**Q1. Calculate the sum of numbers (10 numbers max) & if the user enters a -ve number, the loop terminates.**

#include<stdio.h>

int sumOfRange(int);

int main() {

int n1;

int sum;

printf("calculate the sum of numbers from 1 to n:\n");

printf(" Input the last number of the range starting from 1:");

scanf("%d", &n1);

sum = sumOfRange(n1);

printf("\n The sum of numbers to %d : %d\n",n1, sum);

return 0;

}

int sumOfRange(int n1) {

int res;

if(n1<0) {

return 0;

}

else if(n1 == 1)

{

return (1);

}

else

{

res = n1 + sumOfRange(n1 - 1);

}

return (res);

}

calculate the sum of numbers from 1 to n:

Input the last number of the range starting from 1:-1

 The sum of numbers from 1 to -1 : 0

**Q2. Calculate the sum of numbers (10 numbers max) & if the user enters a -ve number, it’s not added to the result.**

#include<stdio.h>

int sumOfRange(int);

int main() {

int n1;

int sum;

printf(" Input the last number of the range starting from 1 to:");

scanf("%d", &n1);

sum = sumOfRange(n1);

printf("The sum of numbers 1 to %d : %d\n",n1, sum);

return 0;

}

int sumOfRange(int n1) {

int res;

if(n1<0) {

return (res);

}

else if(n1 == 1 && n1>0) {

return (1);

}

else

{

res = n1 + sumOfRange(n1 - 1);

}

return (res);

}

Input the last number of the range starting from 1 to:10

The sum of numbers 1 to 10 : 55

**Q3. Take input from the user until he/she enters zero.**

#include<stdio.h>

int main()

{

int n=0,i;

for(i=0;i<=n;i++)

{

printf("Enter the n value:");

scanf("%d",&n);

if(n==0)

break;

}

return 0;

}

Enter the n value:1

Enter the n value:2

Enter the n value:3

Enter the n value:0

**Q4. Check whether the given number is prime or not. (Using Break)**

#include <stdio.h>

int main() {

int n, i, temp= 0;

printf("Enter a positive integer: ");

scanf("%d", &n);

for (i = 2; i <= n / 2; ++i) {

if (n % i == 0) {

temp= 1;

break;

}

}

if (n == 1) {

printf("1 is neither prime nor composite.");

}

else

{

if (temp == 0)

printf("%d is a prime number.", n);

else

printf("%d is not a prime number.", n);

}

return 0;

}

Enter a positive integer: 9

9 is not a prime number.

**Q5. Print sum of odd numbers between 0 and 10. (Using Continue)**

#include <stdio.h>

int main() {

int n, i,sum;

for(i=0;i<=10;i++)

{

printf("Enter the value for n:");

scanf("%d",&n);

if(n%2==1)

{

sum=sum+n;

printf("Sum:%d\n",sum);

continue;

}

printf("The total sum is:%d\n",sum);

}

return 0;

}

Enter the value for n:3

Sum:3

Enter the value for n:4

The total sum is:3

Enter the value for n:5

Sum:8

Enter the value for n:6

The total sum is:8

Enter the value for n:7

Sum:15

Enter the value for n:8

The total sum is:15

Enter the value for n:9

Sum:24

Enter the value for n:1

Sum:25

Enter the value for n:3

Sum:28

Enter the value for n:4

The total sum is:28

**Q6. Check whether the given number is prime or not. (Using Continue)**

#include <stdio.h>

int main() {

int n, i, temp= 0;

printf("Enter a positive integer: ");

scanf("%d", &n);

for (i = 2; i <= n / 2; ++i) {

if (n % i == 0) {

temp= 1;

continue;

}

}

if (n == 1) {

printf("1 is neither prime nor composite.");

}

else

{

if (temp == 0)

printf("%d is a prime number.", n);

else

printf("%d is not a prime number.", n);

}

return 0;

}

Enter a positive integer: 7

7 is a prime number.

**Q7. Print all even numbers from 1 to 100. (Using Continue)**

#include <stdio.h>

int main()

{

int i,sum;

printf("Even numbers between 1 to 100\n");

for(i= 1; i<= 100; i++)

{

if(i%2 == 0)

{

printf("%d ", i);

}

if(i%2==0)

{

sum=sum+i;

printf("Sum:%d\n",sum);

continue;

}

}

printf("The total sum is:%d\n",sum);

return 0;

}

Even numbers between 1 to 100

2 Sum:2

4 Sum:6

6 Sum:12

8 Sum:20

10 Sum:30

12 Sum:42

14 Sum:56

16 Sum:72

18 Sum:90

20 Sum:110

22 Sum:132

24 Sum:156

26 Sum:182

28 Sum:210

30 Sum:240

32 Sum:272

34 Sum:306

36 Sum:342

38 Sum:380

40 Sum:420

42 Sum:462

44 Sum:506

46 Sum:552

48 Sum:600

50 Sum:650

52 Sum:702

54 Sum:756

56 Sum:812

58 Sum:870

60 Sum:930

62 Sum:992

64 Sum:1056

66 Sum:1122

68 Sum:1190

70 Sum:1260

72 Sum:1332

74 Sum:1406

76 Sum:1482

78 Sum:1560

80 Sum:1640

82 Sum:1722

84 Sum:1806

86 Sum:1892

88 Sum:1980

90 Sum:2070

92 Sum:2162

94 Sum:2256

96 Sum:2352

98 Sum:2450

100 Sum:2550

The total sum is:2550

**Q8. Print numbers from 1 to 10 using goto statement. (Using goto)**

#include <stdio.h>

int main(){

int n;

START:

printf("%d ",n);

n++;

if(n<=10)

goto START;

return 0;

}

0 1 2 3 4 5 6 7 8 9 10

**Q9. Program to calculate the sum and average of positive numbers, If the user enters a negative number, the sum and average are displayed. (Using goto)**

#include <stdio.h>

int main(){

const int max = 100;

int i, number, avg, sum = 0;

for (i = 1; i <= max; ++i) {

printf("Enter a number: ", i);

scanf("%d", &number);

if (number < 0) {

goto START;

}

sum += number;

}

START:

avg = sum / (i - 1);

printf("Sum = %d\n", sum);

printf("Avg = %d", avg);

return 0;

}

Enter a number: 2

Enter a number: 3

Enter a number: 4

Enter a number: 5

Enter a number: -1

Sum = 14

Avg = 3

**Q10. Check if a number is even or not. (Using goto)**

#include <stdio.h>

int main(){

int num;

printf("enter the number :");

scanf("%d",&num);

if(num%2==0)

goto even;

else goto odd;

even:

printf(" %d is a even number",num);

return 0;

odd:

printf(" %d is not a even number",num);

}

enter the number :4

 4 is a even number