**Assignment # 4**

**Marks: 100 (2% in overall Sessional)**

In case of any plagiarism (copying) is found or you could not explain the concepts in VIVA there will be penalty.

Penalty will be -2% marks.

**Submission:**

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CC: ([bilal.shahzad@pucit.edu.pk](mailto:bilal.shahzad@pucit.edu.pk))

**Deadline:** **17-May-2017 11:00 PM**

If delay is between 1 hour, -10 marks will be deducted from obtained marks.

If delay is between 2 hour, -20 marks will be deducted from obtained marks.

If delay is between 3 hour, -30 marks will be deducted from obtained marks.

If delay is between 4 hour, -40 marks will be deducted from obtained marks.

So on.

**Submission Guidelines:**

Delete bin/obj/packages folder, zip your source code, change extension to txt and then email.

**We had studied/discussed a Search Framework in Lecture # 16. You need to develop DB Schema by using information discussed/shared in that lecture. Those tables were just for your information. You may change them according to your need.**

**Task 1**

Design Database with some dummy data in tables

Table for Pages (PageID, PageName, Display Name, BaseQuery)

Table for Columns (FieldID, Display Name, ColumnName, PageID)

Table for Operators(OperatorID, OperatorName)

**Task 2**

Design a class library (SearchFrameworkHelper) which will have **Search** & helping functions. This function will return result as DataTable. This is Helper DAL. For your understanding some sample function and entity is given

DataTable Search(List<SearchParam> pSearchDTO);

Other Sample Entities:

* SearchParam
  + FieldID
  + OperatorID
  + Value

**Task 3**

Develop a windows or Web application. Let say user is on “Student” screen and presses “Search” button. Request will be sent to “Search Screen” with Page ID.

On a Search screen, user will see option to choose a “field” from a dropdown then “operator” from dropdown and then specific value in textbox. For example user selects

Field: “Name”

Operator: Equal

Value: “abc”

User may press + (or Add) button to add more search records. Then user clicks “Search” button. It will generate dynamic “where” clause using the search parameters and will use “query” defined in DB against this page. “Where” clause will be attached to “Select Query” and query will be executed. End result will be shown to the user on page. As you are aware about which entity to use so your function can return DataTable instead of specific DTO.

Note: You also need to create “Student”, Teacher, Course tables with dummy data and search screen should be working for these.