**Practice Problems for Loops**

1. Write a C++ Program to display a text 5 times.

(while, do..while, for loop)

1. Write a C++ program to find the sum of first n natural numbers.

( positive integers such as 1,2,3,...n are known as natural numbers)

(while, do..while, for loop)

1. Write a C++ Program to print numbers from 1 to 5.

(while, do..while, for loop)

1. Write a C++ program to find the sum of positive numbers.

(if the user enters a negative number, the loop ends. The negative number entered is not added to the sum.)

1. Write a C++ program to calculate sum of positive numbers till 50 only.

(if the user enters a negative number, that number is skipped from the calculation)

negative number -> loop terminate

numbers above 50 -> skip iteration

1. Write a C++ program to find the eligibility for admission for a professional course based on the following criteria:  
    Marks in Maths >=65  
    Marks in Phy >=55   
    Marks in Chem>=50  
    Total in all three subjects >=190

or  
 Total in Math and Physics >=140

1. Write a C++ program to read roll no, name and marks of three subjects and calculate the total, percentage and division.

1. Write a program in C++ to calculate and print the Electricity bill of a given customer. The customer id., name and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer. The charge is as follow :  
      
   Unit Charge/unit  
    Up to 199 @1.20  
    200 and above but less than 400 @1.50  
    400 and above but less than 600 @1.80  
    600 and above @2.00  
    If the bill exceeds Rs. 400 then a surcharge of 15% will be charged and the minimum bill should be Rs. 100/-

1. Write a program in C++ to accept a grade and declare the equivalent description:  
      
   Grade Description

E Excellent  
V Very Good  
G Good  
A Average  
F Fail

1. Write a program in C++ which is a Menu-Driven Program to compute the area of the various geometrical shape.

1. Total days in a month is given below.

**Month** **Total days**

January, March, May, July, August, October, December 31 days

February 28/29 days

April, June, September, November 30 days

Step by step descriptive logic to print number of days in a month using switch...case.

● Input month number from user. Store it in some variable say month.  
   
● Switch the value of month i.e. switch(month) and match with cases.

● There can be 12 possible values (choices) of i.e. from 1 to 12.

Hence, write 12 cases inside   
● Print 31 for case 1, 3, 5, 7, 8, 10, 12  
   
● Print 30 for case 4, 6, 9, 11   
● Print 28/29 for case 2.  
   
● Print invalid input for default case.

1. Write a C++ program to create menu driven calculator that performs basic arithmetic operations (add, subtract, multiply and divide) using switch case and functions. The calculator should input two numbers and an operator from user. It should perform operation according to the operator entered and must take input in given format.

<number 1> <operator> <number 2>

**Example Input**

5.2 - 3

**Output**

2.2

1. Write a program in C++ to find the sum of first 10 natural numbers

Sample Output:

Find the first 10 natural numbers:

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The natural numbers are:

1 2 3 4 5 6 7 8 9 10

The sum of first 10 natural numbers: 55

1. Write a program in C++ to find the factorial of a number.

Sample output:

Input a number to find the factorial: 5

The factorial of the given number is: 120