

# Habib University

*CSE355 – Database Systems (Fall' 2017)*

*Lab # 1 – GUI development in C#*

**Q - You need to develop a windows form in C#.NET that implements the following functionality:**

The screenshot shows a Windows Form titled "Assignment 1" with the following controls:

- ISBN: Text box
- Title: Text box
- Purchased On: Date picker (displaying Saturday, February 13, 2010)
- Category: Drop-down menu
- Sub Category: Drop-down menu
- Authors section:
  - Author Name: Text box
  - Add: Button
  - List box (empty)
- Type section (radio buttons):
  - Reference Book
  - Text Book
  - Journal
- Issuance section:
  - Issued: Check box (unchecked)
  - Issued to: Text box
  - Issue Date: Date picker (displaying 2/13/2010)
- Buttons: OK, Close

- The Category drop down will contain the following list:
  - o Database Systems
  - o Programming
  - o Artificial Intelligence
- Upon selection of a category, the corresponding sub categories will be populated in sub category combo box. Following are subcategories for each category:

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- Database Systems
    - ERD
    - SQL
    - OLAP
    - Datamining
  - Programming
    - C#
    - Java
    - Web Programming
  - Artificial Intelligence
    - Machine Learning
    - Robotics
    - Computer Vision
- 
- A book can have multiple authors. Author can be added by entering an author name in the textbox and pressing Add button. This will add the author name in 'Authors' listbox.
  - A book can be of any of the following types:
    - Text Book
    - Reference Book
    - Journal
  - If Issuance check box is ON, that implies that the book is issued to someone. Turning ON/OFF the issuance checkbox will enable/disable 'Issued to' and 'Issue date' fields.
  - Upon pressing OK button, the form will check the following rules:
    - ISBN can be a 12 digit alphanumeric field
    - 'Purchased on' date must be less than today's date
    - If Book is of type 'Journal' then it'll have no author else it must have at least one author.
    - If book is issued to someone then 'Issued to' must not be empty and 'Issue date' must be greater than 'Purchased On' and less than today's date.
  - Application will be closed on pressing Cancel button.