CALCULATOR BASIC TEST

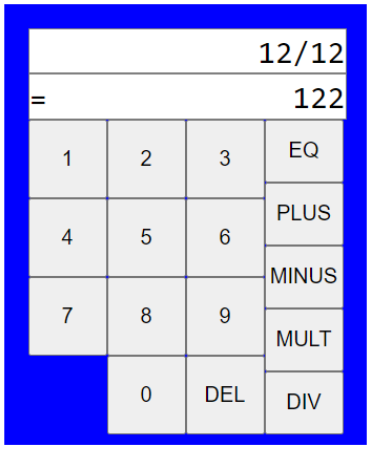
- Verification of all buttons are present, and text written on them is readable – **PASS**
- Check the simple arithmetic operations are working fine +,-,*,.- **PASS**

FUNCTIONAL TEST CASES TESTED

- Check the addition of two number -PASS.
- Check the addition of two negative number -PASS.
- Check the addition of one positive and negative number -PASS.
- Check the subtraction of two integer number -PASS.
- Check the subtraction of one negative and one positive number -PASS.
- Check the subtraction of two negative integer number -PASS.
- Check the multiplication of two integers -PASS.
- Check the multiplication of one negative number and one positive number -PASS.
- Division of two positive one-digit number -PASS

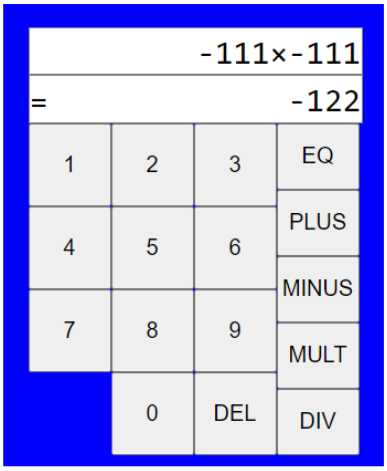
BUGS

- Division only works with one-digit number.



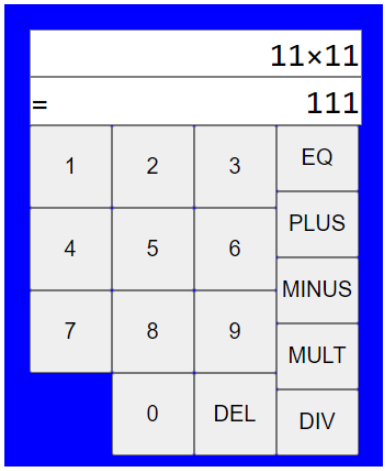
Expected=1

- Multiplication of two negative number.



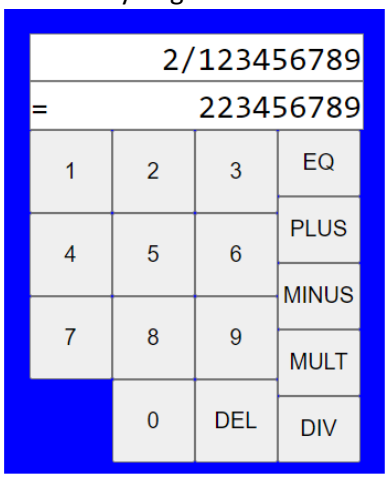
Expected 12321 or '**ERR**'.

- Multiplication of 11 end up in showing **wrong value.**



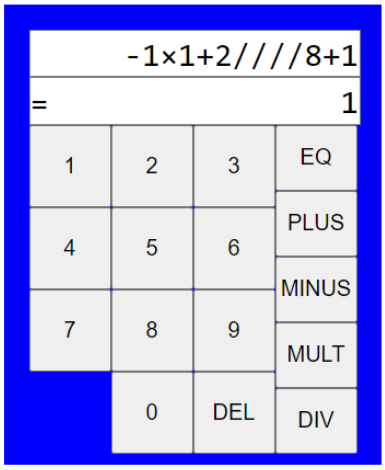
Expected **121**

- Division by large number

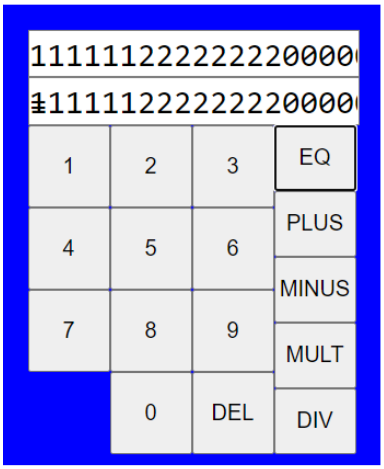


Expected 1.6

- Test with random operator multiple time. Instead of showing **ERR** it showing **1.**

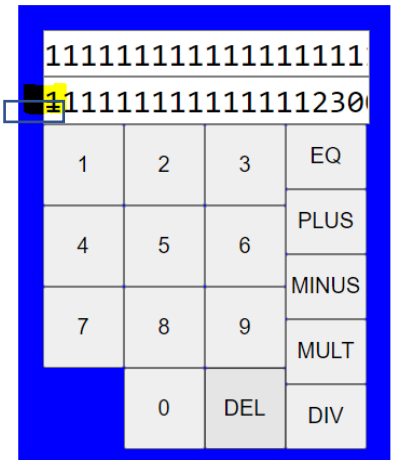


- After entering 17 numbers the numbers are not moving forward.

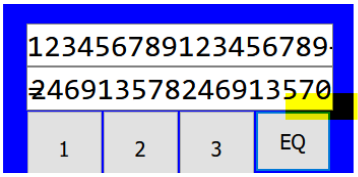


DESIGN ISSUES

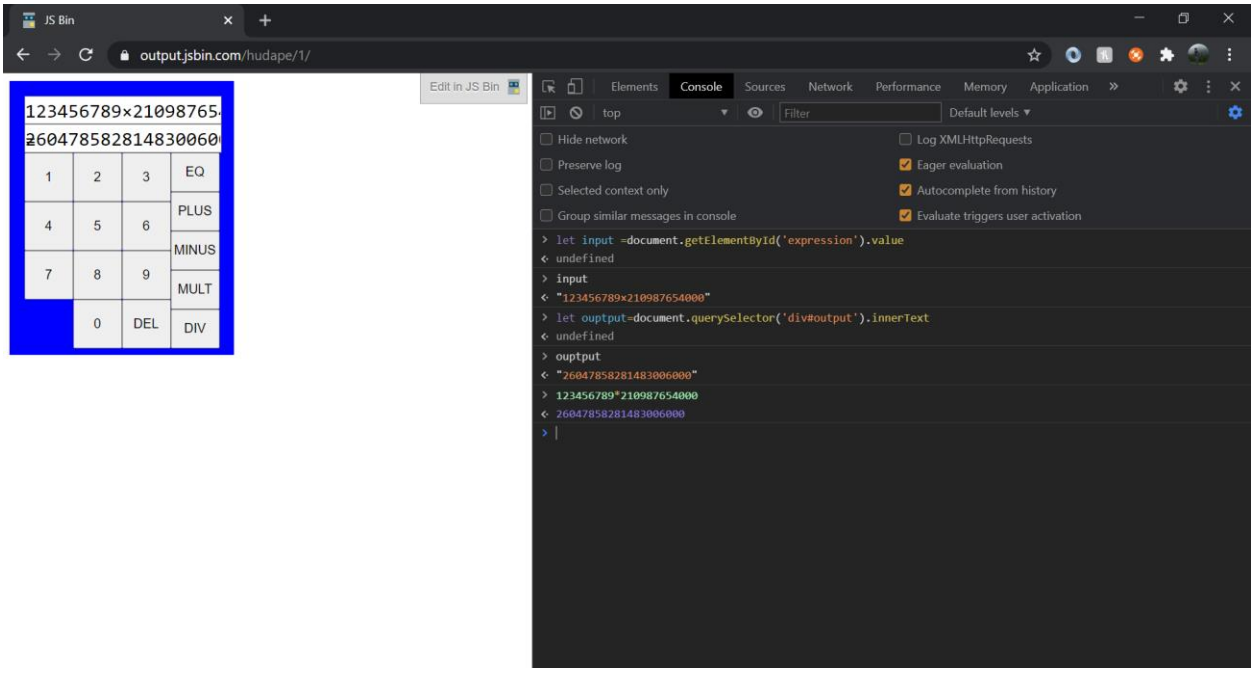
- Numbers are not separated by comma.
- Over writing of = symbol by 1



- The end of the EQ button and result area is not aligned properly.



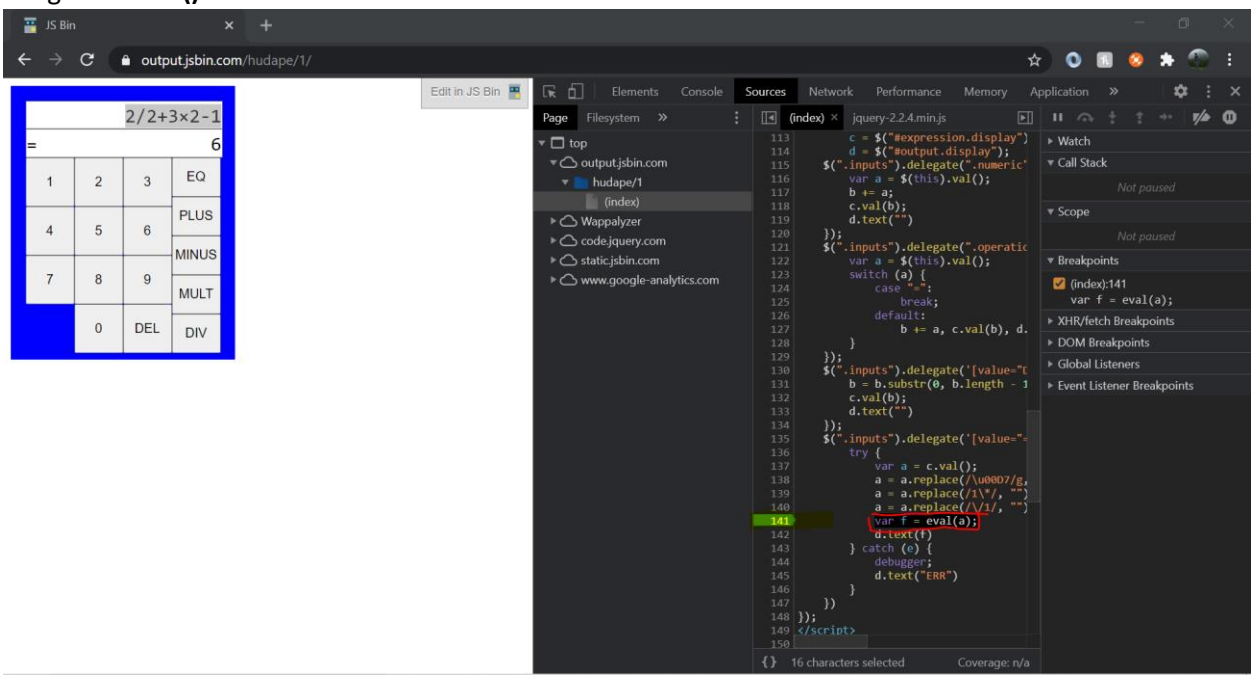
- Multiplication of two large integers 123456789*210987654000=26047858281483006000



Problem: Result is not completely **visible**; the output textbox cannot be moved.

SECURITY

- Usage of **EVAL ()**



TEST CASES

ADD

```
Running:   Test 1 addition of two positive integer number [111+111=222]

√ Element <//div[contains(text(), "222")]> was visible after 16 milliseconds.

OK. 1 assertions passed. (885ms)
Running:  Test 2 addition of two negative number [-111+-111=-222]

√ Element <//div[contains(text(), "-222")]> was visible after 7 milliseconds.

OK. 1 assertions passed. (447ms)
Running:  Test 3 addition of one negative and one positive number [-111+111=0]

√ Element <//div[contains(text(), "0")]> was visible after 9 milliseconds.

OK. 1 assertions passed. (381ms)
Running:  Test 4 addition of two ten digit number [123456789+123456789=246913578]

√ Element <//div[contains(text(), "246913578")]> was visible after 13 milliseconds.

OK. 1 assertions passed. (4.478s)
Running:  Test 5 addition of two fifteen digit number [123456789+123456789=246913578]

√ Element <//div[contains(text(), "24691357824690")]> was visible after 14 milliseconds.

OK. 1 assertions passed. (6.583s)
```

SUBTRACT

```
Running:  Test 1 substraction of two positive integer number [111-111=0]

√ Element <//div[contains(text(), "0")]> was visible after 18 milliseconds.

OK. 1 assertions passed. (1.485s)
Running:  Test 2 substraction of one negative and positive integer [-111-111=0]

√ Element <//div[contains(text(), "-222")]> was visible after 9 milliseconds.

OK. 1 assertions passed. (519ms)
Running:  Test 3 substraction of two negative integer [-111-0-111=0]

√ Element <//div[contains(text(), "-222")]> was visible after 17 milliseconds.

OK. 1 assertions passed. (2.895s)
Running:  Test 4 subtraction of two ten digit number [123456789+123456789=246913578]

√ Element <//div[contains(text(), "0")]> was visible after 19 milliseconds.

OK. 1 assertions passed. (4.971s)
Running:  Test 5 subtraction of two fifteen digit number [123456789+123456789=246913578]

√ Element <//div[contains(text(), "0")]> was visible after 19 milliseconds.

OK. 1 assertions passed. (7.26s)
```

MULTIPLICATION

```
  Using: firefox (83.0) on windows 10.0 platform.

Running:  Test 1 multiplication of two integer [222,222=0]

√ Element <//div[contains(text(), "49284")]> was visible after 33 milliseconds.

OK. 1 assertions passed. (3.92s)
Running:  Test 2 multiplication of one negative and one positive integer [-111,111=0]

√ Element <//div[contains(text(), "-49284")]> was visible after 16 milliseconds.

OK. 1 assertions passed. (1.278s)
Running:  Test 3 Multiplication of a number by 0 [1234567890*0=0]

√ Element <//div[contains(text(), "0")]> was visible after 21 milliseconds.

OK. 1 assertions passed. (3.375s)
Running:  Test 4 Multiplication of a number by fraction on the right side [2/3*123456789]

√ Element <//div[contains(text(), "82304526")]> was visible after 17 milliseconds.

OK. 1 assertions passed. (3.615s)
Running:  Test 5 Multiplication of a number by fraction on the left side [2/3*123456789]

√ Element <//div[contains(text(), "82304526")]> was visible after 17 milliseconds.

OK. 1 assertions passed. (3.568s)
Running:  Test 6 Result of a previous operation when the result is 0 [0*6*6=0]

√ Element <//div[contains(text(), "0")]> was visible after 16 milliseconds.

OK. 1 assertions passed. (1.845s)

OK. 6  total assertions passed (23.673s)
```

DIVISION

```
Running:  Test 1 division of two positive integer [222,222=0]

√ Element <//div[contains(text(), "1")]> was visible after 30 milliseconds.

OK. 1 assertions passed. (1.336s)
Running:  Test 2 division of two negative integers[-222,-222=0]

√ Element <//div[contains(text(), "1")]> was visible after 18 milliseconds.

OK. 1 assertions passed. (592ms)
Running:  Test 3 division of one negative integer and one positive integer[-2,2=0]

√ Element <//div[contains(text(), "-1")]> was visible after 46 milliseconds.

OK. 1 assertions passed. (647ms)
Running:  Test 4 divide 0 by a integer divisor [0/200=0]

√ Element <//div[contains(text(), "0")]> was visible after 20 milliseconds.

OK. 1 assertions passed. (1.975s)
Running:  Test 5 divide a negative divedend by a positive divisor [-1500/2000=-0.75]

√ Element <//div[contains(text(), "-0.75")]> was visible after 18 milliseconds.

OK. 1 assertions passed. (3.222s)
Running:  Test 6 division by 0 [1500/0=ERR]

√ Element <//div[contains(text(), "Infinity")]> was visible after 16 milliseconds.

OK. 1 assertions passed. (2.441s)
Running:  Test 7 division by two floating numbers[1/2/1/5]

√ Element <//div[contains(text(), "0.1")]> was visible after 17 milliseconds.

OK. 1 assertions passed. (2.232s)
```

EXPRESSION

```
[Expression\expression] Test Suite
==================================
i Connected to localhost on port 4444 (4353ms).
  Using: firefox (85.0) on windows 10.0 platform.

Running:  Test 1 expression [2/2+3×2-1=6]

√ Element <//div[contains(text(), "6")]> was visible after 19 milliseconds.

OK. 1 assertions passed. (1.182s)
Running:  Test 2 expression

No assertions ran.
```