Practice Programs for OOJ lab - Week 1

(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>
#include<math.h>
#include<stdlib.h>
void main()
{
 int a,b,c;
 float avg;
 printf("Enter the first number\n");
 scanf("%d",&b);
 while(1)
 {
 printf("\n Enter the choice\n");
 printf("\n 1- Addition \n 2- Subtraction \n
 3- Multiplication \n 4- Division");
 printf("\n 5- Greatest of two numbers \n
 6- Smallest of two numbers \n 7- The two
 numbers are equal \n 8- The two numbers are
 not equal \n 9- Remainder \n 10- Average \n
 0- To exit \n");
```

```
scanf("%d", &c);
switch(c)
{
 case 1:
      printf("Sum=%d", a+b);
      break;
case 2:
      printf("Difference=%d", a-b);
      break;
case 3:
      printf("Product=%d", a*b);
      break;
case 4:
      printf("Quotient=%d", a/b);
      break;
case 5:
      if(a>b)
      printf("The greatest number among the two
            is %d", a);
      else
      printf("The greatest number among the two
            is %d", b);
      break;
case 6:
      if(a<b)
      printf("The smallest number among the two
            is %d", a);
      else
      printf("The smallest number among the two
      break;  is %d", b);
```

```
case 7:
    if (a==b)
    printf ("True\n");
    else
    printf ("False\n");
    break;
case 8:
    if (a!=b)
    printf ("True\n");
    else
    printf ("False\n");
    break;
case 9:
    printf ("Remainder = %d", a%b);
    break;
case 10:
    printf ("Average = %f", (a+b)/2.0);
    break;
case 0;
    exit(0);
default:
    printf ("Invalid input! Please try again later\n");
}
}
}
```

(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) printaver(...) which prints all the even numbers between the given two numbers.

→

```
#include<stdio.h>
float sumaver(int x, int y)
    {
      printf("Sum: %d\n", x+y);
      return ((x+y)/2.0);
    }
void printaver(int x, int y)
  {
    printf("All the even numbers from %d to %d
     are \n", y, x);
   for(int i=y; i<=x; i++)
     {
       if(i%2==0)
       printf("%d ", i);
}   }
```

```
int main()
    int a[3],g1,g2,t;
    printf("Enter the three numbers\n");
    scanf("%d%d%d",&a[0],&a[1],&a[2]);
    for(int i=0;i<3;i++)
    {
     for(int j=i+1;j<3;j++)
     {
         if(a[i]<a[j])
          {
             t=a[i];
            a[i]=a[j];
            a[j]=t;
          }
     }
    }

    g1=a[0];
    g2=a[1];
    float aver=sumaver(g1,g2);
    printf("Average: %f\n",aver);
    printeven(g1,g2);
    return 0;
}
```