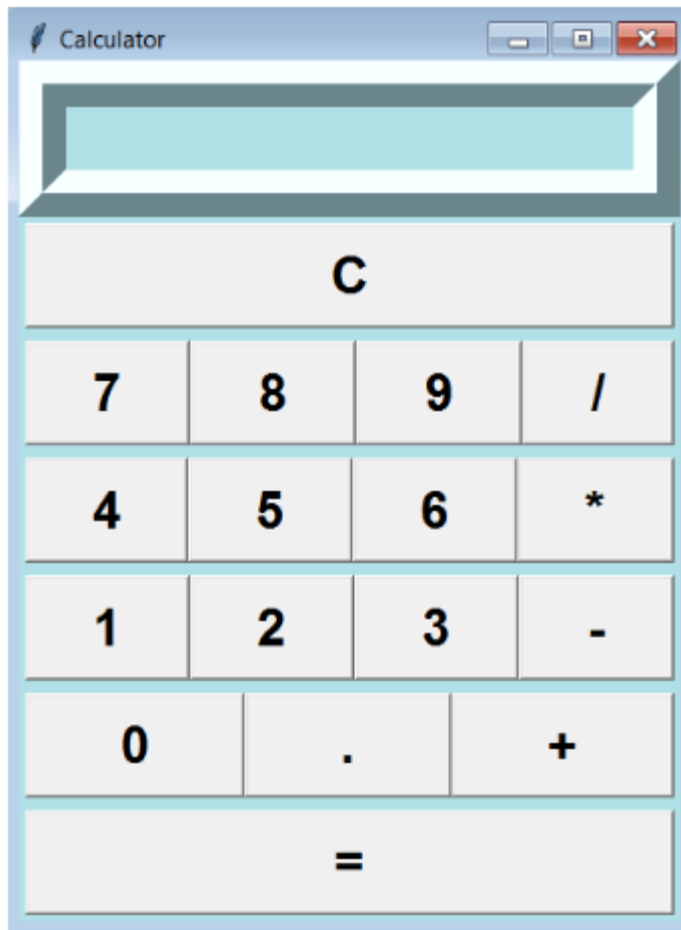


Laboratory Activity No. 11	
The Grid Manager	
Course Code: CPE103	Program: BSCPE
Course Title: Object-Oriented Programming	Date Performed: April 5, 2025
Section: 1-A	Date Submitted: April 5, 2025
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1. Objective(s):	
This activity aims to familiarize students on how to implement geometry manager	
2. Intended Learning Outcomes (ILOs):	
The students should be able to: 2.1 Identify the main components in a GUI Application 2.2 Create a simple GUI Application using Grid manager	
3. Discussion:	
<p>A Graphical User Interface (GUI) application is a program that the user can interact with through graphics (windows, buttons, text fields, checkboxes, images, icons, etc..) such as the Desktop GUI of Windows OS by using a mouse and keyboard unlike with a Command-line program or Terminal program that support keyboard inputs only.</p> <p>Geometry managers are tools used to place widgets on the screen. There are three geometry managers available in tkinter—grid, pack, and place. The place manager provides complete control in the positioning of widgets, but is complicated to program</p> <p>Grids</p> <ul style="list-style-type: none"> A grid is an imaginary rectangle containing horizontal and vertical lines that subdivide it into rectangles called cells. The first row of cells is referred to as row 0, the second row is referred to as row1, and so on. Similarly, the first column of cells is referred to as column 0, the second column of cells is referred to as column 1, and so on. Each cell is identified by its row and column numbers. 	
4. Materials and Equipment:	
Desktop Computer with Pycharm Windows Operating System	
5. Procedure:	

General Instruction:

1. Redesign the interface of the standard calculator using grid () method:



2. Run the program and observe the output when the button is clicked.

6. Supplementary Activity:

1. Make a calculator program that can compute perform the Arithmetic operations as well as exponential operation, sin, cosine math functions as well clearing using the C button and/or clear from a menu bar.
2. Use Geometry manager grid()
3. Use bind () or command parameter in associating event to callback a function.

Questions

1. How do you configure rows and columns in PyCharm when using Tkinter's grid() manager?
By using the grid() function and specifying the row and column where you want to place your button in your application.
2. Why do widgets sometimes disappear when using grid() in PyCharm, and how can you fix it?
Whenever you assign a box in same row and column as your widget, this can cause of the overlapping of the functions, which can be fixed by assigning a different value.
3. How can message boxes be used to provide a better User Experience or how can message boxes be used to make a GUI Application more user-friendly? How can you align widgets across multiple frames using grid() in PyCharm?
Message boxes can be adjusted according to the row and column assigned to them, reducing chances of overlapping and efficiently manage them while also making your GUI more comprehensive and neat to use.

7. Conclusion:

This activity showed the importance of the grid() function on organizing your code in the most efficient way possible. For example, if you have an application where there are many data inputs in a single application, the grid() function can help in organizing the data entered by the user, like their names in alphabetical order.

Please Refer to this link:

<https://github.com/PaulJustinePoletico/CPE-103-OOP-1-A/tree/main/Laboratory%20Activity%20%2311>

8. Assessment Rubric: