

INTRODUCTION OF C++ AND SIMPLE PROGRAM USING LOOP OPERATION

1. Write a C++ program to print counting from 100 to 1.
2. Write a C++ program to display sum of first ten numbers.
3. Write a C++ program to determine and print the sum of following harmonic series for given value of n: $1 + 1/2 + 1/3 + \dots + 1/n$ (The value of n should be given interactively through the terminal)
4. Write a C++ program to find out factorial value of given number.
5. Write a C++ program to take a number from user and check is it prime number or not.
6. Write a program to generate *Fibonacci* series up to user choice. (1 1 2 3 5 8 13 21 34.....)
7. Write a C++ Program to display following different triangle.

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<pre> 1 1 2 1 2 3 1 2 3 4 1 2 3 4 5 </pre>	<pre> A A B A B C A B C D A B C D E </pre>	<pre> A B C D E A B C D A B C A B A </pre>	

SIMPLE PROGRAM USING ARRAY AND FUNCTION

1. Write a C++ program to print all negative elements in an array.
2. Write a C++ program to find sum of all array elements.
3. Write a C++ program to find average of all array elements.
4. Write a C++ program to find maximum and minimum element in an array.
5. Write a C++ program to find second largest element in an array.
6. Write a C++ program to copy all elements from an array to another array.
7. Write a C++ program to count total number of even and odd elements in an array.
8. Write a C++ program to print all unique elements in the array.
9. Write a C++ program to create a function like `sortElements(int n[])`, the function will sort the array elements in descending order where array is passed as parameter. Finally print that sorted array.

CLASS AND OBJECT

1. Write a program that takes name, dept and id as input in a function and display its output using a class.
2. Write a program that takes name, dept and id as input in a function, takes marks of three subjects and calculate the average of the marks in another function and display the output using a class.
3. Write a program that takes name, dept and id as input in a function, takes marks of three subjects and calculate the average of the marks in another function and display their output using loop for three students.
4. Write a program that takes name, dept and id as input in a function, takes marks of three subjects and calculate the average of the marks in another function where the marks will be passed as arguments and display their output.
5. Write a program that takes two numbers as input and show the largest number as output using a class.

CONSTRUCTOR AND INLINE FUNCTION

1. Write a program that takes two numbers as input and show the largest number as output using constructor function where the numbers will be passed as arguments to the constructor.
2. Write a program that takes two numbers as input and show the largest number as output where the logic function part will be private and it will be called in a public function.
3. Write a program with four types of functions (return type and argument, return type but no argument, no return type but argument, no return type and no argument).
4. Write a program with static member variable and static member function.
5. Write a program with overloaded constructors that will pass three arguments to the constructor.
6. Write a program to represent a bank account. Include the following members: Name of the depositor, Account number, Type of account, Balance amount. Member functions: To assign initial values, to deposit an amount, to withdraw an amount after checking balance, to display name and balance.

FRIEND FUNCTION, ARRAY OF OBJECT AND CONSTRUCTOR

1. Write a program to access private data using non-member function.
2. Write a program to declare friend function in two classes. Calculate the sum of integers of both the classes using friend function.
3. Write a program to exchange values without using third variable between two classes. Use friend functions.
4. Write a C++ program that have a class that have 3 overloaded constructor like “**STUDENT(int id, String name, String dept, String section)**”, “**STUDENT(int id, String name, String dept)**”, “**STUDENT(int id, String name, double CGPA)**”. Input the values in main function and pass that values as arguments to the constructors, and three functions **display1stConstructorInfo()**, **display2ndConstructorInfo()** & **display3rdConstructorInfo()** to display the values set by the three constructors.
5. Write a program to create a class like “**MYCTPROBLEM**” that has two functions, 1st function named as **showArraySummation (int a [], int length)**, 2nd function named as **showArraySummation(int n)**. 1st function finds the specific array element in a given position and 2nd function calculate the factorial of the number passed as argument to the function (2nd function must be recursive). Finally show the result.
6. Write a program that takes two numbers as input and show the largest number as output using class and inline function.
7. Write a C++ program to perform different arithmetic operation such as addition, subtraction, division, modulus and multiplication using inline function.