C Programming - Mini Project

TOPIC: SAMPLE CALCULATOR

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Description:
In this topic, we will discuss how we write a calculator program in the C programming language. A Calculator is a small electronic device used to perform various arithmetic operations like addition, subtraction, multiplication, division, percentage, etc. It makes our calculations easier and faster. It is a

portable device that can use anywhere to perform simple mathematical operations. We use a scientific or sophisticated calculator in some situations, where we need to solve complex calculations like trigonometry functions, exponential operators, degrees, radians, log functions, hyperbolic functions etc. Let's discuss the various ways to create a calculator program in the C language.

CODE:{THIS CODE IS DONE BY USING SWITCH STATEMENT }

```
#include <stdio.h>

 int
main ()
{


char op;

double first, second;

printf ("Enter an operator (+, -, *, /): ");

scanf ("%c", &op);
```

```
printf ("Enter two operands: ");

scanf ("%lf %lf", &first, &second);


switch (op)
   {

case '+':

printf ("%.1lf + %.1lf = %.1lf", first, second, first + second);

break;

case '-':

printf ("%.1lf - %.1lf = %.1lf", first, second, first - second);

break;

case '*':

printf ("%.1lf * %.1lf = %.1lf", first, second, first * second);

break;

case '/':

printf ("%.1lf / %.1lf = %.1lf", first, second, first / second);

break;

        // operator doesn't match any case constant
   default:

printf ("Error! operator is not correct");
```

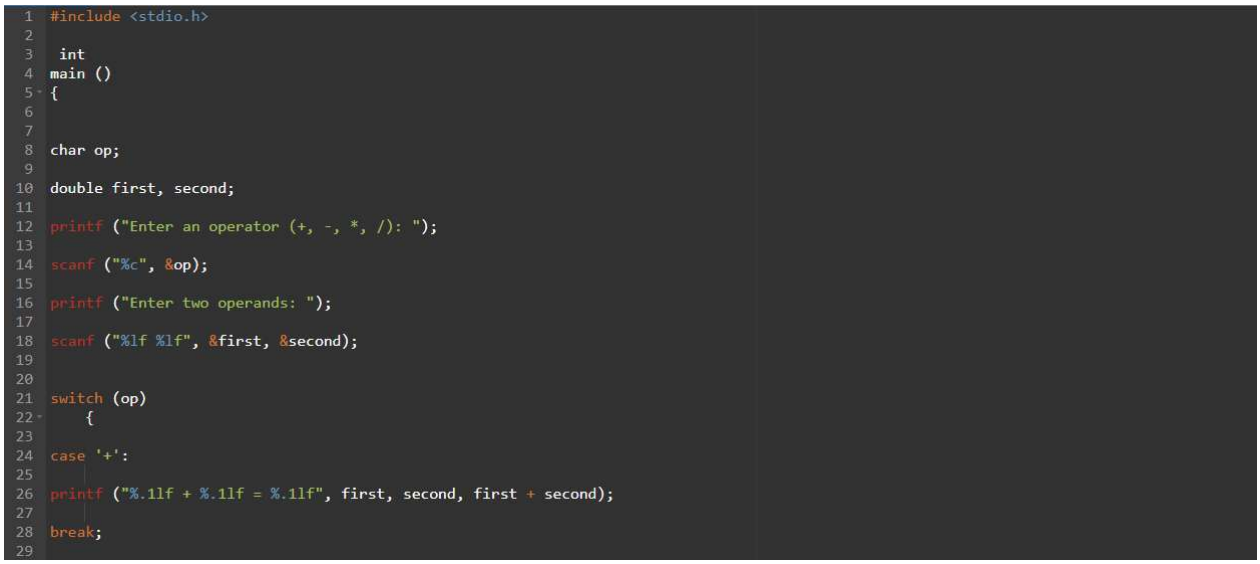
}

return 0;

}

LINK OF OUR PROJECT : https://onlinegdb.com/4HYHzCour

CODE ,Input and output images:



```c
#include <stdio.h>

 int
main ()
{


char op;

double first, second;

printf ("Enter an operator (+, -, *, /): ");

scanf ("%c", &op);

printf ("Enter two operands: ");

scanf ("%lf %lf", &first, &second);


switch (op)
    {

case '+':

printf ("%.1lf + %.1lf = %.1lf", first, second, first + second);

break;

```

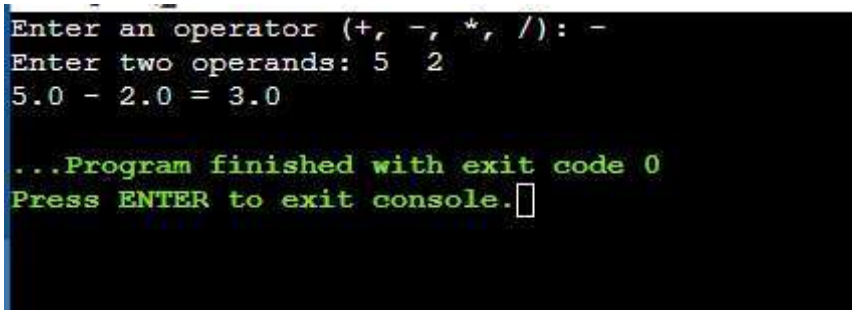
```
30  case '-':
31
32  printf ("%.1lf - %.1lf = %.1lf", first, second, first - second);
33
34  break;
35
36  case '*':
37
38  printf ("%.1lf * %.1lf = %.1lf", first, second, first * second);
39
40  break;
41
42  case '/':
43
44  printf ("%.1lf / %.1lf = %.1lf", first, second, first / second);
45
46  break;
47
48      // operator doesn't match any case constant
49      default:
50
51  printf ("Error! operator is not correct");
52
53  }
54
55
56  return 0;
```

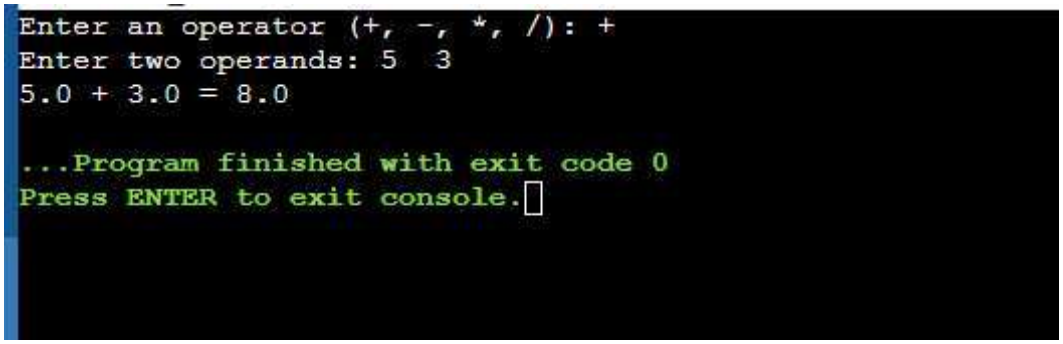
```
Enter an operator (+, -, *, /): /
Enter two operands: 15   3
15.0 / 3.0 = 5.0

...Program finished with exit code 0
Press ENTER to exit console.
```

```
Enter an operator (+, -, *, /): *
Enter two operands: 5  3
5.0 * 3.0 = 15.0

...Program finished with exit code 0
Press ENTER to exit console.
```





Note: We can write the same program within the while loop and ask the user if he wants to continue working inside the calculator application. This avoids the need to exit and re-run the program.

Uses : In general life there are so many uses of simple calculators and this technology allows students to solve complicated problems quickly and in an efficient manner. Additionally, it can reduce the problem to simpler tasks and allows the student to devote more time in understanding the problem.This calculator can save the time .

References:Our team used one online compiler named gdb .