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IBM19CS069

1. Write a menu driven C program to design a simple calculator which solves 10 operations. 4 Arithmetic, 4 Relational & 2 of your choice. The program should loop till the user wishes to stop.

```
#include <stdio.h>
#include <math.h>
int main()
{
   int a, b, choice;
   printf("Enter 1st number :");
   scanf("%d", &a);
   printf("Enter 2nd number :");
   scanf("%d", &b);
   do
   {
   printf("calculator \n");
   printf(" 1. addition \n");
   printf(" 2. substraction \n");
   printf("3. Multiplication \n");
   printf("4. division \n");
   printf(" 5. less than \n");
   printf("6. greater than \n");
   printf("7. even or odd \n");
   printf("8. modulas \n");
   printf("9. checking square \n");
   printf("10. not equal \n");
   scanf("%d", &choice);
```

```
switch (choice)
{
  case 1: printf("%d + %d = %d", a, b, a+b);
          break;
  case 2: printf("%d - %d = %d", a, b, a-b);
          break;
  case 3: printf("%d * %d = %d", a, b, a*b);
          break;
  case 4: printf("%d / %d = %d", a, b, a/b);
          break;
  case 5: if (a<b)
          {
            printf("%d", a);
          }
          else if (b<a)
          {
            printf("%d", b);
          }
          else
          {
            printf("equal");
          }
  case 6: if (a>b)
          {
            printf("%d", a);
          }
          else if (b>a)
          {
            printf("%d", b);
          }
          else
```

```
{
  printf ("equal");
}
break;
case 7:   if (a %. 2 == 0)
          {
            printf ("%.d is even", a);
          }
          else
          {
           printf ("%.d is odd", b);
          }
          if (b %. 2 == 0)
          {
           printf ("%.d is even", b);
          }
          else
           {
            printf ("%.d is odd", b);
           }
          break;
case 8:  printf ("%.d", a, b, a %. b);
         break;
case 9:  printf ("%.d \t %.d", a * a , b * b);
         break;
case 10: printf ("%.d != %.d-%d", a, b, a != b)
         break;
default: printf ("invalid \n");
         break;
}
```

```
    }
    while (choice != 1);

}
```

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2. Write a C program to accpt 3 numbers from the user. Find the greater 2 among the 3 and pass them as parameters to the user defined functions.

a) Sumaver(...) which finds the sum and average of the 2 numbers. Print the sum and return the average.

b).

```
#include <stdio.h>
float sumaver (int l, int l2)
{
  float avg=0 ; int sum=0;
  sum = (l+l2);
  avg = (sum)/2;
  printf (" sum is : %d \n", sum);
  return avg;
}
void printeven (int l, int l2)
{
    int i;
    printf (" Even numbers are : \n ");
    for ( i=l2; i<l ; i++)
    {
        if (i % 2 == 0)
```

```
    {
      printf("%d", i);
    }
  }
}
void main()
{
int a, b, c, l, l2;
printf("Enter any 3 numbers : ");
scanf("%d %d %d", &a, &b, &c);
if (a>b && a>c)
{
   l=a;
 }
if((b>a) && (b>c))
 {
   l=b;
 }
else
 {
   l= c;
 }
if (a==l)
{
   if (b>c)
     l2=b;
   else
     l2=c;
}
```

```
if (b == 1)
{
    if (a > c)
        l2 = a;
    else
        l2 = c;
}
if (c == 1)
{
    if (a > b)
        l2 = a;
    else
        l2 = b;
}
printf("Average is : %.1f \n", sumaver (1, l2));
    printeven (1, l2);
}.
```