

**NOTE: All programs implement By Taking the Input From User.**

1. C program to perform all arithmetic operations
2. C program to find area of a triangle if base and height are give
3. C program to find all angles of a triangle if two angles are given.
4. C program to convert days in to years, weeks and days.
5. C program to find power and square root of any number.
6. C program to calculate total, average and percentage and grades of five subjects.
7. C program to check Least Significant Bit (LSB) and MSB of a number using bitwise operator.
8. C program to swap two numbers USING 3<sup>RD</sup> VARIABLE AND WITHOUT 3<sup>RD</sup> VARIABLE.
9. C program to find maximum between three numbers using conditional operator AND Ternary Operator.
10. C program to check alphabet, digit or special character using Conditional operator.
11. C program to calculate total electricity bill
12. C program to create Simple Calculator AND Days of week using switch case.
13. C program to check vowel or consonant using switch case.
14. C program to check positive negative or zero using switch case.
15. C program to check whether a triangle is Equilateral, Isosceles or Scalene.
16. C program to print all natural numbers AND sum of it from 1 to n.
17. C program to print all even numbers AND sum of it from 1 to n
18. C program to print multiplication table of a number.
19. C program to calculate factorial of a number.
20. C program to check whether a number is palindrome or not.
21. C program to count frequency of digits in a given number.

22. C program to find HCF(GCD) AND LCM of two numbers.
23. C program to print all prime numbers between 1 to n.
24. C program to print all Strong Numbers between 1 to n
25. C program to print Fibonacci series up to n terms.
26. C program to print Armstrong numbers from 1 to n AND  
Check a given number is Armstrong numbers or not.
27. C program to print all Perfect numbers between 1 to n AND  
Check a given number is Perfect numbers or not.
28. C program to find power of any number using for loop.
29. C program to print ASCII values of all characters.
30. C program to print Pascal triangle up to n rows.
31. C program to find sum of all elements of array.
32. C program to copy one array to another array.
33. C program to insert an element in array at specified position.
34. C program to delete an element in array at specified position.
35. C program to search element in array using Linear Search.
36. C program to find second largest number and Sorting Using  
Bubble sort in an array.
37. C program to count total number of duplicate elements in an  
array.
38. C program to perform scalar matrix multiplication.
39. C program to find sum of main diagonal elements of a matrix.
40. C program to check sparse AND transpose matrix.
41. C program to check whether a matrix is Identity matrix or not.
42. C program to merge two sorted array in ascending order.
43. All Operations of String.
44. C program to check whether a string is palindrome or not  
without Compare Function of String.
45. C program to count frequency of each character in a string.
46. C program to find diameter, circumference and area of a circle  
using functions.

47. C program to check prime, armstrong and perfect numbers using functions.
48. C program to add two number using pointers.
49. Swap 2 numbers using Call by Value AND Call by reference.
50. C program to copy an array to another array AND reverse an array using pointers.

## List of star pattern programming exercises

```
*****
*****
*****
*****
*****
```

### Square Star Pattern

```
*****
*      *
*      *
*      *
*      *
*****
```

### Hollow Square Star Pattern

```
*****
** **
* * *
** **
*****
```

### Hollow Square Star Pattern with Diagonal

```
*****
*****
*****
*****
*****
```

### Rhombus Star Pattern

```

    *****
   *       *
  *       *
 *       *
*****

```

## Hollow Rhombus Star Pattern

```

*****
 *   *
 *   *
 *   *
 *   *
 *   *

```

## Mirrored Rhombus Star Pattern

```

*****
 *       *
 *       *
 *       *
 *       *
 *****

```

## Hollow Mirrored Rhombus Star Pattern

```

*
**
***
****
*****

```

## Right Triangle Star Pattern

```

*
**
* *
* *
*****

```

## Hollow Right Triangle Star Pattern

```

*
**
***
****
*****

```

### Mirrored Right Triangle Star Pattern

```
  *
 * *
*  *
 * *
* * * *
```

### Hollow Mirrored Right Triangle Star Pattern

```
  *
 * * *
* * * * *
* * * * * *
* * * * * * *
```

### Pyramid Star Pattern

```
  *
 * *
*  * *
 * * *
* * * * *
```

### Hollow Pyramid Star Pattern

```
*****
*****
*****
***
**
*
```

### Inverted Pyramid Star Pattern

## Square number patterns

```
11111
11111
11111
11111
11111
```

### Number pattern 1

11111  
00000  
11111  
00000  
11111

Number pattern 2

01010  
01010  
01010  
01010  
01010

Number pattern 3

11111  
10001  
10001  
10001  
11111

Number pattern 4

11111  
11111  
11011  
11111  
11111

Number pattern 5

10101  
01010  
10101  
01010  
10101

Number pattern 6

11011

11011  
00000  
11011  
11011

Number pattern 7

10001  
01010  
00100  
01010  
10001

Number pattern 8

01110  
10001  
10001  
10001  
01110

Number pattern 9

11111  
22222  
33333  
44444  
55555

Number pattern 10

12345  
12345  
12345  
12345  
12345

Number pattern 11

12345  
23456  
34567  
45678

56789

### Number pattern 12

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

### Number pattern 13

55555  
54444  
54333  
54322  
54321

### Number pattern 14

12345  
23455  
34555  
45555  
55555

### Number pattern 15

12345  
23451  
34521  
45321  
54321

### Number pattern 16