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1BM19CS103

Qc LAB.

1. Write a menu driven C Program to design a simple calculator which solves 10 operations - 4 Arithmetic, 4 Relational and any two of your choice. The program should loop till user wishes to loop

```
#include <stdio.h>
#include <math.h>
int main()
{
  int num1, num2, choice;
  char ch;
  do
  {
printf("\nselect your choice from the options given below:\n");
printf("ARITHMETIC OPERATIONS: \n\n 1- Addition \n 2-
        Subtraction \n 3 - Multiplication \n 4- Division
      \n\n RELATIONAL OPERATIONS: \n 5- Equal \n 6-
      Greater than \n 7- Smaller than \n 8 - Not
      equal to \n\n RANDOM \n 9- Area of triangle
      \n 10 - Power\n");
scanf("%d", &choice);
printf("Enter the first number :");
scanf("%d", &num1);
printf("Enter the second number :");
scanf("%d", &num2);
switch(choice)
  {case 1:
      printf("Addition of %d and %d is :
          %d \n", num1, num2, num1+num2);
      break;
```

```
Case 2:
 printf ("Subtraction of %.d and %.d is %.d \n",
        num1 , num2, num1-num2);
  break;

Case 3:
 printf ("Multiplication of %.d and %.d is %.d \n",
      num1 , num2, num * num2);
    break;

Case 4:
 ~~printf("Division of %.d and %.d is %.d~~
 if (num2 == 0)
    {
    printf ("cannot divide by zero \n");
      }
    else
     {
    printf ("Division of %.d and %.d is %.d \n",
          num1 , num2 , num1/num2 );
     break;

  Case 5 :
    If (num1 == num2)
        printf ("Both the numbers are equal");
       else
       printf ("Both numbers are not equal");
     break;

  Case 6 :
    If ( num1 > num2)
      printf ("%.d is greater than %.d ", num1, num2);
     else
        printf ("%.d is greater than %.d", num2,
            num1);
         break;
```

```
Case 7:
 if (num1 < num2)
   printf ("%.d is smaller than %.d", num1, num2);
   else
    printf ("%.d is smaller than %.d", num2, num1);
     break;

Case 8:
 if (num1 != num2)
   printf ("Both numbers are not equal");
    else
    printf ("Both numbers are equal");
    break;
  }

Case 9:
 printf ("Area of triangle having sides %.d and
        %.d is %.f , num1, num2, (0.5 * num1 * num2));
  break;

 Case 10:
  printf ("%.d to the power of %.d is %.f", num1,
        num2, pow(num1, num2));
    break;
   default:
    printf ("Please select correct option\n");
     break;
  }
  printf ("Do you want to repeat the operation
            Y/N :");
   scanf ("%.c", &ch);
   }
   while (ch == 'y' || ch == 'Y');
}
```

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2. Write a C program to accept three numbers from the user. Find the greater two among the three and pass them as parameters to the user defined functions given below.

a. sumaver( ) - which finds the sum and average of the two numbers. Print the sum and return the average.

b. printeven( ) - which prints all the even numbers between the given two numbers.

```
#include <stdio.h>
int sumaver (int num1, int num2)
  {
   float sum = 0, avg;
   sum = num1 + num2;
   avg = sum/2;
   printf("\nSum of two numbers is %.f\n", sum);
   return avg;
  }
int printeven (int num3, int num4)
 {  int a = num3 + 1, arr[10];
    printf("\n Even numbers are :");
      while (a < num4)
         {
           if (a%.2 == 0) {
              printf("%.d \t", a);
           ++a;
           }
  }  }
int main( )
  {
     int num[3], i, j, temp, s, p;
     printf("Enter three numbers :\n");
      scanf("%.d %.d %.d", &num[1];&num[2], &num[3]);
        for (i=1 ; i<4; i++)
          {
            for (j = i+1 ; j < 4 ; j++)
              {
```

```
        if (num[i] > num[j])
        {
          temp = num[i];
          num[i] = num[j];
          num[j] = temp;
        }
    }
}
S = sumaver(num[2], num[3]);
p = printeven(num[2], num[3]);
printf("\nAverage is : %d \n", S);
return 0;
}
```