GOOD MORNING EVERYONE

Time to do some more logic-building questions on your own.

NOTE:- You have to do all the questions in a while loop as well as in a do-while loop.

Questions:

- 1.) Write a c++ program to print natural numbers till n.
- 2.) Write a c++ program to print natural numbers between two intervals.
- 3.) Write a c++ program to print positive numbers till n.
- 4.) write a c++ program to print the sum of natural numbers till n.
- 5.) write a c++ program to print the sum of positive numbers till n.
- 6.) Write a c++ program to print the sum of factorial till n.

HINT: factorial of 5 = 1*2*3*4*5 = 120

7.) Write a c++ program that prints the sum of odd numbers till n.

8.) Write a c++ program that prints the sum of even numbers till n.

9.) Write a program in c++ to determine and print the sum of the following harmonic series.

HINT:

for a given value of n:

$$1/1 + 1/2 + 1/3 + \dots + 1/n$$

10.) Write a c++ program to find all the factors of a given number n. and then find the sum of all the factors and also multiply separately.

11.) Write the best-optimized c++ code to find the square root of a very large number n.

12.) Write a c++ program to find the reverse of any number.

Hint:

INPUT: 123456789

OUTPUT: 987654321

- 13.) Write a c++ program to calculate the given series.
- $(1) + (1+2) + (1+2+3) + (1+2+3+4) + (1+2+3+4+5) + \dots + (1+2+3+4+5+\dots+n).$
- 13.) Write a c++ program to calculate the given series.

- 14.) Write a c++ program to calculate the given series.
- (2/(1*1)) + (2/(1*2)) + (2/(1*2*3)) + (2/(1*2*3*4)) + (2/(1*2*3*4*5)) + ... + (2/(1*2*3*4*5*...*n)).
- 15.) Write a c++ program to calculate the given series.

$$(2/(1*1)) + (2/(2*2)) + (2/(3*3*3)) + (2/(4*4*4*4)) + (2/(5*5*5*5*5)) + ... + (2/(n*n*n*n*n*...*n)).$$

16.) Write a c++ program to calculate the given series.

$$(1*1) + (2*2) + (3*3) + (4*4) + (5*5) + ... + (n*n).$$

- 17.) Write a program in C++ to calculate the given series 1 + 1/2^2 + 1/3^3 + ..+ 1/n^n
- 18.) Write the best-optimized c++ code to find whether any number is prime or not.

19.) Write a c++ program that is designed in such a way:

if any $n, 1 \le n \le 15$:

Print the Uppercase word of every number.

like: ONE for 1, TWO for 2, THREE for 3, and so on.

else if n>15:

If it is odd, print ODD If it is even, print EVEN

INPUT:

12

17

OUTPUT:

TWELVE

THIRTEEN

FOURTEEN

FIFTEEN

EVEN

ODD

given number. **INPUT:** 7 Α Ν C W е 0 9 **OUTPUT:** 65 78 67 87 100 111 103

21.) Write a C++ program to print all natural numbers in

reverse (from n to 1). - using while loop

20.) Write a c++ program that finds the ASCII values of any

- 22.) Write a C++ program to print all alphabets from a to z. using while loop
- 23.) Write a C++ program to print all even numbers between 1 to 100. using while loop
- 24.) Write a C++ program to print all odd numbers between 1 to 100.
- 25.) Write a C++ program to find the sum of all even numbers between 1 to n.
- 26.) Write a C++ program to find the sum of all odd numbers between 1 to n.
- 27.) Write a C++ program to print the multiplication table of any number.
- 28.) Write a C++ program to find the first digit of a number.
- 29.) Write a C++ program to find the last digit of a number.
- 30.) Write a C++ program to count the number of digits in a number.

- 31.) Write a C++ program to find the sum of the first and last digit of a number.
- 32.) Write a C++ program to calculate the sum of digits of a number.
- 33.) Write a C++ program to calculate the product of digits of a number.
- 34.) Write a C++ program to enter a number and print its reverse.
- 35.) Write a C++ program to check whether a number is a palindrome or not.
- 36.) Write a C++ program to find the frequency of each digit in a given integer.
- 37.) Write a C++ program to enter a number and print it in words. (use switch case & loop)
- 38.) Write a C++ program to print all ASCII characters with their values.

- 39.) Write a C++ program to find the power of a number using for loop.
- 40.) Write a C++ program to find all factors of a number.
- 41.) Write a C++ program to check whether a number is a Prime number or not.
- 42.) Write a C++ program to print all Prime numbers between 1 to n.
- 43.) Write a C++ program to find the sum of all prime numbers between 1 to n.
- 44.) Write a C++ program to print all Prime numbers between two intervals.
- 45.) Write a C++ program to find all prime factors of a number.
- 46.) Write a C++ program to check whether a number is an Armstrong number or not.
- 47.) Write a c++ program to print all the Armstrong numbers between 1 to n.

- 48.) Write a c++ program to print all the Armstrong numbers between two intervals.
- 49.) Write a C++ program to print the Fibonacci series up to n terms.
- 50.) Write a C++ program to print the Fibonacci series up between two intervals.

Strict instructions:

- You all have to do these questions in your compiler and the Mentors will check anytime in the class.
- The codes written by the students should not be copied from anywhere.
- I Repeat, No Plagiarism accepted.

All the questions/explanations should be done on the compiler.

Regards,
The Coders Association Club