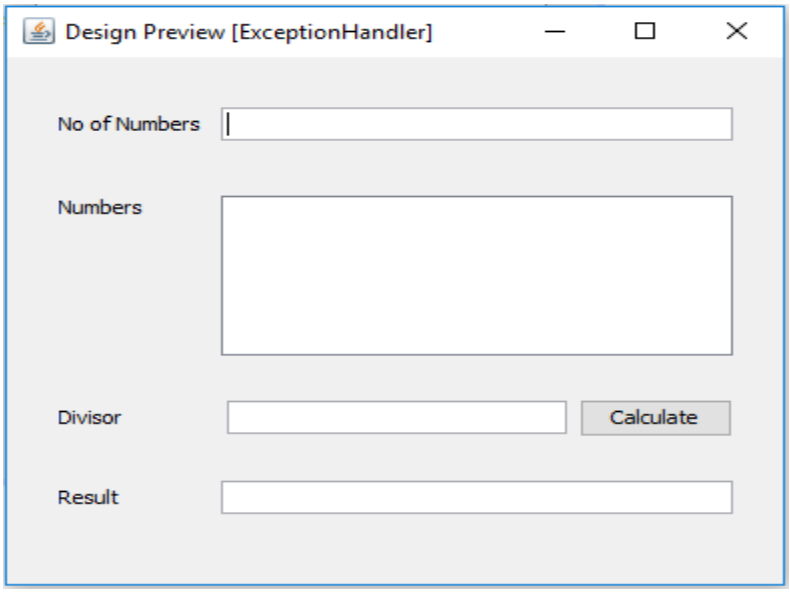
JAVA PROGRAMMING

LAB CYCLE

Note: Strictly follow OOPS concepts & naming conventions

Cycle 2

11. Write a program to implement the **Tower of Hanoi** problem using recursion
12. Write a program to create a class **DynamicArray** to implement a dynamic array. Provide
    a. Constructor to initialize the array
    b. Function to print array
    c. Function to add elements to a position (if position not specified, add to end)
    d. Function to remove elements
    e. Function to search an element
13. Write a program to **Pascal triangle.**
14. Write a program to create a class employee having members Employee id, Employee name, date of birth, date of joining, and salary. Read the details of n employees, sort the employee list in the descending order of salary, and print it. (Note use nested class for date of birth and date of joining)
15. Create a swing program to implement a simple calculator (without drag and drop).
16. Write a program to illustrate exception handling in Java for the following exception.
    a. Number format exception
    b. Null point exception
17. Write a program to create the following GUI



To read element s to an array, divide the sum of element s with the given divisor and print the result. Handle all exceptions and alert the user using dialogue.

18. Write a program to illustrate user-defined exceptions.
19. Write a program to create a 2-player tic-tac-toe game (using a grid layout)
20. Write a program to remove duplicate elements from a string array using tree set collection.