

- 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 Spe	
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	%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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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. WAP. to Calculate Gross Salary of an Employee whose dearness allowance is 40% of basic salary and house rent allowance is 20% of basic salary.

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:** 

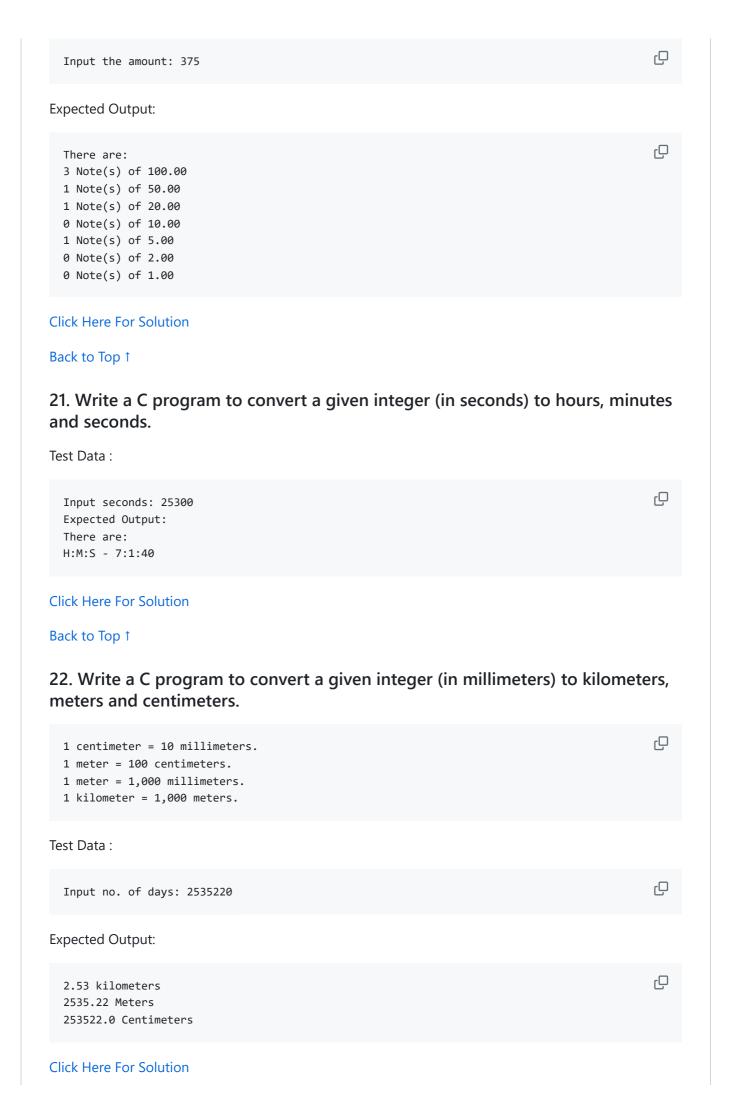
Distance between the said points: 11.1803

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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:

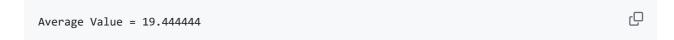
```
Weight - Item1: 15

No. of item1: 5

Weight - Item2: 25

No. of item2: 4
```

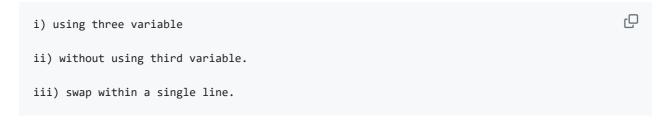
**Expected Output:** 



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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

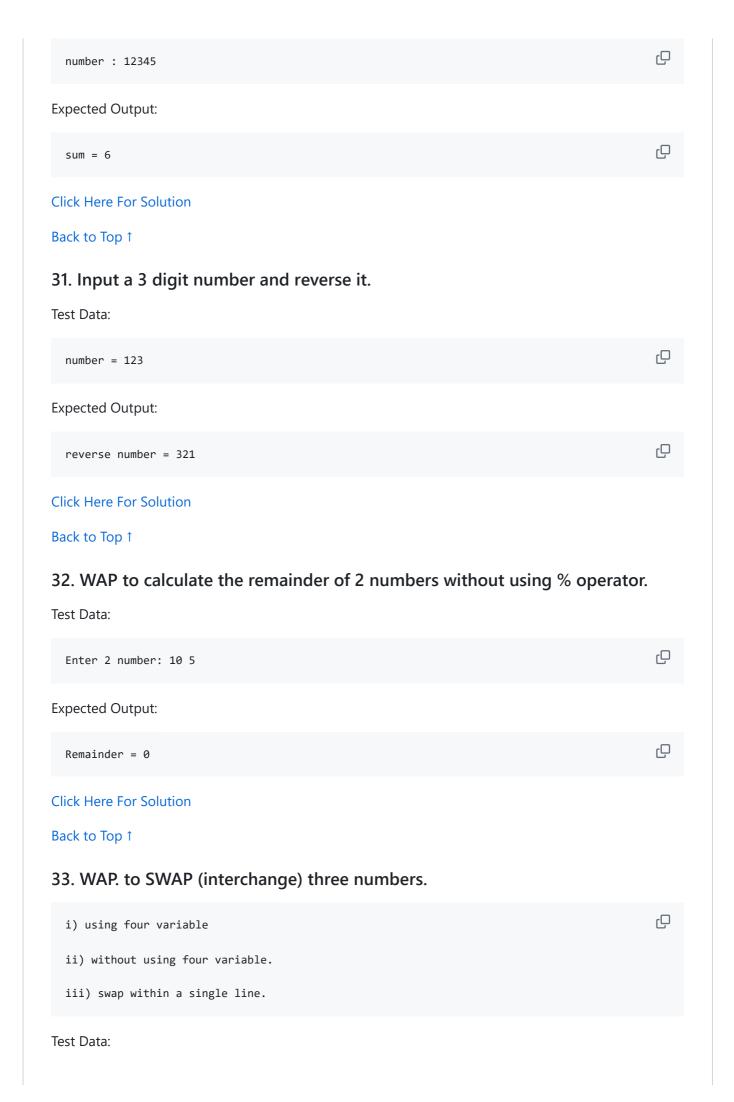


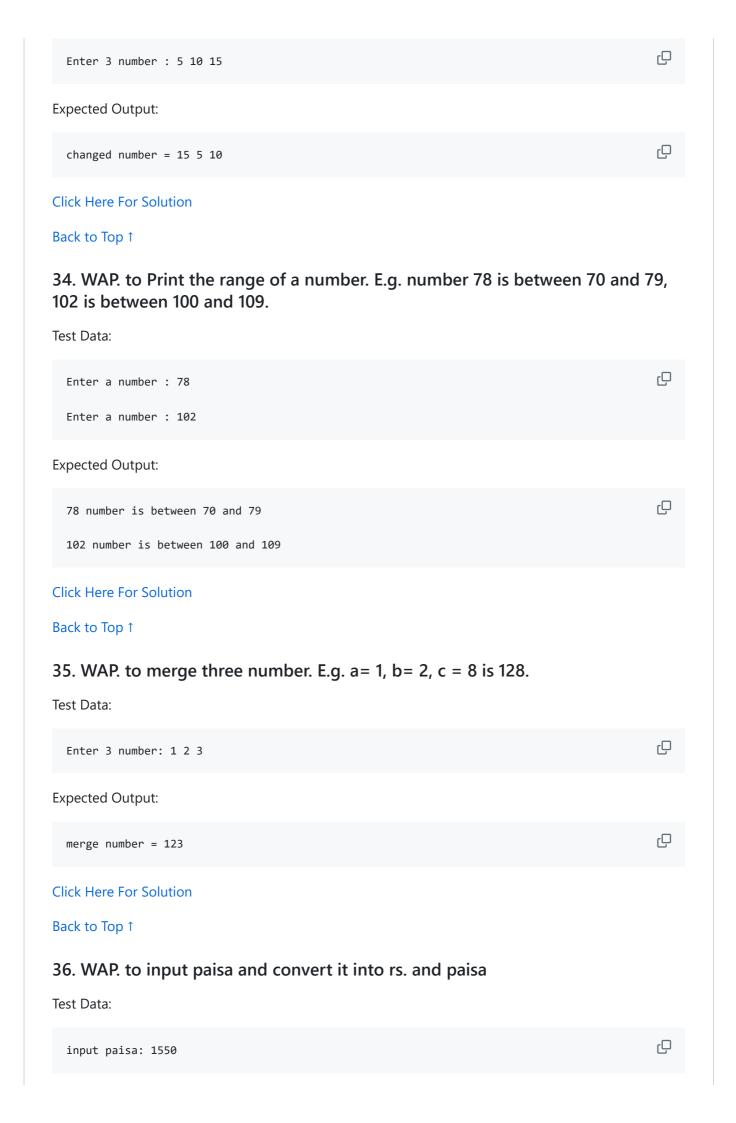
#### Click Here For Solution

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

Test Data:





15 rs. 50 paisa

9

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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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13. While purchasing certain items, a discount of 10% is offered if the quantity purchased is more than 1000. if quantity and price per item are input through the keyboard, write a program to calculate the total expenses.

Test Data:

Enter quantity and price per item: 1000 2

Expected Output:

Total expenses = 1800.00

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14. If cost price and selling price of an item is input through the keyboard, write a program to determine whether the seller has made profit or incurred loss. Also determine how much profit he made or loss he incurred.

Test Data:

Enter cost price and selling price: 50 100

Expected Output:

ſĠ

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He incurred profit of Rs.50

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15. A five-digit number is entered through the keyboard. Write a program to obtain the reversed number and to determine whether the original and reversed numbers are equal or not.

Test Data:

Enter 5 digit number: 12345

**Expected Output:** 

ſĠ Reverse number = 54321Reverse number is not equal to original number. Click Here For Solution Back to Top ↑ 16. Write a program to check whether a triangle is valid or not, when the three angles of the triangle are entered through the keyboard. A triangle is valid if the sum of all the three angles is equal to 180 degrees Test Data: Q input 3 angles of triangle: 45 45 90 **Expected Output:** Q Triangle is valid Click Here For Solution Back to Top ↑ 17. Find the absolute value of a number entered through the keyboard. Test Data: ſŪ Enter a number: -15 Enter a number: 25 **Expected Output:** Q Absolute number = 15 Absolute number = 25 Click Here For Solution Back to Top ↑ 18. Given the length and breadth of a rectangle, write a program to find whether the area of the rectangle is greater than its perimeter. For example, the area of the rectangle with length = 5 and breadth = 4 is greater than its perimeter. Test Data: Q Enter the length and breadth of a rectangle: 5 4 **Expected Output:** 

```
Area of rectangle is greater than its perimeter.
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19. Given three points (x1, y1), (x2, y2) and (x3, y3), write a program to check if
all the three points fall on one straight line.
Test Data:
                                                                                            ſĠ
  Enter points (x1, y1):1 2
  Enter points (x2, y2):3 4
  Enter points (x3, y3):5 6
Expected Output:
                                                                                            Q
  All the three points fall on the straight line:
Click Here For Solution
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20. A certain grade of steel is graded according to the following conditions:
                                                                                            Q
  (i) Hardness must be greater than 50
  (ii) Carbon content must be less than 0.7
  (iii) Tensile strength must be greater than 5600
  The grades are as follows:
  Grade is 10 if all three conditions are met
  Grade is 9 if conditions (i) and (ii) are met
  Grade is 8 if conditions (ii) and (iii) are met
  Grade is 7 if conditions (i) and (iii) are met
  Grade is 6 if only one condition is met
  Grade is 5 if none of the conditions are met
  Write a program, which will require the user to give values of hardness, carbon content
  and tensile strength of the steel under consideration and output the grade of the
  steel.
Test Data:
  Enter hardness, carbon and tensile: 60 0.8 5700
Expected Output:
  Grade is 7
```

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21. Write a C program to input side of a triangle and check wheth valid or not using if else.	her triangle is
A triangle is valid if sum of its two sides is greater than the third side.	
Test Data:	
Enter 3 sides of a triangle: 7 10 5	C
Expected Output:	
Valid Triangle	Ç
Click Here For Solution	
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22. If the three sides of a triangle are entered through the keybo program to check whether the triangle is isosceles, equilateral, so angled triangle.	
angled triangle.	
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Click Here For Solution	ed through the
Click Here For Solution  Back to Top 1  23. Write a program to find the greatest of three numbers entered	ed through the
Click Here For Solution  Back to Top 1  23. Write a program to find the greatest of three numbers entered keyboard. Use conditional operators.	ed through the
Click Here For Solution  Back to Top ↑  23. Write a program to find the greatest of three numbers entered keyboard. Use conditional operators.  Test Data:	
Click Here For Solution  Back to Top ↑  23. Write a program to find the greatest of three numbers entered keyboard. Use conditional operators.  Test Data:  Enter 3 number: 1 2 3	
Click Here For Solution  Back to Top 1  23. Write a program to find the greatest of three numbers entered keyboard. Use conditional operators.  Test Data:  Enter 3 number: 1 2 3  Expected Output:	O.
Click Here For Solution  Back to Top ↑  23. Write a program to find the greatest of three numbers entered keyboard. Use conditional operators.  Test Data:  Enter 3 number: 1 2 3  Expected Output:  Greatest number is 3	O.
Click Here For Solution  Back to Top 1  23. Write a program to find the greatest of three numbers entered keyboard. Use conditional operators.  Test Data:  Enter 3 number: 1 2 3  Expected Output:  Greatest number is 3  Click Here For Solution	O.
Click Here For Solution  Back to Top 1  23. Write a program to find the greatest of three numbers entered keyboard. Use conditional operators.  Test Data:  Enter 3 number: 1 2 3  Expected Output:  Greatest number is 3  Click Here For Solution  Back to Top 1	O.
Click Here For Solution  Back to Top 1  23. Write a program to find the greatest of three numbers entere keyboard. Use conditional operators.  Test Data:  Enter 3 number: 1 2 3  Expected Output:  Greatest number is 3  Click Here For Solution  Back to Top 1  24. WAP to print the second maximum out of three numbers.	- -

**Expected Output:** 

Second maximum = 2

O

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25. WAP to check whether a 3 digit number is a magic number or not. (Palindrome) A number is a magic number if its reverse is same as the original number.

Test Data:

Enter a number: 123



#### **Expected Output:**

Not a magic number.



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26. WAP to compute the pension of an employee.

If the person is male.

Age >= 90 pension is 4000

Age >= 60 pension is 6000

Age < 60 pension is 0

if the person is female.

Age >= 90 pension is 3000

Age >= 60 pension is 5000

Age < 60 pension is 0

ſĢ

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#### 27. Calculate Telephone Bill:-

calls	Rate/call		
First 50 calls	free		
next 100 calls	Rs.3/call		
next 200 calls	Rs.5/call		
next 350 calls	Rs.7/call		

Test Data: **Expected Output:** Click Here For Solution Back to Top ↑ 28. WAP. to check whether a given number is even or odd without using modulo (%) operator. Test Data: Q Enter a number: 12 **Expected Output:** Q Even number Click Here For Solution Back to Top ↑ **Loops C Programs** 1. C Program to Reverse a Number Using FOR Loop Click Here For Solution 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)where: (1 \* 1 \* 1)=1 (5 \* 5 \* 5)=125 (3 \*3 \* 3)=27 So: 1 + 125 + 27 = 153 153 is an Armstrong number Click Here For Solution Back to Top ↑

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

```
ſĠ
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
                Wed
Mon
        Tue
                       Thu
                                Fri
                                        Sat
                                                Sun
                                        1
                                                2
3
        4
                5
                                7
                                                9
                        6
                                        8
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

ſΩ 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

```
No.

8 * 2000 = 16000

1 * 100 = 100

1 * 5 = 5

1 * 2 = 2

1 * 1 = 1

Total =12 Notes For minimum Transaction
```

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# 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:  $5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$ 

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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** 

```
Digits

0 1 2 3 4 5 6 7 8 9

Uppercase Alphabets

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Lowercase Alphabets

a b c d e f g h i j k l m n o p q r s t u v w x y z
```

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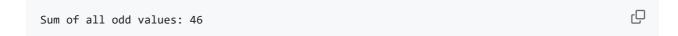
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# 25. Write a C program that read 5 numbers and sum of all odd values between them.

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:** 



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# **Pattern**

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

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

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

```
Click Here For Solution
Back to Top ↑
7. Write A Program To Print Following Outputs In C Language
                                                                                   Q
Click Here For Solution
Back to Top ↑
8. Write A Program To Print Following Outputs In C Language
                                                                                   Q
Click Here For Solution
Back to Top ↑
9. Write A Program To Print Following Outputs In C Language
                                                                                   Q
 1
 1 2
 1 2 3
 1 2 3 4
Click Here For Solution
Back to Top ↑
10. Write A Program To Print Following Outputs In C Language
                                                                                   ſŪ
 1
 2 2
 3 3 3
 4 4 4 4
```

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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 D C B A
A B C C B A
A B A A B A
A B A 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

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

Click Here For Solution

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

```
1 2 1 2 3 4 5 C S 4 3 2 1 2 3 4 5
```

Click Here For Solution

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# 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 Q Click Here For Solution Back to Top ↑ 25. Write A Program To Print Following Outputs In C Language Q Click Here For Solution Back to Top ↑ 26. Write A Program To Print Following Outputs In C Language Q \* \* \* \* \* \* \* \* \*

Click Here For Solution

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