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1. Simple calculator with 10 - 4 arithmetic, 4 - relational and any other two functions/operations untill user wants to exit.

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#include <stdio.h>
#include <math.h>
#include <ctype.h>

void operation(int flag);

int main()
{
    int k = 1;
    operation(k);
    return 0;
}

void operation(int flag)
{
    int l; float x, y; char c;
    if(flag == 1)
    {
        printf("\nEnter the two numbers:\n);
        scanf("%f%f", &x, &y);

        printf("\n Enter the operation: \n <A: Addition>\t
                <S: subtraction>\t<M: Multiplication>\t<D: Division>\n
                <U: To check greater>\t<L: To check lower>\t
                <O: To compare>\t<P: To check equal or not>\n
                <Q: remainder>\t<R: To find Power>\n");

        fflush(stdin);
        scanf("%c", &c);
        switch(toupper(c));
        {
            case 'A': printf("\n %.2f + %.2f = %.2f\n", x, y, x+y);
                      break;
            case 'S': printf("\n %0.2f - %0.2f = %0.2f \n", x, y, x-y);
                      break;
            case 'M': printf("\n %0.2f x %0.2f = %0.2f \n", x, y, x*y);
                      break;
case 'O' : printf("\n %0.2f / %0.2f = %0.2f \n", x, y, x/y);
           break;

case 'U' : if(x > y)
              printf("\n %0.2f > %0.2f \n", x, y);
           else
              printf("\n %0.2f ! > %0.2f \n", x, y);
           break;

case 'L' : if (x < y)
              printf("\n %0.2f < %0.2f \n", x, y);
           else
              printf("\n %0.2f ! < %0.2f \n", x, y);
           break;

case 'O' : if (x = = y)
              printf("\n %0.2f == %0.2f \n", x, y);
           else
              printf("\n %0.2f != %0.2f \n", x, y);
           break;

case 'P' : if (x != y)
              printf("\n %0.2f != %0.2f \n", x, y);
           else
              printf("\n %0.2f = = %0.2f \n", x, y);
           break;

case 'Q' : printf("\n The remainder is %d \n", (int)x, (int)y);
           break;

case 'R' : printf("\n %0.2f to the power of %0.2f is
                   %0.2f\n", x, y, pow(x, y));

           break;

default: printf("\n Input Error! \n");
}
printf("\n Do you wish to continue : \n (yes) 1 \t (NO) Any other
        key? ");
scanf("%d", &l);
```

```
    operation (l);
  }

  return ;
}
```