Arithmetic Calculator

Source Code

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Calci Code:

**package** ArithmeticCalculator;

**public** **class** Calci {

//Protected Multiplication and Division methods

**protected** **float** multiplication(**float** a, **float** b){

**return** a \* b;

}

**protected** **float** division(**float** a, **float** b){

**return** a / b;

}

}

Calculator Code:

**package** ArithmeticCalculator;

**import** java.util.\*;

//Using Inheritance to access the Protected methods

**public** **class** Calculator **extends** Calci{

//Private Addition and Subtraction methods

**private** **float** addition(**float** a, **float** b){

**return** a + b;

}

//Static Private Class

**private** **float** subtraction(**float** a, **float** b){

**return** a - b;

}

**public** **static** **void** main(String[] args) {

//Calling method using Object

Calculator myCal = **new** Calculator();

// Calling Protected method using Object

Calci mycal1 = **new** Calci();

// Do While loop for Repeating Calculation

**char** ch;

**do** {

// Using Scanner for taking input

Scanner s = **new** Scanner(System.***in***);

System.***out***.println("Enter the First Number: \n");

**float** x = s.nextFloat();

System.***out***.println("Enter the Second Number: \n");

**float** y = s.nextFloat();

System.***out***.println("Enter the operator: \n");

**char** operator = s.next().charAt(0);

**double** result = 0;

//Using Switch case for calculationg

**switch** (operator) {

**case** '+':

result = myCal.addition(x, y);

**break**;

**case** '-':

result = myCal.subtraction(x, y);

**break**;

**case** '\*':

result = mycal1.multiplication(x, y);

**break**;

**case** '/':

// if else statement For Zero Division

**if** (y != 0) {

result = mycal1.division(x, y);

**break**;}

**else** {

System.***out***.println("Cannot be divisible by zero.");

}

// Default for wrong input

**default**:

System.***out***.println("Entered Wrong Input!");

**break**;

}

// Making the result as Final and Widening / Implicit Type casting result from double to float

**final** **double** result1 = (**double**)result;

// Printing Result

// Narrow Type casted x and y to integer from float

**int** m = (**int**)x ;

**int** n = (**int**)y;

System.***out***.println(m + " " + operator + " " + n + " = " + result1);

System.***out***.println();

System.***out***.println("Enter the Y to retry and N to exit");

ch = s.next().charAt(0);

}**while**(ch == 'Y');

// Do While Ending

**if** (ch == 'N') {

System.***out***.println("Exited");

}

**else** {

System.***out***.println("Invalid Input!");

System.***out***.println("Input should be either Y or N");

}

}

}

/\*

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\* Git 'https://github.com/SaiKrishna6699/CoreJavaTraining.git'

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