

## Calculator

- **How to run the program:-**

- open the terminal.
- Write “ng server --open” and click enter.
- Open the backend folder on any java IDE and run it.
- Enjoy the show!

- **Features of the program and the operations it supports :**

The program supports the basics calculations like add, subtract, multiply and division in addition to percentage, square, square root and the inverse functions.

It calculates the result step by step like the windows calculator.

- **How to use :**

You can click on the numbers and the operations you need to do and the result will show up in the screen.

There are some functions calculate the results directly when you click on it like square, square root, percentage, inverse. You just enter the number then the function and the result will appear immediately.

- **Assumption :**

- “%” act like dividing by 100.
- There is no difference between C and CE buttons in use.

- **Sample runs :**

- Calculate  $36 \times 3 / 9$  : it calculates the  $36 \times 3$  first then divide the result by 9.

36.0 * 3 =			
108.0			
%	CE	C	⌫
$1/x$	$x^2$	$\sqrt{x}$	$\div$
7	8	9	$\times$
4	5	6	$-$
1	2	3	$+$
+/-	0	.	=

108.0 / 9 =			
12.0			
%	CE	C	⌫
$1/x$	$x^2$	$\sqrt{x}$	$\div$
7	8	9	$\times$
4	5	6	$-$
1	2	3	$+$
+/-	0	.	=

- Calculate  $1/8^2$  : you first enter the 8 square then take the inverse of the result.

sqr(8)			
64.0			
%	CE	C	⌫
$1/x$	$x^2$	$\sqrt{x}$	$\div$
7	8	9	$\times$
4	5	6	$-$
1	2	3	$+$
+/-	0	.	=

1/64.0			
0.015625			
%	CE	C	⌫
$1/x$	$x^2$	$\sqrt{x}$	$\div$
7	8	9	$\times$
4	5	6	$-$
1	2	3	$+$
+/-	0	.	=

- **Errors :**

- You can't divide by zero.
- You can't take the square root

2.0 / 0 =			
Cannot divide by zero			
%	CE	C	⌫
$1/x$	$x^2$	$\sqrt{x}$	$\div$
7	8	9	$\times$
4	5	6	$-$
1	2	3	$+$
+/-	0	.	$=$

sqrt(-5)			
ERROR!			
%	CE	C	⌫
$1/x$	$x^2$	$\sqrt{x}$	$\div$
7	8	9	$\times$
4	5	6	$-$
1	2	3	$+$
+/-	0	.	$=$