CALCULATOR PROJECT IN JAVA

MAINAPP

```
package io.github.vikeshpandey.project.calculator;

import java.lang.reflect.Array;
import java.util.Arrays;
import java.util.LinkedList;
import java.util.Queue;

public class MainApp {

	public static void main(String[]args)
	{
		final String inputExp=ReadInput.read();
		Queue<String> operations;
		Queue<String> numbers;

		String numbersArr[]=inputExp.split("[-+*/]");
		String operArr[]=inputExp.split("[0-9]+");

		numbers=new LinkedList<String>
(Arrays.asList(numbersArr));

		operations=new LinkedList<String>
(Arrays.asList(operArr));

		Double res=Double.parseDouble(numbers.poll());

		while(!numbers.isEmpty())
		{
			String opr=operations.poll();

			Operate operate;
			switch(opr)
			{
			case "+":
				operate=new Add();
				break;
			case "-":
				operate=new Subtract();
```

```
                    break;
               case "*":
                    operate=new Multiply();
                    break;
               case "/":
                    operate=new Divide();
                    break;
                    default:
                         continue;

               }

               Double
num=Double.parseDouble(numbers.poll());
               res=operate.getResult(res,num);

          }
          System.out.println(res);
     }
}
```

READINPUT

```
package io.github.vikeshpandey.project.calculator;

import java.util.Scanner;

public class ReadInput {

     public static String read()
     {
          Scanner scan=new Scanner(System.in);
          System.out.println("Input expression(for
eg:4*3/2)");
          String inputLine=scan.nextLine();

          scan.close();
          return inputLine;
          }

     }
```

OPERATE

```
package io.github.vikeshpandey.project.calculator;

public interface Operate {

	Double getResult(Double... numbers );
}
```

ADD

```
package io.github.vikeshpandey.project.calculator;

public class Add implements Operate {

	@Override
	public Double getResult(Double... numbers) {
		Double sum=0.0;

		for(Double num:numbers)
		{
			sum +=num;
		}
				return sum;
	}

}
```

SUBTRACT

```
package io.github.vikeshpandey.project.calculator;

public class Subtract implements Operate {

	@Override
	public Double getResult(Double... numbers) {
		Double result=numbers[0];

		for(int i=0;i<numbers.length;i++)
		{
```

```
                result -=numbers[i];
            }
            return result;
        }

}
```

MULTIPLY

```
package io.github.vikeshpandey.project.calculator;

public class Multiply implements Operate{

    @Override
    public Double getResult(Double... numbers) {
        Double result=1.0;

        for(Double num:numbers)
        {
            result *=num;
        }
                return result;
    }

}
```

DIVIDE

```
package io.github.vikeshpandey.project.calculator;

public class Divide implements Operate {

    @Override
    public Double getResult(Double... numbers) {
        Double result=numbers[0];

        for(int i=1;i<numbers.length;i++)
        {
            result /=numbers[i];
        }
                return result;
```

```
        }

    }
```