WEEK (1)

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PROGRAM 1:

Write a menu driven C program to design a simple calculator that involves 10 operations, 4 Arithmetic, 4 Relational, 2 of your choice. Program should loop till user wishes to stop.

```
#include <stdio.h>
    int main()
    {
      int i, a, b, c;
      int sum, diff, mul, mod;
      float divi;
      while (1)
        {
        printf ("CHOOSE OPERATION YOU WISH TO DO : \n");
        printf ("1. Add \n");
        printf ("2. Subtract \n");
        printf ("3. Multiply \n");
        printf ("4. Divide \n");
        printf ("5. Modulus \n");
        printf ("6 Greater than \n");
        printf ("7. Lesser than \n");
        printf ("8. NOT equal \n");
        printf ("9. Equal to \n");
        printf ("10. Increment by 5 \n");
        scanf ("%d", &i);
        printf ("Enter two numbers to perform the operation: \n");
        scanf ("%d %d", &a, &b);
```

```
sum = a+b;
diff = a-b;
mul = a+b;
divi = (a*1.0) /b;
mod = a%b;

switch (i)
{
case 1 : printf ("sum=%d \n", sum);
         break;
case 2 : printf ("Difference=%d \n", diff);
         break;
case 3 : printf ("Multiplication=%d \n", mul);
         break;
case 4 : printf ("Division =%f \n", divi);
         break;
case 5 : printf ("Modulus =%d \n", mod);
         break;

case 6 : if (a>b)
         {
           printf ("%d >%d \n", a,b);
         }
         else
         {
           printf ("%d > %d \n", b, a);
         }
         break;
```

```
case 7: if (a<b)
        {
         printf ("%.d <%.d \n" , a,b) ;
        }
         else
        {
         printf (" %.d<%.d \n" , b,a) ;
        }
        break;

case 8: if (a!=b)
        {
         printf ( "%.d !=%.d \n" , a,b);
        }
         else if
        {printf ("%.d !=%.d \n" , b,a);
        }
        break;

case 9: if (a==b)
        {
         printf ("%.d =%.d \n" , a,b) ;
        }
          else if
        {
         printf ("%.d =%.d \n" , b,a);
        }
        break;
```

```
case 10: printf("Incremented value is \n", a, a+5);
         printf("Incremented value is \n", b, b+5);
         break;

default : printf("WRONG CHOICE!");
}

printf("Press 1 to calculate more,
        Or Press any key to exit \n\n");
scanf("%d", &c);

if (c!=1)
{
    break;
}
}
}
```

OUTPUT

```
CHOOSE THE OPERATION YOU WISH TO DO :
1. Add
2. Subtract
3. Multiply
4. Divide
5. Modulus
6. Greater than
7. Lesser than
8. Not equal
9. Equal
10. Increment by 5
```

7

Enter two numbers to perform the operation

9

3

3 < 9

PROGRAM 2:

Write a C program to accept three numbers from the user. Find the greater two among the three and 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 a, int b)
{
 int sum;
 sum = a+b;
 printf ("sum=%d\n", sum);
 return sum/2;
}

void printeven (int a, int b)
{
 int small, big;
 if (a>b)
  {
```

```
    small = b;
    big = a;
  }
    else
  {
   small = a;
   big = b;
  }
   printf ("Even numbers between two numbers are :\n");
  int i;
  for (i= small +1; i<big ; i++)
    {
     if (i%2==0)
     printf("%d\n", i);
    }
}

int main()
{
  int a,b,c, avg, n1,n2;
  printf ("Enter three numbers:\n");
  scanf ("%d%d%d",&a,&b,&c);
    if (c>a && c<b)
      {
       n1=a;
       n2=b;
      }
       else if(b<a && b<c)
      { n1=a;
       n2=c;
      }
```

```
else
{
  n1=b;
  n2= c;
}
avg= sumaver(n1,n2)
printf("Average of two number is : %d\n",avg);
printeven(n1,n2);
}
```

OUTPUT

```
Enter three numbers :
3
6
1
sum=9
The average of two numbers is :4
The even numbers between the two are-
4.
```