

Q1) Write a menu driven C program to design a simple calculator which solves 10 operations 4 arithmetic, 4 relational and any 2 of your choice. The program should loop till the user wishes to stop.

```
#include <stdio.h>
void main()
{
    int a, b, n, x;
    printf("Enter 2 numbers");
    scanf("%d %d", &a, &b);
    while(true)
    {
        printf("Enter a number 1-10");
        scanf("%d", &n);
        switch(n)
        {
            case 1: printf("Sum = %d", (a+b));
                    break;
            case 2: printf("Diff = %d", (a-b));
                    break;
            case 3: printf("product = %d", (a*b));
                    break;
            case 4: printf("quotient = %d", (a/b));
                    break;
            case 5: printf("remainder = %d", (a%b));
                    break;
            case 6: if(a > b)
                    printf("%d greater than %d", a, b);
                    else
                    printf("%d smaller than %d", a, b);
        }
    }
}
```

break;

case 7: if (a < b)

printf ("%d smaller than %d", a, b);

else

printf ("%d greater than %d", a, b);

break;

case 8: if (a == b)

printf ("numbers are equal");

else

printf ("numbers not equal");

break;

case 9: if (a != b)

printf ("numbers not equal");

else

printf ("numbers equal");

break;

case 10: printf ("square of number \n");

printf ("%d \n", a \* a);

printf ("%d \n", b \* b);

break;

default: printf ("Invalid choice");

}

printf ("Enter 0 to exit 1 to continue");

scanf ("%d", &x);

if (x == 0)

break;

}

}



a) Write a C program to accept 3 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) `prnteven(...)` 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 prnteven(int x, int y)
```

```
{
```

```
    printf("All the even numbers from %d to %d\n", y, x);
```

```
    if (y % 2 != 0)
```

```
        y = y + 1
```

```
    for (int i = y; i <= x; i += 2)
```

```
        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++)  
{  
    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;  
}
```