1.Menu-driven calculator:

Code:

```c
#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);
```

```c
    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");
 }
 }
 }
```

Output:

```
Enter the first number
6
Enter the second number
8

Enter the choice

 1-Addition
 2-Subtraction
 3-Multiplication
 4-Division
 5-Greatest of two numbers
 6-Smallest of two numbers
 7-The two numbers are equal
 8-The two numbers are not equal
 9-Remainder
 10-Average
 0-To exit
10
Average=7.000000
```

```
Enter the choice

1-Addition
2-Subtraction
3-Multiplication
4-Division
5-Greatest of two numbers
6-Smallest of two numbers
7-The two numbers are equal
8-The two numbers are not equal
9-Remainder
10-Average
0-To exit
5
The Greatest number among the two is 8
```

```
Enter the choice

1-Addition
2-Subtraction
3-Multiplication
4-Division
5-Greatest of two numbers
6-Smallest of two numbers
7-The two numbers are equal
8-The two numbers are not equal
9-Remainder
10-Average
0-To exit
0


...Program finished with exit code 0
Press ENTER to exit console.
```

2.User defined function:
Code:
```c
#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)
    {
```

```c
        printf("All the even numbers from %d to %d\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;
}
```

Output:

```
Enter the three numbers
5 2 8
Sum: 13
Average: 6.500000
All the even numbers from 5 to 8
6 8
```