

Week-1 Program-1

Input :

```
1
2 /* Write a menu driven C Program to design a simple calculator which solves 10
3 operations - 4 Arithmetic, 4 Relational and any two of your choice. The program
4 should loop till the user wishes to stop. */
5
6
7 void arithmetic(int a, int b);
8 void relational(int a, int b);
9
10 #include <stdio.h>
11 #include <math.h>
12
13 int main()
14 {
15     int a, b, choice;
16     choice = 0;
17     do
18     {
19         printf("Enter a number 'a' \n");
20         scanf("%d", &a);
21         printf("Enter another number 'b' \n");
22         scanf("%d", &b);
23         printf("-----MENU-----\n");
24         printf("1. Arithmetic Operations \n");
25         printf("2. Relational Operations \n");
26         printf("3. EXIT\n");
27         printf("Enter a number of your choice \n");
28         scanf("%d", &choice);
29
30         switch(choice)
31         {
32             case 1: arithmetic(a, b);
33                     break;
34             case 2: relational(a, b);
35                     break;
36             case 3: printf("EXITING \n");
37                     break;
38             default: printf("Enter correct number\n");
39         }
40         while(choice != 3);
41     }
42     return 0;
43 }
44
45 void arithmetic(int a, int b)
46 {
47     int ch;
48     printf("-----SUB MENU-----\n");
49     printf("1. Addition \n");
50     printf("2. Subtraction \n");
51     printf("3. Multiplication \n");
52     printf("4. Division \n");
53     printf("5. Modulus \n");
54     printf("Enter the number of your choice\n");
55     scanf("%d", &ch);
56     switch(ch)
57     {
58         case 1: printf("The sum is : %d\n", (a+b));
59                 break;
60         case 2: printf("The difference is : %d\n", (a-b));
61                 break;
62         case 3: printf("The product is : %d\n", (a*b));
63                 break;
64         case 4: printf("The quotient is : %d\n", (a/b));
65                 break;
66         case 5: printf("The remainder is : %d\n", (a%b));
67                 break;
68         default: printf("Enter number correctly\n");
69     }
70 }
71
72 void relational(int a, int b)
73 {
74     int ch;
75     printf("-----SUB MENU-----\n");
76     printf("1. Lesser than \n");
77     printf("2. Greater than \n");
78     printf("3. Equality \n");
79     printf("4. Lesser than or equal to \n");
80     printf("5. Greater than or equal to \n");
81     printf("Enter the number of your choice\n");
82     scanf("%d", &ch);
83     switch(ch)
84     {
85         case 1:
```

```

85     if (a < b)
86         printf("%d is lesser than %d\n", a, b );
87     else
88         printf("%d is not lesser than %d\n", a, b);
89     break;
90     case 2:
91     if (a > b)
92         printf("%d is greater than %d\n", a, b );
93     else
94         printf("%d is not greater than %d\n", a, b);
95     break;
96     case 3:
97     if (a == b)
98         printf("%d is equal to %d\n", a, b );
99     else
100         printf("%d is not equal to %d\n", a, b);
101     break;
102     case 4:
103     if (a <= b)
104         printf("%d is lesser than or equal to %d\n", a, b );
105     else
106         printf("%d is neither lesser than nor equal to %d\n", a, b);
107     break;
108     case 5:
109     if (a >= b)
110         printf("%d is greater than or equal to %d\n", a, b );
111     else
112         printf("%d is neither greater than nor equal to %d\n", a, b);
113     break;
114     default: printf("Enter number correctly\n");
115 }
116 }

```

Output :

```

Enter a number 'a'
10
Enter another number 'b'
20
-----MENU-----
1. Arithmetic Operations
2. Relational Operations
3. EXIT
Enter a number of your choice
1
-----SUB MENU-----
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Modulus
Enter the number of your choice
3
The product is : 200
Enter a number 'a'

```

Week-1 Program-2

INPUT :

```
1
2  /* Write a C program to accept three numbers from the user. Find the greater two
3  among the three and pass them as parameters to the user defined functions given below.
4  a. sumaver ( ... ) which finds the sum and average of the two numbers. Print the
5  sum and return the average.
6  b. printeven ( ... ) which prints all the even numbers between the given two
7  numbers */
8
9
10
11 float sumaver(int x, int y);
12 void printeven(int x, int y);
13
14 #include <stdio.h>
15 #include <math.h>
16
17 int main()
18 {
19     int a, b, c, small;
20     float avg = 0;
21     printf("Enter the first number\n");
22     scanf("%d", &a);
23     printf("Enter the second number\n");
24     scanf("%d", &b);
25     printf("Enter the third number\n");
26     scanf("%d", &c);
27     if ((a > c) && (b > c))
28     {
29         avg = sumaver(a, b);
30         printf("The average of greater two numbers is : %.2f\n", avg);
31         printeven(a, b);
32     }
33     else if ((a > b) && (c > b))
34     {
35         avg = sumaver(a, c);
36         printf("The average of greater two numbers is : %.2f\n", avg);
37         printeven(a, c);
38     }
39     else if ((b > a) && (c > a))
40     {
41         avg = sumaver(b, c);
42         printf("The average of greater two numbers is : %.2f\n", avg);
43         printeven(b, c);
44     }
45     return 0;
46 }
47
48 float sumaver(int x, int y)
49 {
50     int sum = 0;
51     printf("The sum of greater two numbers is : %d\n", (x + y));
52     return (float)(x + y)/2.0;
53 }
54
55 void printeven(int x, int y)
56 {
57     int p1, p2;
58     if (x < y)
59     {
60         p1 = x;
61         p2 = y;
62     }
63     else
64     {
65         p1 = y;
66         p2 = x;
67     }
68     printf("The even numbers between %d and %d are:\n", p1, p2);
69     for (int i = p1; i <= p2; i++)
70     {
71         if (i % 2 == 0)
72         {
73             printf("%d\n", i);
74         }
75     }
76 }
```

Output :

```
Enter the first number
11
Enter the second number
10
Enter the third number
21
The sum of greater two numbers is : 32
The average of greater two numbers is : 16.00
The even numbers between 11 and 21 are:
12
14
16
18
20

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