

# **Table of Content**

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

# 

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

Data Type	Size (bytes)	Range	Format Specifier
int	4	-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	16	3.4E-4932 to 1.1E+4932	%Lf
char	1	-128 to 127	%с

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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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Back to Top ↑

# 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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Back to Top ↑

# 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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Back to Top ↑

# 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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Back to Top ↑

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

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Back to Top ↑

#### 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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Back to Top ↑

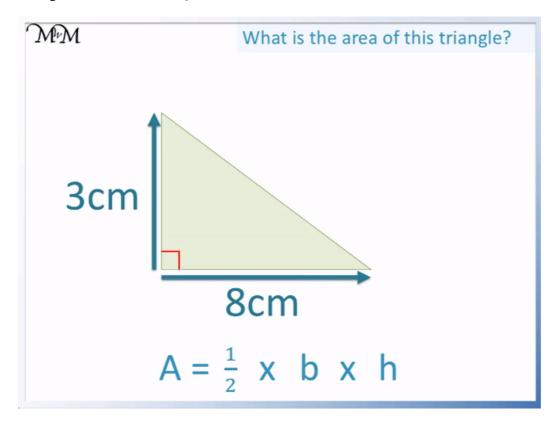
#### 8. Print Ascii Value of the Character

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Back to Top ↑

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

Triangle = 0.5 \* Base \* Height



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Back to Top ↑

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

Name: Ghanendra Pratap Singh

Abbreviated Name: G. P. Singh

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Back to Top ↑

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

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

Back to Top ↑

# 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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Back to Top ↑

#### 13. Calculate Percentage of 5 Subjects

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

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Back to Top ↑

#### 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

# ——Alternative Method — FAHRENHEIT → CELSIUS

USE THE FOLLOWING CONVERSION FORMULA:

$$C = \frac{(^{\circ}F - 32)}{1.8}$$

⋮≡ READme.md

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Back to Top ↑

#### 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 to compute the perimeter and area of a rectangle with a height of 7 inches and width of 5 inches.

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

Area of Rectangle = height \* width;

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Back to Top ↑

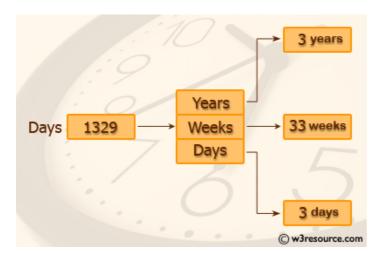
#### 17. Write a C program to accept 3 characters and print the sum of their ascii.

Click Here For Solution

Back to Top ↑

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

Note: Ignore leap year.



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Back to Top ↑

#### 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:

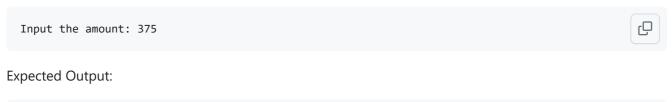
Input x1: 25
Input y1: 15
Input x2: 35
Input y2: 10

**Expected Output:** 

#### Back to Top ↑

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

Test Data:



```
There are:

3 Note(s) of 100.00

1 Note(s) of 50.00

1 Note(s) of 20.00

0 Note(s) of 10.00

1 Note(s) of 5.00

0 Note(s) of 2.00

0 Note(s) of 1.00
```

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Back to Top ↑

21. Write a C program to convert a given integer (in seconds) to hours, minutes and seconds.

Test Data:

```
Input seconds: 25300
Expected Output:
There are:
H:M:S - 7:1:40
```

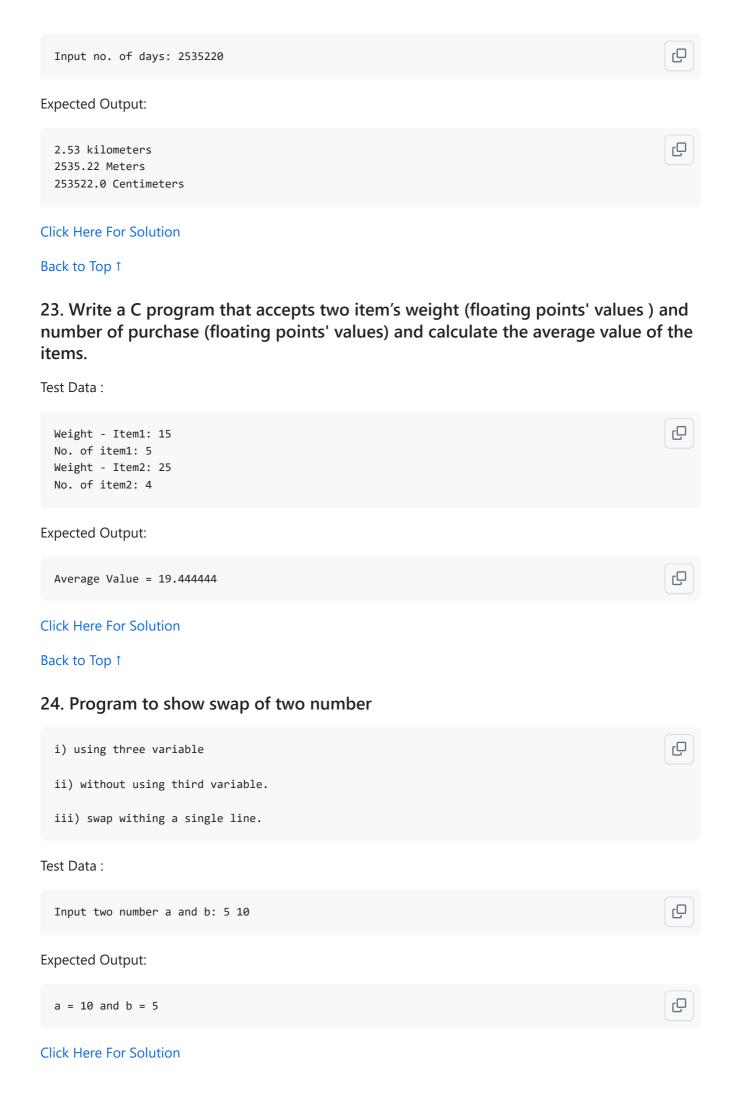
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Back to Top ↑

22. Write a C program to convert a given integer (in millimeters) to kilometers, meters and centimeters.

```
1 centimeter = 10 millimeters.
1 meter = 100 centimeters.
1 meter = 1,000 millimeters.
1 kilometer = 1,000 meters.
```

Test Data:



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

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Back to Top ↑

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

Click Here For Solution

Back to Top ↑

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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Back to Top ↑

28. Input a number and change the sign.

Test Data:

```
input number : 10
input number : -15
```

**Expected Output:** 

```
Sign Changed number = -10
Sign Changed number = 15
```

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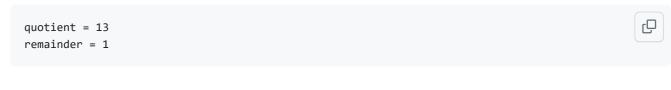
Back to Top ↑

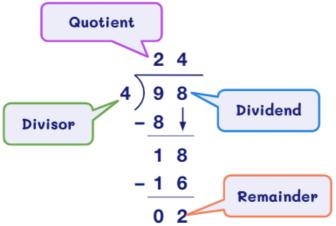
29. Input two number and display quotient and remainder.

Test Data:

```
input number : 27 2
```

**Expected Output:** 





#### Back to Top ↑

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

Test Data:

number : 12345

**Expected Output:** 

sum = 6

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Back to Top ↑

### 31. Input a 3 digit number and reverse it.

Test Data:

number = 123

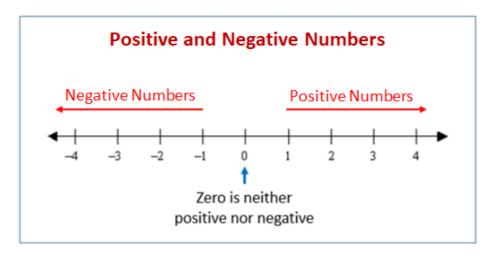
**Expected Output:** 

reverse number = 321

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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

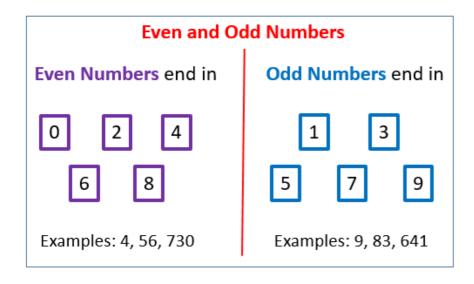


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Back to Top ↑

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



Click Here For Solution

Back to Top ↑

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

Click Here For Solution

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

Click Here For Solution

Back to Top ↑

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

# **Example 2: Finding Roots**

Consider the quadratic equation;

$$ax^2 + bx + c = 0$$

### **Mathematical Solution**

First we need to find the value of the discriminant( $\Delta$ );

• 
$$\Delta = b^2 - 4ac$$
 ,  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ 

- if  $(\Delta < 0)$  then roots are complex.
- if  $(\Delta = 0)$  then there is only one root.
- if  $(\Delta > 0)$  then roots are real.

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Back to Top ↑

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, Avg>=50 Grade B

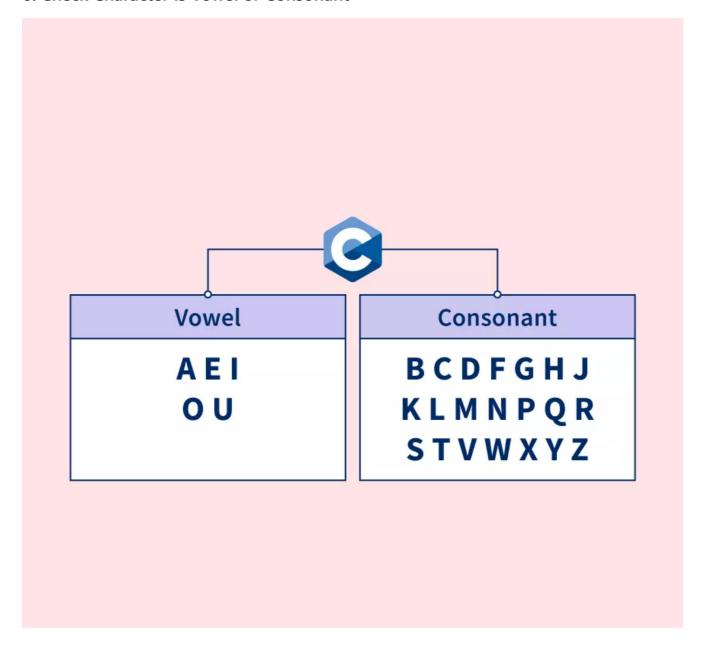
Avg<50, Avg>=40 Grade C Grade F.

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Back to Top ↑

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

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



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Back to Top ↑

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

Click Here For Solution

Back to Top ↑

### 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

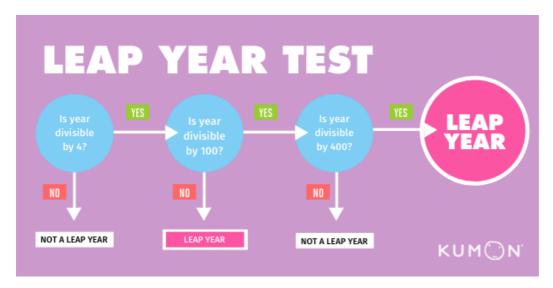
#### **Leap Year Examples:**

• 1992: Leap Year

• 2002: Not a Leap Year

• 2016: Leap Year

• 2100: Not a Leap Year



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Back to Top ↑

# 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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Back to Top ↑

# **Loops C Programs**

1. C Program to Reverse a Number Using FOR Loop



# C Program to Reverse a Number Using FOR Loop



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Back to Top ↑

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

Example: 153 is an Armstrong number

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

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

153 is an Armstrong number

# **Armstrong Numbers**

$$1^4 + 6^4 + 3^4 + 4^4 = 1634$$

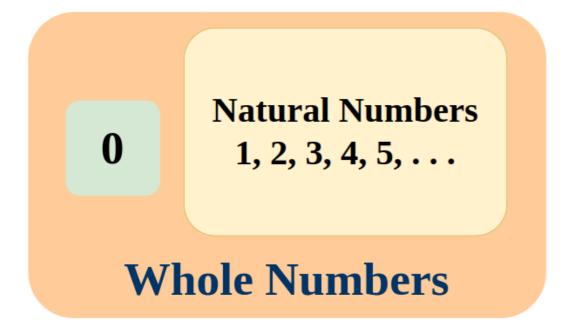
#### Number of digits , d= 4

Sum of the digits raised to power number of digits is equal to the original digit, so this number is an Armstrong Number

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Back to Top ↑

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



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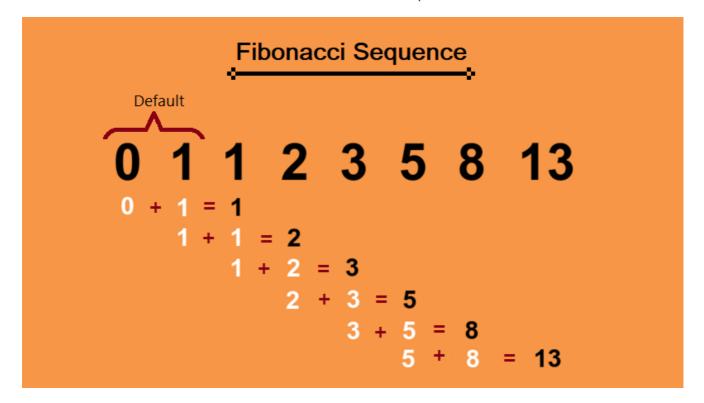
Back to Top ↑

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

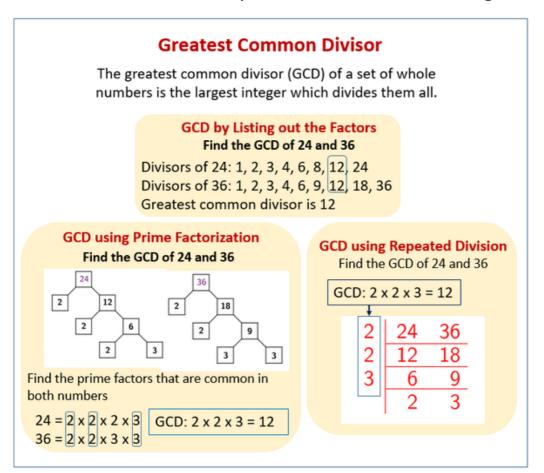
**Fibonacci Series:** 0, 1, 1, 2, 3, 5, 8, 13, 21, 34. Fibonacci Series is up to 10 Elements.



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Back to Top ↑

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



Back to Top ↑

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

$$12 = 2 \times 2 \times 3$$
 $20 = 2 \times 2 \times 3 \times 5$ 
 $1cm = 2 \times 2 \times 3 \times 5$ 
 $1cm = 60$ 

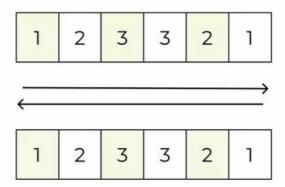
Factor Alignment is the KEY!

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Back to Top ↑

8. Palindrome Program in C Using While Loop

# Number is Palindrome or Not



- A palindrome number is a number that is given the same number after reverse
- 123321 and the reverse of the number is same so this is a Palindrome Number

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Back to Top ↑

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

Click Here For Solution

Back to Top ↑

#### 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.

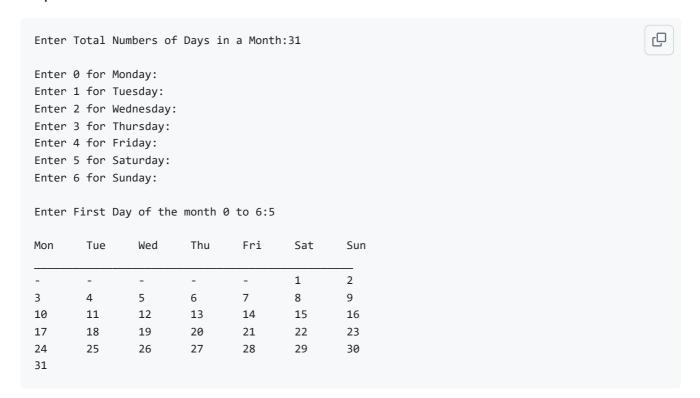
Generic Root of number 12345 is 6.

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#### Back to Top ↑

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

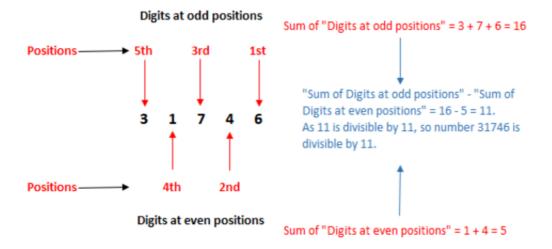
#### Output



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#### Back to Top ↑

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



#### Back to Top ↑

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

```
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
```

Click Here For Solution

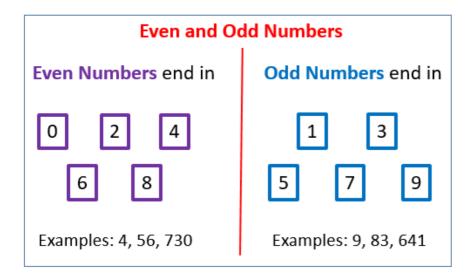
#### 14. Write a Program to print numbers 1 to n using while loop in C language

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Back to Top ↑

#### 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

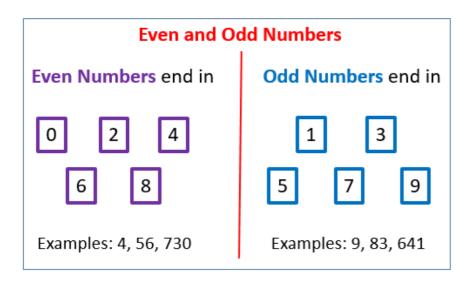


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Back to Top ↑

#### 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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Back to Top ↑

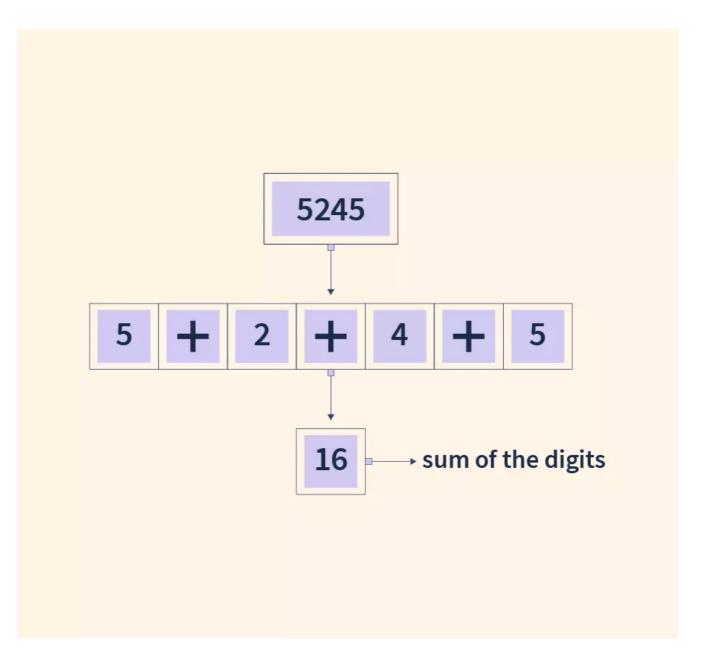
17. Write A Program To Accept A Number From User And Print If It Is Prime Or Not In C Language

Prime Numbers to 100 A prime number can only be divided (without a remainder) by itself and 1.				
2	3	5	7	11
13	17	19	23	29
31	37	41	43	47
53	59	61	67	71
73	79	83	89	97
				sciencenotes.org

Back to Top ↑

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

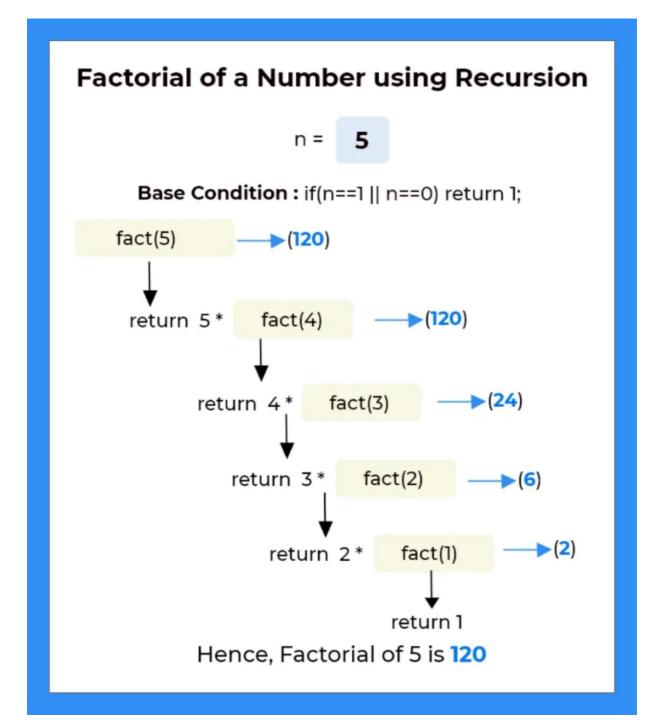
Ex: 153 Sum of its digit is 9



Back to Top ↑

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

factorial of 5 is:  $5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$ 



Back to Top ↑

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

Prime Numbers to 100 A prime number can only be divided (without a remainder) by itself and 1.				
2	3	5	7	11
13	17	19	23	29
31	37	41	43	47
53	59	61	67	71
73	79	83	89	97
				sciencenotes.org

Back to Top ↑

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

**ASCII** 



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Back to Top ↑

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

#### Back to Top ↑

#### 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,

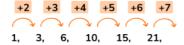
# Triangular numbers

Triangular numbers are numbers that can be represented as a triangle.

The first triangular number  $T_1 = 1$ .

The second triangular number is found by adding 2 to the previous triangular number and so  $T_2=1+2=3$ .

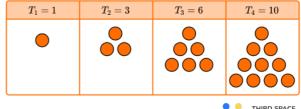
Continuing this pattern, we get:



The sequence of triangular numbers is:

1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, ...

To determine the next triangular number in a numerical sequence, given the sequence, we need to find the difference between the previous two terms, and add one more than this value.



THIRD SPACE

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#### Back to Top ↑

#### 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,

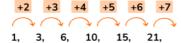
# Triangular numbers

**Triangular numbers** are numbers that can be represented as a triangle.

The first triangular number  $T_1 = 1$ .

The second triangular number is found by adding 2 to the previous triangular number and so  $T_2 = 1 + 2 = 3$ .

Continuing this pattern, we get:



The sequence of triangular numbers is:

1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, ...

To determine the next triangular number in a numerical sequence, given the sequence, we need to find the difference between the previous two terms, and add one more than this value.

$T_1 = 1$	$T_2=3$	$T_3 = 6$	$T_4=10$



#### Click Here For Solution

#### Back to Top ↑

# 25. Write a C program that read 5 numbers and sum of all odd values between them.

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

#### **Expected Output:**

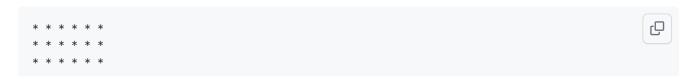
Sum of all odd values: 46

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Back to Top ↑

# **Pattern**

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

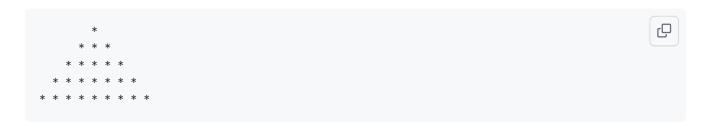


```
Click Here For Solution
Back to Top ↑
2. Write A Program To Print Following Outputs In C Language
                                                                           Q
Click Here For Solution
Back to Top ↑
3. Write A Program To Print Following Outputs In C Language
                                                                           Q
Click Here For Solution
Back to Top ↑
4. Write A Program To Print Following Outputs In C Language
Click Here For Solution
Back to Top ↑
5. Write A Program To Print Following Outputs In C Language
```

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

Back to Top ↑

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



Click Here For Solution

Back to Top ↑

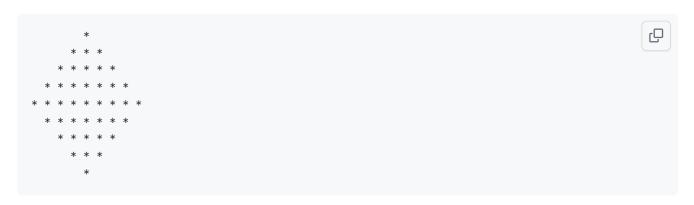
# 7. Write A Program To Print Following Outputs In C Language



Click Here For Solution

Back to Top ↑

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



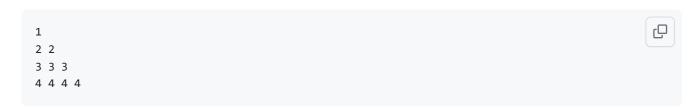
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Back to Top ↑

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



Click Here For Solution

Back to Top ↑

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

```
A
BBB
CCCCC
DDDDDDD
```

Click Here For Solution

Back to Top ↑

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



Click Here For Solution

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

Click Here For Solution

Back to Top ↑

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

Click Here For Solution

Back to Top ↑

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

Click Here For Solution

Back to Top ↑

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

```
1
2 3
4 5 6
7 8 9 10
11 12 13 15
```

Click Here For Solution

```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

Click Here For Solution

Back to Top ↑

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

Click Here For Solution

Back to Top ↑

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

Click Here For Solution

Back to Top ↑

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

Click Here For Solution

Back to Top ↑

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

```
1
2 2
3 3 3
```

```
4 4 4 4
5 5 5 5 5
```

Back to Top ↑

# 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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Back to Top ↑

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

```
*

* *

* * *

* * *

* * *

* * *

* * *

* *

* *

* *

* *

* *
```

Click Here For Solution

Back to Top ↑

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

```
*

* *

* *

* * *

* * *

* * *

* * *

* * *

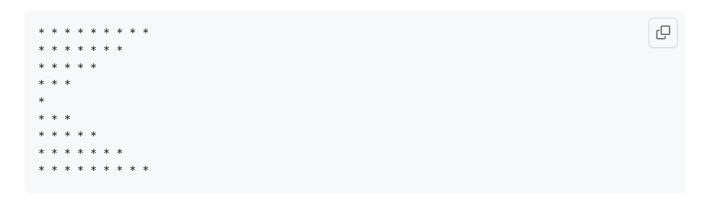
* *

* *

* *

* *
```

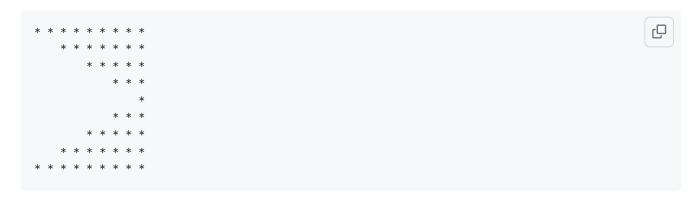
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Click Here For Solution

Back to Top ↑

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



Click Here For Solution

Back to Top ↑

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

Click Here For Solution

Back to Top ↑

#### Releases

No releases published Create a new release

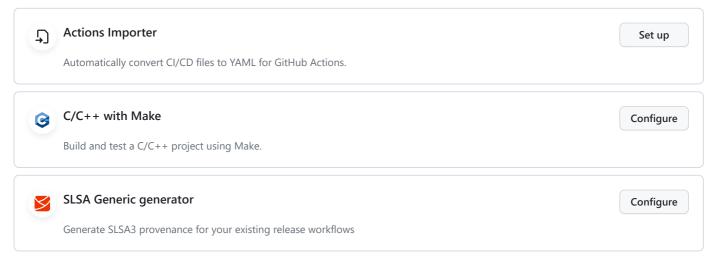
#### **Packages**

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