**Assignment 2 – List<T> Data Structure (5%)**

**Weight:** **5%**

**Late Policy:** Late submitted assignment will be penalized 5% per day up to 5 working days and **will not be accepted after that**.

**Submission:** Submit a link to the video demonstrating the execution of the application. Also upload the zip file of the project containing all the assignment files.

**Plagiarism:** Found matching with someone will be awarded “0” and reported to Associate Dean.

This is an extension/modification of week 6 lab i.e. adding some more fields and features. Develop a 3-tier GUI application to maintain a list of students using List data structure i.e. add, remove, find, and display list. (4 points)

**For each student** it should maintaining the following **information**:

* Student ID, string type, unique
* Name, string type
* Total assignment score obtained of all the assignments, double type
* Total maximum score of all the assignments, double type
* Details of each assignment i.e. assignment id (unique), score obtained and maximum score using the array of size 5.

For each student, the user should be able to perform the following **operations**:

* Add a new assignment (1 point)
* Find an existing assignment of a student (1 point)
* Remove an existing assignment of a student (1 point)
* Update the score of given assignment when assignment id of the assignment is provided with the new assignment information of a student (1 points)

The application will be graded based upon the following criteria:

* Using the requested data structures, architecture, and appropriate GUI (2 points)
* Functionality (8 points)

**Hint:**

* Presentation Layer – GUI and data validation classes
* Business Layer – Student and Assignment Class. Student class should have an array of Assignment class and methods related to all the all the features of assignment.
* Data Layer – StudentDB class to maintain students