10) **Actor and Movie**
11) **Patient and Medical Record**
12) **Blog Post and Comments**
13) **Teacher and Subject**
14) **Person and Driving License**
15) **Student and Class**

16) **Design the ER diagram Online Book Store**

Entities:
Book
Author
Customer
Order
Review

Attributes:
1. Book
ISBN (Primary Key)
Title
Genre
Price
Publish Date

2. Author
AuthorID (Primary Key)
Name
Biography

3.Customer
CustomerID (Primary Key)
Name
Email
Address

4. Order
OrderID (Primary Key)
CustomerID (Foreign Key, references Customer)
Order Date

5. Review

ReviewID (Primary Key)
CustomerID (Foreign Key, references Customer)
BookISBN (Foreign Key, references Book)
Rating
Comment

Relationships:
A Book is written by one or more Authors.
A Customer can place one or more Orders.
An Order can contain one or more Books.
A Customer can write one or more Reviews for Books.

Cardinality:
One Author can write many Books.
One Book can have many Authors.
One Customer can place many Orders.
One Order can contain many Books.
One Customer can write many Reviews.
One Book can have many Reviews.

17) University Course Registration System
Identify all entities and attributes and design the ER diagram for this scenario.

Relationships:

A Student can enroll in many Courses.
A Course can have many Students enrolled.
An Instructor can teach many Courses.
A Course can have many Instructors (for cases like co-teaching).
A Department can offer many Courses.
A Course belongs to one Department.
A Student can have many Class Enrolments.
A Course can have many Class Enrolments.

Cardinality:

One Student can enroll in many Courses, and each Course can have many Students.
One Instructor can teach many Courses, and each Course can have many Instructors.
One Department can offer many Courses, and each Course belongs to one Department.
One Student can have many Class Enrollments, and each Course can have many Class Enrollments.