

Problem No: 1

Problem Name: Write a C program for a simple calculator using function.

Sample Input Output:

Case 1 -----

input: 1

output:

Enter how many times do you want this calculator to work

1

You can use this calculator 1 time

For addition,subtraction,multiplication,division, reminder, square or cube press 1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

Opps memory is full!! Try relauching the program

Case 2 -----

input:: 8

output:

You can use this calculator 8 times

For addition,subtraction,multiplication,division, reminder, percentage, square or cube press 1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

For addition, subtraction, multiplication, division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

For addition, subtraction, multiplication, division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

1

performing addition

111

1

result of addition 112.00

For addition, subtraction, multiplication, division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

For addition, subtraction, multiplication, division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

For addition,subtraction,multiplication,division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

For addition,subtraction,multiplication,division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

For addition,subtraction,multiplication,division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

1

performing addition

1

1

result of addition 2.00

Opps memory is full!! Try relaunching the program

Case 3 -----

input : 2

output:

You can use this calculator 2 times

For addition,subtraction,multiplication,division, reminder, percentage, square or cube press
1,2,3,4,5,6,7 accordingly

0

plz press between 1 to 7

For addition, subtraction, multiplication, division, reminder, percentage, square or cube press 1,2,3,4,5,6,7 accordingly

9

plz press between 1 to 7

Opps memory is full!! Try relaunching the program

Coding :

```
#include <stdio.h>
```

```
float add()
```

```
{
```

```
    printf ("performing addition\n");
```

```
    float a,b;
```

```
    scanf ("%f%f", &a,&b);
```

```
    return a+b;
```

```
}
```

```
float sub()
```

```
{
```

```
    printf ("performing subtraction\n");
```

```

    float a,b;
    scanf ("%f%f",&a, &b);
    return a-b;
}
float mul()
{
    printf ("performing multiplication\n");
    float a,b;
    scanf ("%f%f", &a,&b);
    return a*b;
}
float div()
{
    printf ("performing division\n");
    float a,b;
    scanf ("%f%f",&a,&b);
    if (b==0)
    {
        printf ("can not be divided by 0 and result will be wrong\n");
    }

    else
    {
        return a/b;
    }

}
int rem()

```

```
{  
    printf ("performing reminder\n");  
    int a,b;  
    scanf ("%d%d",&a,&b);  
    return a%b;  
}
```

```
float squ()
```

```
{  
    printf ("performing square\n");  
    float a;  
    scanf ("%f",&a);  
    float b;  
    b=a*a;  
    return b;  
}
```

```
float cub()
```

```
{  
    printf ("performing cube\n");  
    float a;  
    scanf ("%f", &a);  
    float b;  
    b=(a*a)*a;  
    return b;  
}
```

```
int main ()
```

```

{
    printf ("Enter how many times do you want this calculator to work\n");
    int x;
    scanf ("%d",&x);
    if (x==1)
    {printf ("You can use this calculator %d time\n", x);}
    else
    {
        printf ("You can use this calculator %d times\n",x);
    }

    for ( int y=1;y<=x;y++)

    {

        printf ("For addition,subtraction,multiplication,division, reminder, square or cube press
1,2,3,4,5,6 or 7 accordingly \n");
        int a;
        scanf ("%d",&a);
        if (a>8)
        {
            printf ("plz press between 1 to 8\n");
        }
        else if (a<=0)
        {
            printf ("plz press between 1 to 8\n");
        }
    }
}

```

```
}
```

```
else if (a==1)
```

```
{
```

```
    printf ("result of addition %.2f\n",add());
```

```
}
```

```
else if (a==2)
```

```
{
```

```
    printf ("result of subtraction %.2f\n", sub());
```

```
}
```

```
else if (a==3)
```

```
{
```

```
    printf ("result of multiplication %.2f\n", mul());
```

```
}
```

```
else if (a==4)
```

```
{
```

```
    printf ( "result of division %.2f\n", div());
```

```
}
```

```
else if (a==5)
```

```
{
```

```
    printf ("result of reminder %d\n", rem());
```

```
}
```

```
else if (a==6)
```

```
{
```

```
    printf ("result of square %.2f\n", squ());
```

```
}
```

```
else
```

```
{
```

```
    printf ("result of cube %.2f\n",cub());
```



```
}  
  
}  
printf ("\nOpps memory is full!! Try relauching the program\n");  
return 0;}
```

Result and Analysis :

The program enables user to perform how many times he\she can use the calculator. User will be asked to enter between 1 to 8 values to perform addition, subtraction, multiplication, division, reminder, percentage, square or cube respectively.

If the user enters the required value then the code will execute its equivalent function and print the value. Noted that if the dividend value entered is 0 the the code will show error and the result will be error.

After performing the task, the program will show “memory is full” message and will be executed from the program.