Module 3 Lab Assignment.

In this lab assignment, you will develop a Student Engagement Calculator application. All form controls and variables that you include in your project MUST have a proper and relevant name. For each improper naming, 0.05 point will be deducted.

If you have any questions, doubts, or if you need any assistance about this assignment, please feel free to post in Module 4's *Slack* channel.

The interface of this application consists of four GroupBox controls to calculate student engagement in four categories: Readings, Discussions, Videos, and Quizzes. Each GroupBox will have several textboxes to allow the users indicator values. The name of the indicators will be shown in the labels just right to the textboxes. At the bottom part of the GroupBox controls, a label should be placed to display an initial message to users. These labels later should show the engagement scores for the group that they belong to.
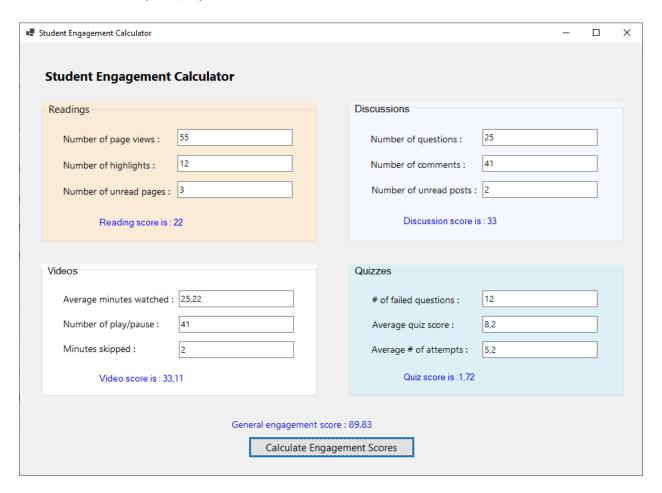
At the bottom of the form, there should be a button and a label. Users will need to click this button to calculate the engagement scores. A default text should be set for the label. When the computations are done, the label should display the overall engagement score.

Below is an example screen with engagement scores calculated. In all calculations per each group, the sum of the values in the first two textboxes will be divided by the value in the third textbox. For example, for Readings, the formula will be like this: **(pageviews + highlights) / unreadpages**.

Note that all labels showing scores should change their font colours to blue when the scores are calculated. A sample code for changing font colour is: `lbl_videoScore.ForeColor = Color.Blue;`

Any field that shows an average score should be stored inside a `double` variable. Other variables can be stored as `int`. For calculations that involve `double` values (e.g., video engagement score) please keep only two decimal places using **Math.Round()** method. For example, `Math.Round(5.55555, 2)` will return 5.55, whereas `Math.Round(5.13, 1)` will return 5.1.

Student Engagement Calculator

Student Engagement Calculator

Readings

Number of page views :	55
Number of highlights :	12
Number of unread pages :	3

Reading score is : 22

Discussions

Number of questions :	25
Number of comments :	41
Number of unread posts :	2

Discussion score is : 33

Videos

Average minutes watched :	25,22
Number of play/pause :	41
Minutes skipped :	2

Video score is : 33,11

Quizzes

# of failed questions :	12
Average quiz score :	8,2
Average # of attempts :	5,2

Quiz score is :1,72

General engagement score : 89,83

Calculate Engagement Scores

If there is an invalid entry in any of the group boxes, an error message should be displayed only in the group box where an invalid entry is made. For example, in the following screen, *Number of unread pages* is entered wrong, and an error message is shown in red font only in the *Readings* group box, while the scores in other group boxes are calculated.

To achieve this, you can place each code block that calculates an engagement score in a different `try-catch` statements. In total, you would have four `try-catch` statements. Inside the `catch` blocks, you should show the custom error message and set the font colour of the label to red.

Grading Schema

Task	Points
Computing the engagement score in each box	0.2 x 4 = 0.8
Showing custom error messages in each box	0.2 x 4 = 0.8
Setting the error message colour to red	0.05 x 4 = 0.2
Computing the general engagement score	0.2