

Get two numbers of type of integer or double from the user and perform the operation (Add,Multiply,Divide,Subtract) selected by the user using switchcase, if-else statement,break and looping switchcase using recursion

This exercise contains a class named Calculator with the following methods:

+calculate(int, int, int) : String

- Should take three integers(firstValue,secondValue,operator) as input and return a String of format "firstValue operation secondValue = result"

- Switch case should be used to provide user operations as option to select

- The number of switch cases should be similar to number of operation options provided in menu

- Operator value that is not present as a case should be dealt by default case

+getValues(Scanner) : String

- Should get three integers from user as input from console using scanner

- After receiving the operands the operation menu should be shown to the user to choose from

- All the three values should be send to calculate method and return value should be printed out to user

Ans)

```
import java.util.Scanner;
```

```
public class Calculator {  
    private static Scanner scan;  
    int firstNumber ;  
    int secondNumber;  
    int operator;
```

```
    public void getValues(Scanner scan) {  
        char repeat;  
        do {  
            System.out.println("Enter the first number :");  
            firstNumber = scan.nextInt();  
            System.out.println("Enter the second number :");  
            secondNumber = scan.nextInt();  
            System.out.println("Enter the number beside the operation to perform : \n"  
                +"1.Add \n"  
                +"2.subtract \n"  
                +"3.Multiply \n"  
                +"4.Divide");  
            operator = scan.nextInt();  
            String result=this.calculate(firstNumber,secondNumber,operator);  
            System.out.println(result);  
            System.out.println("Do u want to try again(y/n)");  
            repeat =scan.next().charAt(0);  
            if (repeat == 'n' || repeat=='N')  
                System.exit(0);  
        }while (repeat == 'y' || repeat=='Y');  
    }
```

```
    public static void main(String[] args) {  
        scan = new Scanner(System.in);  
        new Calculator().getValues(scan);  
    }
```

```

}

public String calculate(int firstValue, int secondValue, int operator)
{
    String output;
    int result;
    switch(operator) {
        case 1:
            result = firstValue+secondValue;
            output=firstValue+" "+"+"+" "+secondValue+" "+"="+" "+result;
            break;

            case 2 :
                result=firstValue-secondValue;
                output=firstValue+" "+"- "+" "+secondValue+" "+"="+" "+result;
                break;
        case 3 :
            result=firstValue*secondValue;
            output=firstValue+" "+"* "+" "+secondValue+" "+"="+" "+result;
            break;
            case 4 :
                if(secondValue!=0)
                {
                    result=firstValue/secondValue;
                    output=firstValue+" "+"/"+" "+secondValue+" "+"="+" "+result;
                }
                else {
                    output="The divider (secondValue) cannot be zero";
                }
                break;
        default:
            output="Entered wrong option"+" "+Integer.toString(operator);

    }
    return output;
}
}

```