Week-1

1BM19CS052
DIVYANSHU.

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 the user wishes to stop.

⇒
```
#include <stdio.h>
Void main()
{
  int num1, num2, opt;
  Char ch;
  do
  {
    printf ("\n What's on your mind: \n");
    printf (" ARITHMETIC OPERATIONS : \n\n
        1 - Addition. \n2 - Substraction \n3 -
        - Multiplication \n4 - Division \n\n
        RELATIONAL OPERATIONS : \n \n5 -
        Equal \n6 - Greater than \n7 - Smaller
        than \n8 - Power to \n \n RANDOM \n
        \n9 - Area of square (s x s) \n10 -
        - Area of rectangle (L x B) \n\n");
    scanf ("%d, & opt);
    printf (" Enter the first Integer : ");
    scanf ("%d", & num1);
    printf (" Enter the second Integer : ");
    Scanf ("%d, & num2);
    switch (opt)
    {
```

```
Case 1:
    printf ("Addition of %d and %d is :d\n",
    num1, num2, num1+2);
    break;
Case 2:
    printf ("Substraction 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, num1*num2);
    break;
Case 4:
    if (num2==0)
    {
    printf ("The second integer is zero.
    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 number are not equal");
     break;
```

```
Case 6:
    if (num1 > num2)
        printf ("%.d is greater than %.d, num1,
        num2);
    elseif (num2 > num1)
        printf ("%.d is greater than %.d",
        num2, num1);
    else if (num1 == num2)
        printf ("both are equal");
    break;
Case 7:
    if (num1 < num2)
        printf ("%.d is smaller than %.d, num1,
        num2);
    else if (num2 < num1)
        printf ("%.d is smaller than %.d", num2, num1);
    else if (num1 == num2)
        printf ("both are equal");
    break;
Case 8:
    printf ("%.d to the power of %.d is %.f",
    num1, num2, pow(num1, num2));
    break;
Case 9:
    printf ("Area of Square with side %.d is %.d",
            num1, num1 * num2);
    break;
Case 10:
    printf ("Area of rectangle with length %.d
    and breadth %.d is %.d", num1, num2, num1
    * num2);
```

```
        break;
    default:
        printf("Input correct option\n");
        break;
    }
    printf("Do you want to repeat the operation
                Y/N : ");
    scanf("%c", &ch);
    }
while (ch == 'y' || ch == 'Y');
}
```

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

a) sumaver(....) which finds the sum and average of the 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("\n sum of two numbers : %f\n", sum);
```

```
    return avg;
}
int printeven(int num3, int num4)
{
    int k = num3+1, arr[10];
    printf("\n Even numbers : ");
    while (k<num4)
    {
        if (k%2==0)
            printf("%d\t", k);
        ++k;
    }
}

int main()
{
    int num[3], i, j, temp, s, p;
    printf("\n Even numbers :-");
    printf("Enter three number seperated.
            with spaces : ");
    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 ("\n Average : %d \n", s);
return 0;
}
```