

- 1. Basic Simple C Programs
- 2. If/Else Statement
- 3. Loops
- 4. Patterns

# **Basic Simple C Programs**

1. C Program to Display The Size of Different Data Types

Data Type	Size (bytes)	Range	Format Specifier
int	2	-2,147,483,648 to 2,147,483,647	%d
long int	4	-2,147,483,648 to 2,147,483,647	%ld
float	4	1.2E-38 to 3.4E+38	%f
double	8	1.7E-308 to 1.7E+308	%lf
long double	12	3.4E-4932 to 1.1E+4932	%Lf
char	1	-128 to 127	%c

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2. Write a program to accept values of two numbers and print their addition, subtraction, multiplication, division.

Addition: x + y;

Subtraction: x - y;

multiplication: x \* y;

division: x / y;
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3. Write a program to accept a number from user and print it's square & cube in C language

Square: x \* x

**Cube:** x \* x \* x

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4. Write a program to accept two values a & b and interchange their values in C language

Before Interchange value: a = 12; b = 15

After Interchange value: a = 15; b = 12

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5. Write a program to accept roll no & marks of 3 subjects of a student, Calculate total 3 subjects and average in c language

Average: Sanskrit + Hindi + Math/3

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6. Print following outputs: http:\www.kodegod.com\new in C language

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7. Area and Circumference of a Circle

Area of the Circle is:  $\pi r^2$ 

Circumstances of the Circle are:  $2\pi r$ 

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8. Print Ascii Value of the Character

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#### 9. Write a program to print area of a triangle

Triangle = 0.5 \* Base \* Height

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#### 10. Convert a Person's Name in Abbreviated

Name: Ghanendra Pratap Singh

Abbreviated Name: G. P. Singh

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#### 11. C Program For Calculate Simple Interest

Simple Interest = ( Principal Amount \* Rate of Interest \* Time ) / 100;

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# 12. Write a program to accept a name and basic salary of an employee calculate and display the gross salary Program in C.

**Gross Salary** = Basic\_Salary + HRA + Other\_Allowance.

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# 13. Calculate Percentage of 5 Subjects

percentage = ((sanskrit + hindi + math + english + accountancy)/500) \* 100

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# 14. C Program For Converting Temperature Celsius Into Fahrenheit

Fahrenheit = ((9/5) \* Celsius) + 32 or you can use 1.8 in place of 9/5

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# 15. First Three Powers (N, N \* N, N \* N \* N) Without Using Power Function

Three Powers: (N, N \* N, N \* N \* N)

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16. Write a C program input a number to compute the perimeter and area of a rectangle.

Perimeter of the rectangle = 2(height + width);

Area of Rectangle = height \* width;

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17. Write a C program to accept 3 characters and print the sum of their ascii.

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18. Write a C program to convert specified days into years, weeks and days.

Note: Ignore leap year.

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19. Write a C program to calculate the distance between the two points

Formula:- 
$$\sqrt{(x_1-x_2)^2+(y_1+y_2)^2}$$

Test Data:

Input x1: 25
Input y1: 15
Input x2: 35
Input y2: 10

**Expected Output:** 

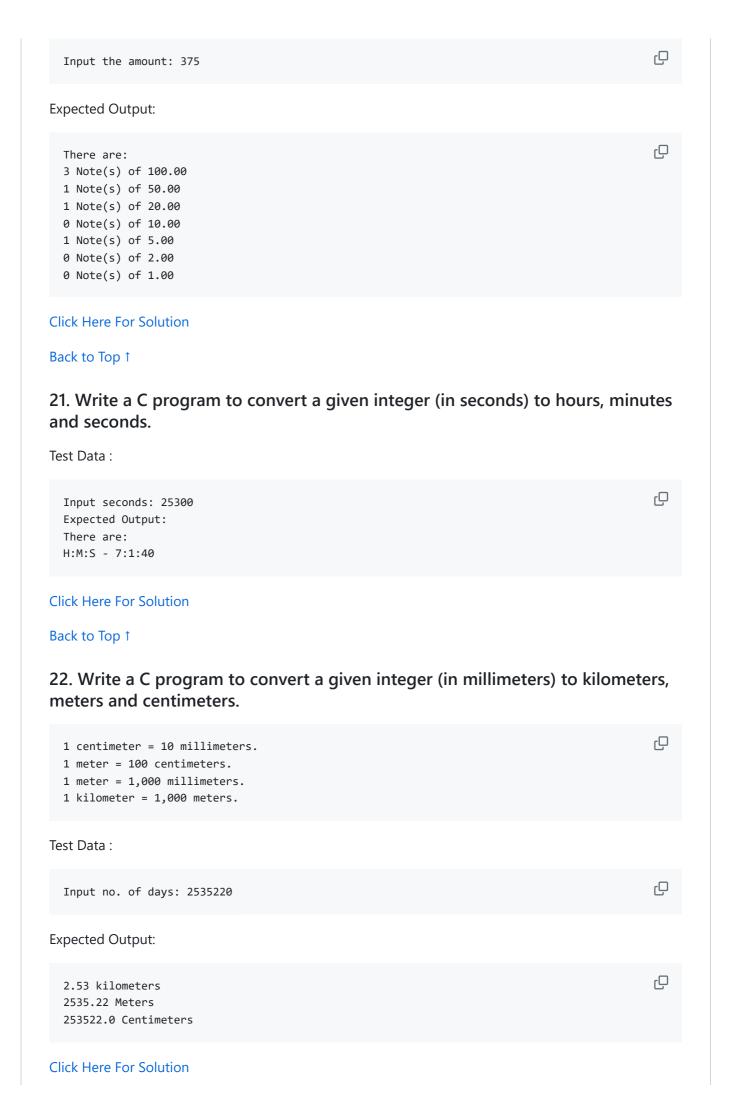
Distance between the said points: 11.1803

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20. Write a C program to read an amount (integer value) and break the amount into smallest possible number of bank notes.

Test Data:



23. Write a C program that accepts two item's weight (floating points' values ) and number of purchase (floating points' values) and calculate the average value of the items.

Test Data:

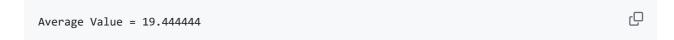
```
Weight - Item1: 15

No. of item1: 5

Weight - Item2: 25

No. of item2: 4
```

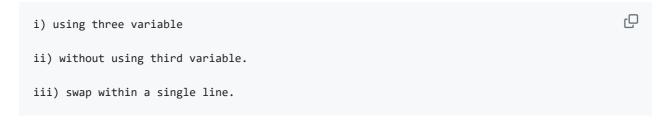
**Expected Output:** 



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#### 24. Program to show swap of two number



Test Data:

Input two number a and b: 5 10

**Expected Output:** 

```
a = 10 and b = 5
```

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25. Write a program to display last digit of a number. Number is entered through keyboard.

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26. Write a program to calculate sum of the digits of three digit number.



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# 27. Write a program to print profit and profit percentage. Selling price and cost price is given by user.

formula:-

profit = selling - cost

 $profitPercentage = \frac{profit}{cost} * 100$ 

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#### 28. Input a number and change the sign.

Test Data:

input number : 10
input number : -15

C

**Expected Output:** 

Sign Changed number = -10 Sign Changed number = 15



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# 29. Input two number and display quotient and remainder.

Test Data:

input number : 98 4

O

**Expected Output:** 

quotient = 24
remainder = 2

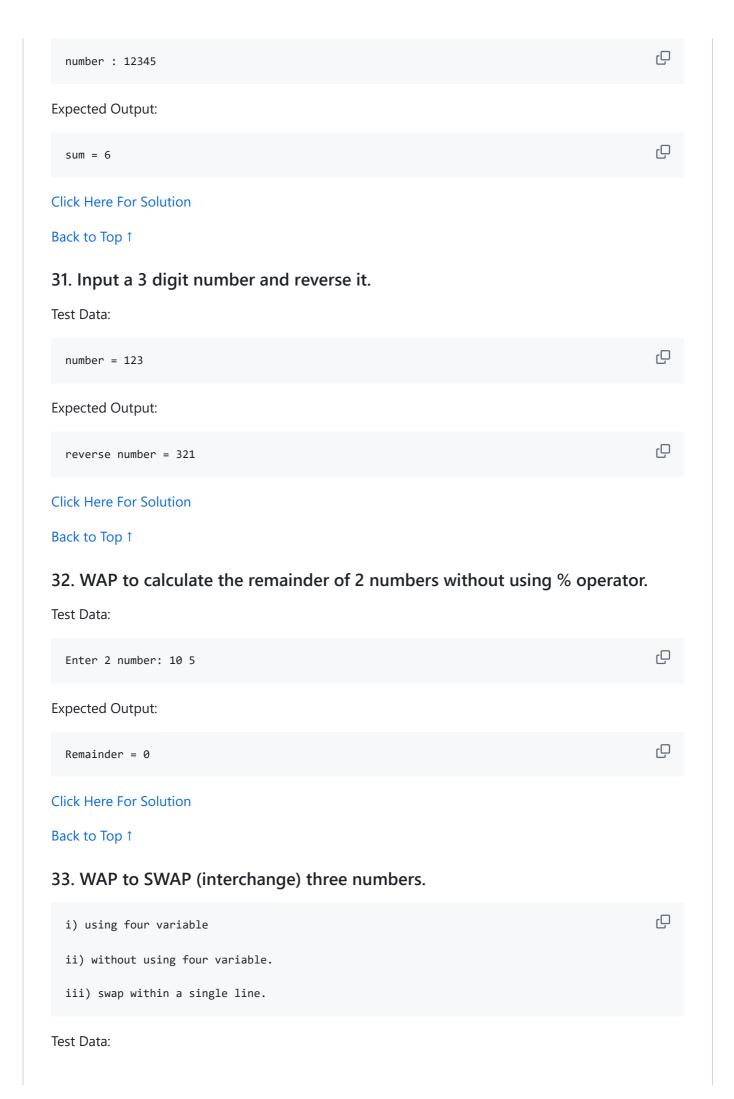


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# 30. Input a 5 digit number and calculate the sum of last and first digit number.

Test Data:



Enter 3 number : 5 10 15

**Expected Output:** 

changed number = 15 5 10

Q

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# If/Else Statement

1. Write a program to accept a number and print if the number is Positive/Negative in C language

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2. Write a program to accept a number from user and print if it is even or odd in C language

HINT: Even number is divisible by 2 and generates a remainder of 0

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3. Write a program to find greater between two numbers.

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4. Write a program to accept three numbers from user and print them in ascending and descending order in C language

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5. Write a program to calculate roots of a quadratic equations in C language

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6. Write a program to accept roll number ,and marks for three subjects, print total marks and average, also print grade by considering following conditions

Avg>=60 Grade A

Avg<60, Avg>=50 Grade B

Avg<50, Avg>=40 Grade C Grade F.

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7. Write a Program to accept user's marital status, gender and age to check if he/she is eligible for marriage or not.

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#### 8. Check Character Is Vowel or Consonant

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#### 9. A Character Is an Alphabet or Not

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### 10. C Program to Check Uppercase or Lowercase or Digit or Special Character

Hint: ASCII value of the digit is between 48 to 58 and lowercase characters have ASCII values in the range of 97 to 122, and uppercase is between 65 and 90.

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#### 11. Leap Year Program in C Using IF-ELSE

**Leap Year Examples:** 

- 1992: Leap Year
- 2002: Not a Leap Year
- 2016: Leap Year
- 2100: Not a Leap Year

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### 12. Given Date Month and the Year Is Correct or Not Using If-Else

Valid Date Examples:

- 09-03-2002
- 01-01-2023

• 31-12-2025

#### **Invalid Date Examples:**

- 29-02-2023
- 32-12-2023
- 31-03-2023

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# **Loops C Programs**

## 1. C Program to Reverse a Number Using FOR Loop

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2. Write a c program to check whether a given number is an Armstrong number or not.

Example: 153 is an Armstrong number

$$153 = (1 * 1 * 1) + (5 * 5 * 5) + (3 * 3 * 3)$$

where: 
$$(1 * 1 * 1)=1 (5 * 5 * 5)=125 (3 * 3 * 3)=27$$

So: 
$$1 + 125 + 27 = 153$$

153 is an Armstrong number

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3. Calculate the Sum of n Natural Numbers Using the While Loop

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4. Write a C Program to Print the Multiplication Table of N

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5. Fibonacci Series Program in C Using DO While Loop

**Fibonacci Series:** 0, 1, 1, 2, 3, 5, 8, 13, 21, 34. Fibonacci Series is up to 10 Elements.

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#### 6. GCD of Two Numbers in C | Greatest Common Divisor Program

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#### 7. Program to Find LCM of Two Numbers in C Using While Loop

Formula

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#### 8. Palindrome Program in C Using While Loop

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#### 9. Count the Number of Digits of an Integer Using the While Loop

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# 10. Find a Generic Root of a Number Using While Loop

For Example: If user input number is 12345, then we add all the individual digits of the number i.e., 1 + 2 + 3 + 4 + 5 = 15. We got 15. Now we add individual digits of number 15 i.e., 1 + 5 = 6. So Generic Root of number 12345 is 6.

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# 11. C Program to Print The Calendar of a Month of 31 Days

#### Output

```
ſŪ
Enter Total Numbers of Days in a Month:31
Enter 0 for Monday:
Enter 1 for Tuesday:
Enter 2 for Wednesday:
Enter 3 for Thursday:
Enter 4 for Friday:
Enter 5 for Saturday:
Enter 6 for Sunday:
Enter First Day of the month 0 to 6:5
                               Fri
Mon
       Tue
               Wed
                       Thu
                                       Sat
                                               Sun
```

-	-	-	-	-	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	26	27	28	29	30
31						

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### 12. Check Whether a Number Is Divisible by 11 Using (Vedic Maths)

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#### 13. Denomination of an Amount Using While Loop

```
Q
Logic :- The Logic Behind we have to divide a money by Above Money lets take a example
Suppose money is 16108 then follow the Step We are taking a example of Indian Currency
In present
Step 1:- Then First we divide 16108 by 2000 then we get 8 ,2000 rs notes then go to
step 2
Step 2:- After divide 2000 we get a remainder 108 The we know that 108 is not
divisible by 500 so go to next step
Step 3:- Now divide 108 by 100 then we get 1 ,100 rs note now remainder is 8 go to next
step
Step 4:- 8 is divisible by 50 and 20 nor 10 so we escape now go to next step
Step 5:- Now divide 8 by 5 we get a 1 ,5 rs notes and remainder is 3 so go to next step
Step 6:- Now divide 3 by 2 we get 1 ,2 rs notes and remainder is 1
so follow the next step
Step 7:- This is a Last step divide 1 by 1 we get zero remainder now print the total no
of denomination needed and along with total no of count require to fulfill a
requirement
So for 16108 You Need to
No.
8 * 2000 = 16000
1 * 100 = 100
1 * 5 = 5
1 * 2 = 2
1 * 1 = 1
Total =12 Notes For minimum Transaction
```

#### 14. Write a Program to print numbers 1 to n using while loop in C language

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#### 15. Write a Program to print first n even numbers in C language

HINT: Even number is divisible by 2 and generates a remainder of 0

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### 16. Write a Program to print first n odd numbers in C language

HINT: Odd number which is not divisible by "2". An odd number always ends in 1, 3, 5, 7, or 9.

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# 17. Write A Program To Accept A Number From User And Print If It Is Prime Or Not In C Language

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# 18. Write a Program to accept a number and print sum of it's digits in C language

Ex: 153 Sum of its digit is 9

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# 19. Write A Program To Accept A Number From User And Print It's Factorial In C Language

factorial of 5 is: 5! = 5 x 4 x 3 x 2 x 1 = 120

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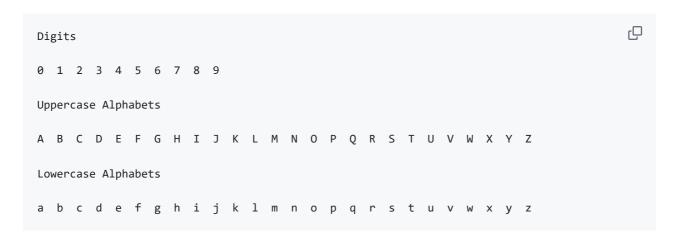
# 20. Write a program to accept a number and print prime numbers between 2 and n in C language

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# 21. Write a program to print digits, alphabets in capital and lower case in C language

**ASCII** 



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22. Write a program to print out ASCII chart on a single screen (all 256 characters from 0 to 255) in a tabular form. The ASCII code should be followed by the corresponding character in C language

**ASCII** 

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# 23. Program To Print Triangular Number Series Till n

**Triangular Number Example:** 15 is Triangular Number because it can be obtained by 1+2+3+4+5+6 i.e. 1+2+3+4+5+6=15

**List of Triangular Numbers:** 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, 153, 171, 190, 210, 231, 253, 276, 300, 325, 351, 378, 406, 435, 465, 496, 528, 561, 595, 630, 666,

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# 24. C Program to Check Whether a Number is Triangular or Not

**Triangular Number Example:** 15 is Triangular Number because it can be obtained by 1+2+3+4+5+6 i.e. 1+2+3+4+5+6=15

**List of Triangular Numbers:** 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, 153, 171, 190, 210, 231, 253, 276, 300, 325, 351, 378, 406, 435, 465, 496, 528, 561, 595, 630, 666,

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25. Write a C program that read 5 numbers and sum of all odd values them.	between
Test Data :	
Input the first number: 11 Input the second number: 17 Input the third number: 13 Input the fourth number: 12 Input the fifth number: 5	<u>_</u>
Expected Output:	
Sum of all odd values: 46	C
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Pattern	
1. Write A Program To Print Following Outputs In C Language	
* * * * * * * * * * * * * * * * * * *	0
Click Here For Solution	
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2. Write A Program To Print Following Outputs In C Language	
* * * * * * * * * * * * *	-C
Click Here For Solution	
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3. Write A Program To Print Following Outputs In C Language	
* * * * * * * * *	C

```
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4. Write A Program To Print Following Outputs In C Language
                                                                                  Q
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5. Write A Program To Print Following Outputs In C Language
                                                                                  Q
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6. Write A Program To Print Following Outputs In C Language
                                                                                  Q
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7. Write A Program To Print Following Outputs In C Language
                                                                                  ф
```

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8. Write A Program To Print Following Outputs In C Language

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9. Write A Program To Print Following Outputs In C Language

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10. Write A Program To Print Following Outputs In C Language

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11. Write A Program To Print Following Outputs In C Language

```
A
BBB
CCCCC
DDDDDDD
```

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12. Write A Program To Print Following Outputs In C Language

```
A B C D E E D C B A
A B C D C B A
A B C C B A
A B A
A B A
A B A
```

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### 13. Write A Program To Print Following Outputs In C Language

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# 14. Write A Program To Print Following Outputs In C Language

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# 15. Write A Program To Print Following Outputs In C Language

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### 16. Write A Program To Print Following Outputs In C Language

1			٥
2 3			
4 5 6			

```
7 8 9 10
11 12 13 15
```

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17. Write A Program To Print Following Outputs In C Language

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18. Write A Program To Print Following Outputs In C Language

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19. Write A Program To Print Following Outputs In C Language

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20. Write A Program To Print Following Outputs In C Language

```
* * * * * *

* * *

* * *

* * *

* * *
```

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21. Write A Program To Print Following Outputs In C Language

```
1
22
333
4444
5555
```

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## 22. Write A Program To Print Following Outputs In C Language

```
1
2 1 2
3 2 1 2 3
4 3 2 1 2 3 4
5 4 3 2 1 2 3 4 5
```

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### 23. Write A Program To Print Following Outputs In C Language

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# 24. Write A Program To Print Following Outputs In C Language

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25. Write A Program To Print Following Outputs In C Lang	99-
* * * * * * * * * * * * * * * * * * *	
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Back to Top ↑  26. Write A Program To Print Following Outputs In C Lange  * * * * * * * * * *  * * * * * *  * * * * *  * * * * *  * * * * * *  * * * * * *  * * * * * * *  * * * * * * *  * * * * * * *  * * * * * * * *	guage
26. Write A Program To Print Following Outputs In C Land  * * * * * * * * * *  * * * * * *  * * * *  * * * *  * * * *  * * * *  * * * * *  * * * * *	