CDAC-Mumbai
Subject: MS.NET (Lab Spot exam)

Date:03-07-2024   Total Marks: 15

Time duration: 1:00 hrs.   Batch: March-24

Problem Statement:

Create a Book class by creating the following properties with validations. **[2.5 marks]**

- Properties:
  - int BookId - validation: must be greater than 0
  - string Title - validation: cannot be null or empty
  - decimal Price - validation: must be greater than 0
  - int AuthorId - no validations

  Throw a custom exception if the validation is not successful. **[2 marks]**

  Also, override ToString() method to display the object data.

Create a class Author with the following properties. **[0.5 marks]**

- Properties:
  - int AuthorId - validation: must be greater than 0
  - string AuthorName - validation: cannot be null or empty

Create a class TestCode design the following inside it:

1. Static list of Books to add records of books.
2. Static list of Author to add records of authors.
3. Static method InitiateRecords inside this method:
   a. Add five records to the list of Author.
   b. Add ten records to the list of Books.

   Note: Add records in such a way that Joins and Groups can be implemented on it.

4. A Main method inside which do the followings: **[10 marks]**

   a. Call InitiateRecords method.

   Write the LINQ queries for the following: (In Query format and Lambda format also)

   b. Select all books and display them using foreach.

   c. Select BookId and Title from the list of books and display them using foreach.

   d. Select books whose Price is greater than 500 and display them using foreach.

   e. Select books whose Price is between 300 and 700 and display them using foreach.

   f. Select books by using orderby on Title in descending order.

   g. Demonstrate orderby with ascending and descending in one query.

   h. Demonstrate join on the list of Author and the list of Book on AuthorId and select books only.

   i. Demonstrate join on the list of Author and the list of Book on AuthorId and select authors only.

   j. Demonstrate join on the list of Author and the list of Book on AuthorId and select books only.

   k. Demonstrate join on the list of Author and the list of Book on AuthorId and select few properties of Book and few of Author.