

C = getchar();

Sample Output:

Given year is Non Leap Year

Run Save

```
1. #include<stdio.h>
2. int main()
3. {
4.     int year;
5.     printf("enter a year:");
6.     scanf("%d", &year);
7.     if(year % 400 == 0)
8.     {
9.         printf("%d is a leap year.", year);
10.    }
11.    else if(year % 100 == 0)
12.    {
13.        printf("%d is not a leap year.", year);
14.    }
15.    else if(year % 4 == 0)
16.    {
17.        printf("%d is a leap year.", year);
18.    }
19.    else
20.    {
21.        printf("%d is not a leap year .", year);
22.    }
23.    return 0;
24. }
```

1947

enter a year:1947 is not a leap year.

Type here to search

SSE/SF/228/CSE/MTR/024

LG

MENU/◀ READER/◀ FUNC./▶ AUTO/▼ INPUT/EXIT

CMQ9  
Not secure | http://192.168.1.77/php\_chrome.php

Write a program to find the sum and average of the elements in an array

Sample Input;

Array of elements = {16, 18, 27, 16, 23, 21, 19}

Sample Output:

Sum = 140

Average = 20

```
1. #include<stdio.h>
2. int main()
3. {
4.     int a[25],n,i;
5.     float avg=0,sum=0;
6.     printf("enter the number of elements in array");
7.     scanf("%d",&n);
8.     printf("\n Enter the array elements :\n");
9.     for(i=1;i<=n;i++)
10.    scanf("%d",&a[i]);
11.    for(i=1;i<=n;i++)
12.    {
13.        sum=sum+a[i];
14.        avg=sum/n;
15.    }
16.    printf(" sum of elements of array is:%f",sum);
17.    printf("\n average of element of array are:%f",avg);
18.    return 0;
19. }
```

3  
1  
2  
3

enter the number of elements in array  
Enter the array elements :  
sum of elements of array is:6.000000  
average of element of array  
are:2.000000

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SIMATIC IDE

http://172.18.49.175/php\_u/home.php

Write a C program to display the details of student(Name , Age) by passing structures to a function.

Sample Input :

```
Enter No.Students: 1
Enter student 1 Name, Age :AAA, 25
```

Sample Output:

```
Student 1 details:
Name: AAA
Age : 25
```

No.Student: 4 (Any details of student)
No.Student: 5
No.Student: 1( 62, 28)
No.Student: A
No.Student: 1( xxx, 28.2)

CMQ20  
CMQ3  
CMQ4  
CMQ5  
CMQ6  
CMQ7

Logout

kavya  
13  
100

```
1. #include<stdio.h>
2. struct student
3. {
4.     char name[50];
5.     int roll;
6.     float marks;
7. };
8. int main()
9. {
10.    struct student s;
11.    printf("enter the information of the student:");
12.    printf("enter the name:");
13.    scanf("%s",s.name);
14.    printf("enter roll no:");
15.    scanf("%d",&s.roll);
16.    printf("enter the marks:");
17.    scanf("%f",&s.marks);
18.    printf("\ndisplaying the info");
19.    printf("name:%s\n",s.name);
20.    printf("roll:%d\n",s.roll);
21.    printf("marks:%.2f\n",s.marks);
22.    return 0;
```

enter the information of the student:enter the name:enter roll no:enter the marks: displaying the infoname:kavya roll:13 marks:100.00

SSE/SF/228/CSE/MTB/022

LG

MENU/READER/ FUNC / AUTO / INPUT

```
1. #include<stdio.h>
2. int pri(int n)
3. {
4.     int i,c=0;
5.     for(i=1;i<=n;i++)
6.     {
7.         if (n%i==0)
8.         {
9.             c++;
10.        }
11.    }
12.    if (c<=2)
13.    {
14.        return 1;
15.    }
16. }
17. int main()
18. {
19.     int n;
20.     printf("enter\n");
21.     scanf("%d",&n);
22.     if (pri(n)==1)
23.     {
24.         printf("%d is prime number",n);
25.     }
26.     else
27.     {
28.         printf("it is not prime");
29.     }
30. }
```

Run

Save



Search



SIMATS C IDE Not secure | 172.18.49.175/php\_c/home.php

Enter no. of elements in an array 5  
Enter the elements:  
1 2 3 4 5

Output:  
Maximum of an array 5  
Minimum of an array 1

CMQ13 CMQ14 CMQ15 CMQ16 CMQ17 CMQ18 Logout

C Run Save

```
1. #include<stdio.h>
2. int main()
3. {
4.     int a[1000],i,n,min,max;
5.     printf("enter the size of the array:");
6.     scanf("%d", &n);
7.     printf("enter elements in array : ");
8.     for(i=0;i<n;i++)
9.     {
10.         scanf("%d",&a[i]);
11.     }
12.     min=max=a[0];
13.     for(i=1; i<n; i++)
14.     {
15.         if(min>a[i])
16.             min=a[i];
17.         if(max<a[i])
18.             max=a[i];
19.     }
20.     printf("minimum of array is:%d",min);
21.     printf("\nmaximum of array is:%d",max);
22.     return 0;
23. }
```

5  
1  
2  
3  
4  
5

enter the size of the array:enter  
elements in array : minimum of array is:1  
maximum of array is:5

Type here to search 12:30 07-04-2023

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# SIVIATOS | Saveetha School of Engineering

Questions  
CMQ12.

Write a Program to find the sum and average of numbers in a matrix.

Sample input:

1 2 3  
4 5 6  
7 8 9

Output:

Sum = 45

Average = 5

Run

Save

```
1. #include<stdio.h>
2. int main()
3. {
4.     int i,j,m,n;
5.     float a[10][10],sum=0,avg;
6.     printf("enter rowsn and column size:\n");
7.     scanf("%d%d",&m,&n);
8.     printf("enter matrix elements:\n");
9.     for(i=0;i<m;i++)
10.    {
11.        for(j=0;j<n;j++)
12.        {
13.            printf("a[%d][%d]=",i,j);
14.            scanf("%f",&a[i][j]);
15.        }
16.    }
17.    for(i=0;i<m;i++)
18.    {
19.        for(j=0;j<n;j++)
20.        {
21.            sum=sum+a[i][j];
22.        }
23.    }
24.    avg=sum/(m*n);
25.    printf("sum=%f\n",sum);
26.    printf("average=%f",avg);
27. }
```

22  
1234

enter rowsn and column size:  
enter matrix elements:  
a[0][0]=a[0][1]=a[1][0]=a[1][1]=su=10.000  
average=2.500000

LG

MENU/◀ READER/◀ FUNC./▶ AUTO/▼ INPUT/EXIT

CSE/SF/228/CSE/MTR/022

Questions  
CMQ13.

Write a program in C to add numbers using call by reference.

Test Data :  
Input the first number : 5  
Input the second number : 6

Expected Output :  
The sum of 5 and 6 is 11

Test Cases

1. X = 0 , N = 4
2. X = 5 , N = 0
3. X = -3 , N = 3
4. X = 0 , N = 0
5. X = 123 , N = 123

C Run Save Logout

```
1. #include<stdio.h>
2. long addTwoNumbers(long*,long*);
3.
4. int main()
5. {
6.     long fno,sno,sum;
7.     printf("\n\npointer:add two numbers using call by reference\n");
8.     printf("_____\n");
9.     printf("input the first number:");
10.    scanf("%ld",&fno);
11.    printf("input the first number:");
12.    scanf("%ld",&sno);
13.    sum=addTwoNumbers(&fno,&sno);
14.    printf("the sum of %ld and %ld is %ld\n\n",fno,sno,sum);
15.    return 0;
16. }
17. long addTwoNumbers(long*n1,long*n2)
18. {
19.     long sum;
20.     sum=*n1+*n2;
21.     return sum;
22. }
```

pointer:add two numbers using call by reference

13  
14

Net secure | http://127.0.0.1/php\_c/chmc.php

Write a program in C to print all perfect numbers in given range using the function.

Test Data :

Input lowest search limit of perfect numbers : 1  
Input lowest search limit of perfect numbers : 100

Expected Output :

The perfect numbers between 1 to 100 are :

6  
28

Run Save

```
1. #include<stdio.h>
2. int perf(int n)
3. {
4.     int i,s=0;
5.     for(i=1;i<n;i++)
6.     {
7.         if(n%i==0)
8.         {
9.             s+=i;
10.        }
11.        if(s==n)
12.        {
13.            return 1;
14.        }
15.    }
16. }
17. int main()
18. {
19.     int m=5;
20.     int k=100;
21.     int i;
22.     for(i=m;i<=k;i++)
23.     {
24.         if(perf(i)==1)
25.         {
26.             printf("the perfect numbers are:\n %d\n",i);
27.         }
28.     }
29.     return 0;
30. }
```

Your Input Goes Here...!!!

the perfect numbers are:  
6  
the perfect numbers are:  
24  
the perfect numbers are:  
28

← → C Not secure | 172.18.49.175/php\_c/home.php

Gmail YouTube Maps

element 3 = 7

```
1. #include <stdio.h>
2. void cyclicSwap(int *a, int *b, int *c);
3. int main() {
4.     int a, b, c;
5.
6.     printf("Enter a, b and c respectively: ");
7.     scanf("%d %d %d", &a, &b, &c);
8.
9.     printf("Value before swapping:\n");
10.    printf("a = %d \nb = %d \nc = %d\n", a, b, c);
11.    cyclicSwap(&a, &b, &c);
12.
13.    printf("Value after swapping:\n");
14.    printf("a = %d \nb = %d \nc = %d", a, b, c);
15.
16.
17.
18. }
```

```
void cyclicSwap(int *n1, int *n2, int *n3) {
    int temp;
    temp = *n2;
    *n2 = *n1;
    *n1 = *n3;
    *n3 = temp;
}
```

5  
6  
7

Enter a, b and c respectively:  
swapping:  
a = 5  
b = 6  
c = 7  
Value after swapping:  
a = 7  
b = 5  
c = 6

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MENU/READER/ FUNC./ AUTO/ INPUT

# SIMATS | Saveetha School of Engineering

## Questions CMQ20.

Write a program to reverse a number using function?(Get the input from user).

Sample Input:  
Number: 14567

Sample Output:  
Reverse Number: 76541

## Test Cases

1. -45721
2. 000
3. AD1947
4. !@#\$%
5. 145\*999=144855

```
C Run Save
1. #include <stdio.h>
2.
3. int main() {
4.
5.     int n, reverse = 0, remainder;
6.
7.     printf("Enter an integer: ");
8.     scanf("%d", &n);
9.
10.    while (n != 0) {
11.        remainder = n % 10;
12.        reverse = reverse * 10 + remainder;
13.        n /= 10;
14.    }
15.
16.    printf("Reversed number = %d", reverse);
17.
18.    return 0;
19.
20.
21. }
```

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Questions  
CMQ16.

Write a program in C to find the factorial of a given number using pointers.

Test Data :

Input a number : 5

Expected Output :

The Factorial of 5 is : 120

## Test Cases

1. N = 0
2. N = -5
3. N = 1
4. N = M
5. N = %

```
C Run Save
1. #include<stdio.h>
2. int main(){
3.     int i,f=1,num;
4.
5.
6.     printf("Enter a number: ");
7.     scanf("%d",&num);
8.
9.     for(i=1;i<=num;i++)
10.         f=f*i;
11.
12.     printf("Factorial of %d is: %d",num,f);
13.     return 0;
14.
15.
16.
17.
18.
19.
20.
21.
22.
```

Write a program in C to compute the sum of all elements in an array using pointers.

Test Data :

Input the number of elements to store in the array (max 10) : 5

Input 5 number of elements in the array :

element - 1 : 2  
element - 2 : 3  
element - 3 : 4  
element - 4 : 5  
element - 5 : 6

Expected output :

1. N = 0,1,3,8,7,-5  
2. N = 5,5,5,5,5,4  
3. N = -2,2,-2,4,-4  
4. N = -5,55,30,0,5  
5. N = 0,2,2,4,5,8

```
1. #include <stdio.h>
2. void main()
3. {
4.     int arr1[10];
5.     int i,n, sum = 0;
6.     int *pt;
7.

8.     printf("\n\n Pointer : Sum of all elements in an array :\n");
9.     printf("-----\n");
10.    printf(" Input the number of elements to store in the array (max 10) : ");
11.    scanf("%d",&n);
12.    printf(" Input %d number of elements in the array : \n",n);
13.    for(i=0;i<n;i++)
14.    {
15.        printf(" element - %d : ",i+1);
16.        scanf("%d",&arr1[i]);
17.    }
18.    for (i = 0; i < n; i++) {
19.        sum = sum + *pt;
20.        pt++;
21.    }
22. }
23. printf(" The sum of array is : %d\n\n", sum);
```

odd numbers = 7,9,11,13

```
4. include<stdio.h>
5. int main()
6. {
7.     int num,m=20,n=40;
8.     printf("print odd numbers in a given range m to n");
9.     for(num=m;num<=n;num++)
10.    {
11.        if(num%2==1);
12.            printf("%d",num);
13.    }
14.    return 0;
15. }
```

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