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CIS133N

**Challenge**

You will be designing a calculator program is it is seen in the demo. It will have to add, subtract, divide, and multiply. The results will be displayed in the result area.

**Step 1. Clearly define what the application will do.**

**Purpose**: To calculate two different numeric variables inputted by the user.

**Output:** Sum, Difference, Product, Quotient.

**Input:** Two separate integers.

**Process**: Take two different integers and perform one of the four basic mathematical operations on them.

**Step 2. Design the GUI**

Exit

Clear

/

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Sub

Add

Calculation

Process

Result

Result

Input

Enter Number

Enter Number

**Step 3 Make a list of the controls needed.**

**Define the values of each controls relevant properties**

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Text** |
| calcForm | A form that serves as a window to hold the other controls | Calculator Form |
| calcGroupBox | A box that holds all calculation buttons | Calculation |
| resultGroupBox | A box that holds the result of the calc methods. | **Result** |
| inputGroupBox | **A box that holds textboxes for user input.** | **Input** |
| processGroupBox | A box that holds two program options program methods, clear and exit. | Process |
| calcResultLabel | Shows result after user chooses a calculator option | Result |
| enterNumber1Label | Tells user to enter a number | Enter Number |
| enterNumber2Label | Tells user to enter a number | Enter Number |
| num1TextBox | Holds first integer |  |
| num2TextBox | Holds second integer |  |
| addButton | Will add two integers | Add |
| divideButton | Will divide two integers | Divide |
| multiplyButton | Will multiply two integers | Multiply |
| subtractButton | Will subtract two integers | Subtract |
| clearButton | Clears both textboxes and result. | Clear |
| exitButton | Exits application | Exit |
| titleLabel | Title for app | My Calculator |

**Step 4 Make a list of the methods needed for each control**

|  |  |
| --- | --- |
| **Method** | **Description** |
| addButton\_Click | Gets the sum of the two integers and places result in the calcResultLabel when clicked |
| subtractButton\_Click | Gets the difference of two integers and places result in calcResultLabel when clicked |
| multiplyButton\_Click | Gets the product of two integers and places result in calcResultLabel when clicked |
| DivideButton\_Click | Gets the quotient of two integers and places result in calcResultLabel when clicked |
| clearButton\_Click | Clears both the textboxes when clicked |
| exitButton\_Click | Exits the application when clicked |