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",&a);
printf("Enter the second number\n");
scanf("%d",&b);
while(1)
{
printf("\nEnter 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);
```

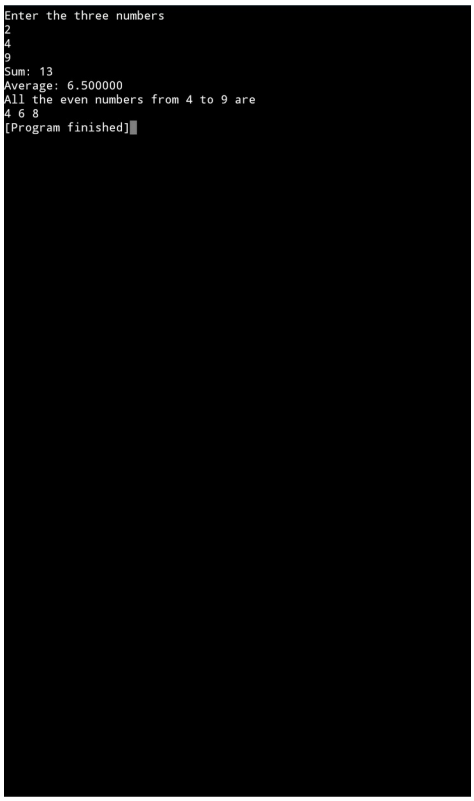
```
    break;
case 6:
  if(a<b)
    printf("The Smallest number among the two is %d",a);
     else
    printf("The Smallest number among the two is %d",b);
    break;
case 7:
    if(a==b)
    printf("True\n");
    else
    printf("False\n");
    break;
case 8:
    if(a!=b)
    printf("True\n");
    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. **printeven (…)** 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 printeven(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;
}
```


Enter the three numbers
2
4
9
Sum: 13
Average: 6.500000
All the even numbers from 4 to 9 are
4 6 8
[Program finished]