

QUIZ 2 Solution

Write a complete C program to model a simple calculator. Your program should allow the user to do the following:

```
+      add
-      subtract
*      multiply
/      divide
q      quit
```

The program should display the current result after each operation is performed. You need a function *scan_data* to get an operator and a number from the user.

You need a function a *do_next_op* that performs the required operation. *do_next_op* has two input parameters (the operator and the number).

Below is a sample run of the program:

```
Enter an operator and then a number:
+ 5.0
result so far is 5.0
```

```
Enter an operator and then a number:
* 3.0
result so far is 15.0
```

```
Enter an operator and then a number:
q 0
final result is 15.0
```

Solution

```
#include<stdio.h>

void scan_data();
void do_next_op(char symbol, double operand);

void main()
{
scan_data();
}

void scan_data()
{
char symbol;
double operand;

scanf(" %c %lf",&symbol, &operand);

do_next_op(symbol, operand);
}

void do_next_op(char symbol, double operand)
{
double accumulator = 0;

while(symbol != 'q')
{
if(symbol == '+')
{
accumulator = accumulator + operand;
printf("result so far %lf\n", accumulator);
}
else if(symbol == '-')
{
accumulator = accumulator - operand;
printf("result so far %lf\n", accumulator);
}
else if(symbol == '*')
{
accumulator = accumulator * operand;
printf("result so far %lf\n", accumulator);
}
else if(symbol == '/')
{
accumulator = accumulator / operand;
printf("result so far %lf\n", accumulator);
}
else
{
printf("Invalid operator!");
}
}
}
```

```
scanf(" %c %lf",&symbol, &operand);  
}  
printf("final result is %lf", accumulator);  
}
```