

Forum:[Hack Forums](#)

Thread: [Simple Java Calculator](#)

CyberPunkw - March 8, 2015, 10:51 pm

This is a simple Java calculator I wrote. It's my first program in Java so let me know how i did. I'm aware I could have used functions, but I haven't learned that in java yet.

Code import java.util.Scanner;

```
public class Calculator
{
    public static void main(String args[])
        throws java.io.IOException
    {
        char choice;

        // The calculator menu
        System.out.println("\t*Calculator*");
        System.out.println("Menu:");
        System.out.println("\t1. Addition");
        System.out.println("\t2. Subtraction");
        System.out.println("\t3. Multiplication");
        System.out.println("\t4. Division");
        System.out.println("\t5. Raise to Power");
        System.out.println("\t0. Quit");

        System.out.print("Choice: "); // prompts for choice
        choice = (char) System.in.read(); // reads in choice
        System.out.println(""); // blank line to seperate menu

        Scanner sc;
        double A, B, C;

        switch (choice)
        {
            case '1':
                // Description of addition
                System.out.println("Adds two numbers:");
                System.out.println("\tA + B = C");

                // Inputs A and B
                System.out.print("Enter A: ");
                sc = new Scanner(System.in);
                A = sc.nextDouble();
                System.out.print("Enter B: ");
                sc = new Scanner(System.in);
                B = sc.nextDouble();
                sc.close();
```

```
// Adds A and B to find C and shows the answer
C = A + B;
System.out.println(A + " + " + B + " = " + C);
break;
```

case '2':

```
// Description of subtraction
System.out.println("Subtracts one number from another");
System.out.println("\tA - B = C");
```

```
// Inputs A and B
System.out.print("Enter A: ");
sc = new Scanner(System.in);
A = sc.nextDouble();
System.out.print("Enter B: ");
sc = new Scanner(System.in);
B = sc.nextDouble();
sc.close();
```

```
// Subtracts B from A to find C and shows the answer
C = A - B;
System.out.println(A + " - " + B + " = " + C);
break;
```

case '3':

```
// Description of Multiplication
System.out.println("Multiplies two numbers");
System.out.println("\tA * B = C");
```

```
// Inputs A and B
System.out.print("Enter A: ");
sc = new Scanner(System.in);
A = sc.nextDouble();
System.out.print("Enter B: ");
sc = new Scanner(System.in);
B = sc.nextDouble();
sc.close();
```

```
// Multiplies A and B to make C and shows answer
C = A * B;
System.out.println(A + " * " + B + " = " + C);
break;
```

case '4':

```
// Description of Division
System.out.println("Divides one number by another");
System.out.println("\tA / B = C");
```

```
// Inputs A and B
System.out.print("Enter A: ");
sc = new Scanner(System.in);
A = sc.nextDouble();
```

```

System.out.print("Enter B: ");
sc = new Scanner(System.in);
B = sc.nextDouble();
sc.close();

// Divides A by B to make C and shows answer
C = A / B;
System.out.println(A + " / " + B + " = " + C);
break;

```

```

case '5':
    // Description of Raise to a Power
    System.out.println("Gives A to the B power");
    System.out.println("\t A^B = C");

```

```

// Inputs A and B
System.out.print("Enter A: ");
sc = new Scanner(System.in);
A = sc.nextDouble();
System.out.print("Enter B: ");
sc = new Scanner(System.in);
B = sc.nextDouble();
sc.close();

```

```

C = Math.pow(A, B);
System.out.println(A + "^" + B + " = " + C);
break;

```

```

default:
    System.out.println("Quitting...");

```

```

}

```

```

}

```

```

}

```

S. Goodman - March 8, 2015, 10:59 pm

For a beginner, I will say that I see some good habits and logic, although it's not perfect. A little tired ATM so if no one gets back to you in detail, I will when I wake up.

Trisomy 21 - March 9, 2015, 1:37 pm

Don't call `System.out.println()` ten times in a row if you want to print out options on a console, just format the lines with `"\n"` in one method call. And as for the rest of it, well it works lol. Next try a calculator where you can enter a single expression like `"4+5"` or `"12/3"` and it will automatically detect what operations to do on the numbers.

CyberPunkw - March 9, 2015, 4:19 pm

(Mar 8, 2015 10:59 PM)S. Goodman Wrote: [CITE](#) For a beginner, I will say that I see some good habits and logic, although it's not perfect. A little tired ATM so if no one gets back to you in detail, I will when I wake up.

Thanks, this isn't my first language, I know python fairly well.

(Mar 9, 2015 01:37 PM)Trisomy 21 Wrote: [\[CITE\]](#) Don't call System.out.println() ten times in a row if you want to print out options on a console, just format the lines with "\n" in one method call. And as for the rest of it, well it works lol. Next try a calculator where you can enter a single expression like "4+5" or "12/3" and it will automatically detect what operations to do on the numbers.

Would only one call make it faster or save memory? And making a calculator like that would be hard, but I'm sure I will be able to do so eventually.

csrk - March 10, 2015, 8:30 am

(Mar 9, 2015 04:19 PM)CyberPunkw Wrote: [\[CITE\]](#) Thanks, this isn't my first language, I know python fairly well.

Would only one call make it faster or save memory? And making a calculator like that would be hard, but I'm sure I will be able to do so eventually.

Actually it's not that hard, but for a beginner it's the idead challange! It looks difficult but once you did 'one' of the methods the calculator should have the rest will be easier.

The hardest part would be the parsing, reading a string (your calculation) as numbers and operators.

I really encourage you to create such a calculator, you will learn loads. :)

Trisomy 21 - March 10, 2015, 1:59 pm

(Mar 9, 2015 04:19 PM)CyberPunkw Wrote: [\[CITE\]](#) Would only one call make it faster or save memory? .

Every time you call a method, it takes time. For something like println it is literally fractions of a millisecond, but there is no reason not to just use one method call.

Han. - March 10, 2015, 4:39 pm

(Mar 9, 2015 01:37 PM)Trisomy 21 Wrote: [\[CITE\]](#) Don't call System.out.println() ten times in a row if you want to print out options on a console, just format the lines with "\n" in one method call. And as for the rest of it, well it works lol. Next try a calculator where you can enter a single expression like "4+5" or "12/3" and it will automatically detect what operations to do on the numbers.

Why not? You're encouraging a beginner to reduce the readability of their program. Code is made for people to read, it's a means of communication with yourself at a later date and with other programmers. What he learns now will become deep-rooted habits.

Entityy - March 10, 2015, 4:40 pm

Thats honestly pretty well done for being a beginner. We're currently working on stuff similar to this in my computer science class.

CyberPunkw - March 10, 2015, 9:57 pm

(Mar 10, 2015 04:40 PM)Instagram Fanatic Wrote: [\[CITE\]](#) Thats honestly pretty well done for being a beginner. We're currently working on stuff similar to this in my computer science class.

Cool. That makes me feel like more than just a highschooler who likes to code.

(Mar 10, 2015 04:40 PM)Instagram Fanatic Wrote: [\[CITE\]](#) Thats honestly pretty well done for being a beginner. We're currently working on stuff similar to this in my computer science class.

So it is a good habit? I'm confused as hell now.

Trisomy 21 - March 11, 2015, 2:11 pm

(Mar 10, 2015 04:39 PM)Han. Wrote: [\[CITE\]](#) Why not? You're encouraging a beginner to reduce the readability of their program. Code is made for people to read, it's a means of communication with yourself at a later date and with other programmers. What he learns now will become deep-rooted

habits.

I explained why above, if you don't understand why calling the same method 10 times at the moment when you have all the information needed to call it once, you should hit the books. And I couldn't agree with you more about what he learns now will become deep-rooted habits, so he should start doing things the right way now.

Captain Steve Rogers - March 12, 2015, 10:45 pm

Why you wrote this "throws java.io.IOException" ?

Btw i'm also going to make this today for the first time without copying from others.

CyberPunkw - March 13, 2015, 3:42 pm

(Mar 12, 2015 10:45 PM)Lalit Agarwal Wrote: [\[CITE\]](#) Why you wrote this "throws java.io.IOException" ?

Btw i'm also going to make this today for the first time without copying from others. At first I was going to use `System.in.read()`, but I realized that wouldn't work as well as `Scanner`. I guess I forgot to take it out.

Captain Steve Rogers - March 14, 2015, 10:27 am

(Mar 13, 2015 03:42 PM)CyberPunkw Wrote: [\[CITE\]](#) At first I was going to use `System.in.read()`, but I realized that wouldn't work as well as `Scanner`. I guess I forgot to take it out.

Frankly speaking no idea what is "`System.in.read()`".

Why scanner won't work? you have even used it.

Your code looks damn complicated to me.

Here is mine : <https://hackforums.net/showthread.php?tid=4730078>

SunnyAkuma - March 15, 2015, 5:41 am

No need to lengthen the program by taking inputs in every Case. You can take 2 numbers as inputs before entering the switch block.

Code import java.util.Scanner;

```
public class Calculator
{
    public static void main(String args[])
    {
        char choice;

        // The calculator menu
        System.out.println("\t*Calculator*");
        System.out.println("Menu:");
        System.out.println("\t1. Addition");
        System.out.println("\t2. Subtraction");
        System.out.println("\t3. Multiplication");
        System.out.println("\t4. Division");
        System.out.println("\t5. Raise to Power");
        System.out.println("\t0. Quit");

        System.out.print("Choice: "); // prompts for choice
        choice = (char) System.in.read(); // reads in choice
        System.out.println(""); // blank line to separate menu
```

```

if(choice=='0')
    System.exit(1);
Scanner sc=new Scanner(System.in);
double A, B, C;
    System.out.println("\n First number:");//input first number
    A=sc.nextDouble();
System.out.println("\n Second number:");//input second number
    B=sc.nextDouble();
switch (choice)
{
case '1':
// Description of addition
System.out.println("Adds two numbers:");
System.out.println("\tA + B = C");

// Adds A and B to find C and shows the answer
C = A + B;
System.out.println(A + " + " + B + " = " + C);
break;

case '2':
// Description of subtraction
System.out.println("Subtracts one number from another");
System.out.println("\tA - B = C");

// Subtracts B from A to find C and shows the answer
C = A - B;
System.out.println(A + " - " + B + " = " + C);
break;

case '3':
// Description of Multiplication
System.out.println("Multiplies two numbers");
System.out.println("\tA * B = C");

// Multiplies A and B to make C and shows answer
C = A * B;
System.out.println(A + " * " + B + " = " + C);
break;

case '4':
// Description of Division
System.out.println("Divides one number by another");
System.out.println("\tA / B = C");

// Divides A by B to make C and shows answer
C = A / B;
System.out.println(A + " / " + B + " = " + C);
break;

case '5':
// Description of Raise to a Power
System.out.println("Gives A to the B power");

```

```

System.out.println("\t A^B = C");

C = Math.pow(A, B);
System.out.println(A + "^" + B + " = " + C);
break;
}

}

}

```

Bibl - March 15, 2015, 6:39 am

(Mar 9, 2015 01:37 PM)Trisomy 21 Wrote: [\[CITE\]](#) Don't call System.out.println() ten times in a row if you want to print out options on a console, just format the lines with "\n" in one method call. And as for the rest of it, well it works lol. Next try a calculator where you can enter a single expression like "4+5" or "12/3" and it will automatically detect what operations to do on the numbers.

Hi there,

I would not recommend doing this. If you're code is going to make a million calls to the System.out.println(String) method, then the JIT will come with a solution on it's own. If you really want to do it yourself, use a [StringBuilder](https://docs.oracle.com/javase/7/docs/api/java/lang/StringBuilder.html)(docs.oracle.com/javase/7/docs/api/java/lang/StringBuilder.html) to concat Strings in Java.

Bertha.

Serventor - March 15, 2015, 2:20 pm

Looks good to me, OP. Although I'd recommend having a small snippet where you use all methods, including comments on what the outputs will be, because some people are too lazy to read through the whole class and to study each method.

Psifour - March 15, 2015, 5:46 pm

(Mar 15, 2015 06:39 AM)Bertha Gladstone Lovegood Wrote: [\[CITE\]](#) Hi there,

I would not recommend doing this. If you're code is going to make a million calls to the System.out.println(String) method, then the JIT will come with a solution on it's own. If you really want to do it yourself, use a [StringBuilder](https://docs.oracle.com/javase/7/docs/api/java/lang/StringBuilder.html)(docs.oracle.com/javase/7/docs/api/java/lang/StringBuilder.html) to concat Strings in Java.

Bertha.

First, JIT is an acronym so look at your sentence and explain to me how it makes any sense. Second, creating a StringBuilder or using multiple calls to println() is inefficient for printing static blocks of text. As the person you quoted said those should be formatted using the proper escape codes to remove the need to concatenate Strings.

If you have no choice but to concat then a StringBuilder is the better choice in some cases, but if the choice is to concat or design it better than...

Bibl - March 16, 2015, 12:36 am

(Mar 15, 2015 05:46 PM)Psifour Wrote: [\[CITE\]](#) First, JIT is an acronym so look at your sentence and explain to me how it makes any sense. Second, creating a StringBuilder or using multiple calls to println() is inefficient for printing static blocks of text. As the person you quoted said those should be formatted using the proper escape codes to remove the need to concatenate Strings.

If you have no choice but to concat then a StringBuilder is the better choice in some cases, but if the choice is to concat or design it better than...

Hi there,

When I say JIT I am obviously talking about the JIT compiler. We're posting in the Java language and platform section so it should've been obvious. But I understand your point.

Bertha.

Psifour - *March 16, 2015, 1:30 am*

(Mar 16, 2015 12:36 AM)Bertha Gladstone Lovegood Wrote: [\[CITE\]](#) Hi there,

When I say JIT I am obviously talking about the JIT compiler. We're posting in the Java language and platform section so it should've been obvious. But I understand your point.

Bertha.

I was well aware of your intent. That said those with knowledge should always avoid giving incorrect or incomplete information if possible. If such a person makes a mistake there is no harm there so long as they make the correction before causing a misunderstanding for a less-informed member. Good on you for not rising to my naturally aggressive tone and for accepting the responsibility that having knowledge places on you.