

## Simple Calculator Lab

1. Create a simple calculator app. The index.html page displays 4 text fields, two for summing two numbers, and two more for multiplying. After the user enters 4 and 6 in the multiplication boxes, the index.html page looks like this:

<input type="text"/>	+	<input type="text"/>
<input type="text" value="4"/>	*	<input type="text" value="6"/>
<input type="button" value="Submit"/>		

After the user clicks Submit, the result appears on another page; in this case, like this:

$$4 * 6 = 24$$

If user fills in both sets of boxes, as in the following:

<input type="text" value="4"/>	+	<input type="text" value="6"/>
<input type="text" value="3"/>	*	<input type="text" value="7"/>
<input type="button" value="Submit"/>		

both answers should appear in the output:

$$4 + 6 = 10$$
$$3 * 7 = 21$$

All operations (addition and multiplication) must be performed on the server side – you must not use JavaScript to do these calculations.

2. Create an improved calculator app. The index.html page should look like this initially:

<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	*	<input type="text"/>	=	<input type="text"/>
<input type="button" value="Submit"/>				

After the user enters 4 and 6 in the multiplication boxes, the output should (seem to) appear in one of the “equals” boxes, like this:

<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
<input type="text" value="4"/>	*	<input type="text" value="6"/>	=	<input type="text" value="24"/>
<input type="button" value="Submit"/>				

Again, if user fills in both sets of boxes,

<input type="text" value="2"/>	+	<input type="text" value="3"/>	=	<input type="text"/>
<input type="text" value="5"/>	*	<input type="text" value="9"/>	=	<input type="text"/>
<input type="button" value="Submit"/>				

both calculations should be performed:

2	+	3	=	5
5	*	9	=	45
<input type="button" value="Submit"/>				

Again, all computations must occur on the server side; you must not use JavaScript to perform the calculations. Your app should handle non-numerical inputs gracefully. That is, blanks or other non-numerical inputs should not crash your servlet.

Note that in this app, there appears to be only one webpage – index.html.