
“Honesty, integrity and a strong work ethic are the qualities Lambton College believes are central to the development of exceptional students, employees and citizens.”

Judith Morris
President and CEO
Lambton College

LAMBTON COLLEGE TEST-TAKING:

- Take precautions to ensure you have all tools needed to complete this evaluation (pens, pencils, pencil sharpeners, permitted calculators). Clear away any items not used for testing (phones, smart watches, water bottles, hats, unauthorized calculators, etc.)
- Ensure that your person and workspace (desk, lab bench, computer desk) are clear of anything that could be perceived as a means to cheat.
- Do not communicate with others outside of the test invigilator(s) during your evaluation.

(For a full reading of student required behaviours, consult the *Test and Exam Writing Procedure* and *Student Rights and Responsibilities and Discipline Policy* on MyLambton.)

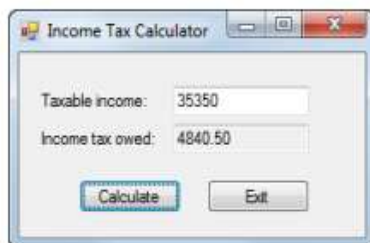
CSD-2354 Exam 02

Instructions

- This paper contains a selection of questions that will test your knowledge & comprehension of the 1st 9 units of this course. Complete this using only your textbook, my slides, [https://msdn.microsoft.com/en-us/library/67ef8sbd\(v=vs.120\).aspx](https://msdn.microsoft.com/en-us/library/67ef8sbd(v=vs.120).aspx) as resources. No previous work may be used.
- This exam is worth 25% of your final grade. Each part is not equally weighted.

Add a method and an event handler to the income tax calculator

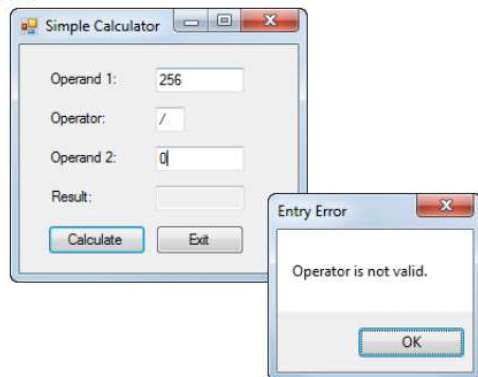
In this exercise, you'll add a method and another event handler to the income tax calculator.



1. Open the TaxCalculator project in the \TaxCalculator directory and display the code for the form.
2. Code the declaration for a private method named CalculateTax that receives the income amount and returns the tax amount.
3. Move the if-else statement in the btnCalculate_Click event handler to the CalculateTax method. Then, declare a variable for the tax at the beginning of this method, and return the tax at the end of the method.
4. Modify the statement in the btnCalculate_Click event handler that declares the tax variable so it gets its value by calling the CalculateTax method.
5. Create an event handler that clears the Income Tax Owed text box if the user changes the value in the Taxable Income text box.
6. Test the application to be sure it still works correctly.

Add data validation to the simple calculator

In this exercise, you'll add data validation to the Simple Calculator form.



1. Open the SimpleCalculator project in the \SimpleCalculator With Data Validation directory.
2. Code methods named `IsPresent`, `IsDecimal`, and `IsWithinRange` that work like the methods described in chapter 7 of the book.
3. Code a method named `IsOperator` that checks that the text box that's passed to it contains a value of `+`, `-`, `*`, or `/`.
4. Code a method named `IsValidData` that checks that the Operand 1 and Operand 2 text boxes contain a decimal value between 0 and 1,000,000 (non-inclusive) and that the Operator text box contains a valid operator.
5. Delete all of the catch blocks from the try-catch statement in the `btnCalculate_Click` event handler except for the one that catches any exception. Then, add code to this event handler that performs the calculation and displays the result only if the values of the text boxes are valid.
6. Test the application to be sure that all the data is validated properly.

Submissions will be tested for uniqueness and authenticity. Any code verified to be not unique will result in a grade of zero. The easiest way to prevent this is to write your own code and come up with solutions on your own. Working with other students or asking them for assistance is expressly forbidden.