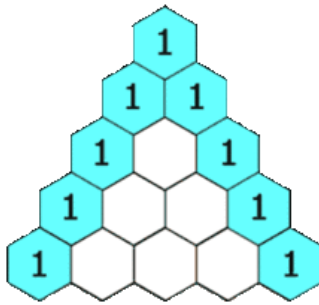


## Some practice questions on loops

1. Write a C program to print all natural numbers from 1 to n. - using while loop
2. Write a C program to print all natural numbers in reverse (from n to 1). - using while loop
3. **Write a C program to print all alphabets from a to z. - using while loop**
4. Write a C program to print all even numbers between 1 to 100. - using while loop
5. Write a C program to print all odd number between 1 to 100.
6. **Write a C program to find sum of all natural numbers between 1 to n.**
7. Write a C program to find sum of all even numbers between 1 to n.
8. Write a C program to find sum of all odd numbers between 1 to n.
9. Write a C program to print multiplication table of any number.
10. **Write a C program to count number of digits in a number.**
11. Write a C program to find first and last digit of a number.
12. Write a C program to find sum of first and last digit of a number.
13. **Write a C program to swap first and last digits of a number.**
14. Write a C program to calculate sum of digits of a number.
15. Write a C program to calculate product of digits of a number.
16. **Write a C program to enter a number and print its reverse.**
17. **Write a C program to check whether a number is palindrome or not. // A palindromic number is a number that remains the same when its digits are reversed. Eg. 121, 14641 etc.**
18. **Write a C program to enter a number and print it in words.**
19. **Write a C program to print all ASCII character with their values.**
20. **Write a C program to find power of a number using for loop.**
21. **Write a C program to calculate factorial of a number.**
22. **Write a C program to check whether a number is Prime number or not.**
23. **Write a C program to print all Prime numbers between 1 to n.**
24. Write a C program to find sum of all prime numbers between 1 to n
25. **Write a C program to find all prime factors of a number.**
26. **Write a C program to check whether a number is Armstrong number or not. //An Armstrong number is a number that is the sum of its own digits each raised to the power of the number of digits. Eg.  $153=1^3+5^3+3^3=1+125+27$ .**
27. Write a C program to print all Armstrong numbers between 1 to n.
28. Write a C program to check whether a number is Perfect number or not. // a perfect number is a number that is half the sum of all of its positive divisors (including itself) i.e.  $\sigma_1(n) = 2n$ . eg.  $6=(1+2+3+6)/2$
29. Write a C program to print all Perfect numbers between 1 to n.
30. Write a C program to check whether a number is Strong number or not. // If the sum of factorial of the digits in any number is equal the given number then the number is called as STRONG number.  
  
Ex= $1! + 4! + 5! = 1+24+120 = 145$ .

31. Write a C program to print all Strong numbers between 1 to n.
32. Write a C program to find HCF (GCD) of two numbers. // the greatest common divisor (GCD) of two or more integers, which are not all zero, is the largest positive integer that divides each of the integers. For example, the GCD of 8 and 12 is 4.
33. Write a C program to find LCM of two numbers. // the least common multiple(LCM), of two integers a and b, is the smallest positive integer that is divisible by both a and b. the LCM of 8 and 12 is 24.
34. Write a C program to print Fibonacci series up to n terms.
35. Write a C program to print Pascal triangle up to n rows.



36. Number pattern/ Star pattern programs - Write a C program to print the given number patterns.

a. * ** *** **** *****	b. 1 12 123 1234 12345	c. A AB ABC ABCD ABCDE	d. 1 23 345 4567 56789	e. 1 23 456 78910 101112131415
f. ***** **** *** ** *	g. ABCDE ABCD ABC AB A	h. * *** ***** ***** *****	i. 1 123 12345 1234567 123456789	j. 1 121 12321 1234321 123454321
k. * ** *** **** *****	l. ABCDE ABCD ABC AB A	m. 1 12 123 1234 12345	n. ***** 0000 *** 00 *	o. 1 10 101 1010 10101
p. 1 01 101 0101 10101	q. 1 22 333 4444 55555	r. A AB ABC AB A	s. ABCDEDCBA ABCD DCBA ABC CBA AB BA A A	t. 1 121 12321 1234321 123454321

37. Write C programs to print the terms of each of the following series:  
i. Sin(x)      ii. Cos(x)      iii. Log (1+x)      iv. log(1-x)      v. ex      vi. e-x
38. Write a C program to print the sum of above series.