1. Checking if a given year is leap year or not
2. Write a code to check whether no is prime or not. Condition use function check() to find whether entered no is positive or negative ,if negative then print “Enter the valid no”, and if yes pass no as a parameter to prime() and check whether no is prime or not?
3. Consider the below series:

0,0,2,1,4,2,6,3,8,4,10,5,12,6,14,7,16,8

This series is a mixture of 2 series all the odd terms in this series form even numbers in ascending order and every even terms is derived from the previous term using the formula (x/2).

Write a program to find the nth term in this series.

The value n in a positive integer that should be read from STDIN the nth term that is calculated by the program should be written to STDOUT. Other than the value of the nth term, no other characters /strings or message should be written to STDOUT.

For example if n=10, the 10th term in the series is to be derived from the 9th term in the series. The 9th term is 8 so the 10th term is (8/2)=4. Only the value 4 should be printed to STDOUT.

You can assume that the n will not exceed 20,000.

1. The program will recieve 3 English words inputs from STDIN
2. These three words will be read one at a time, in three separate line
3. The first word should be changed like all vowels should be replaced by $
4. The second word should be changed like all consonants should be replaced by #
5. The third word should be changed like all char should be converted to upper case
6. Then concatenate the three words and print them

Other than these concatenated word, no other characters/string should or message should be written to STDOUT

For example if you print how are you then output should be h$wa#eYOU.

You can assume that input of each word will not exceed more than 5 chars

Write Code for this

1. Program to Print all Permutations of a String
2. For Example, consider the given series: 1, 2, 1, 3, 2, 5, 3, 7, 5, 11, 8, 13, 13, 17, … This series is a mixture of 2 series – all the odd terms in this series form a Fibonacci series and all the even terms are the prime numbers in ascending order. Now write a program to find the nth term in this series.
3. Consider the following series: 1,1,2,3,4,9,8,27,16,81,32,243,64,729,128,2187… This series is a mixture of 2 series – all the odd terms in this series form a geometric series and all the even terms form yet another geometric series. Write a program to find the Nth term in the series.

The value N is a positive integer that should be read from STDIN. The Nth term that is calculated by the program should be written to STDOUT. Other than the value of the nth term, no other character/string or message should be written to STDOUT. For example, if N=16, the 16th term in the series is 2187, so only value 2187 should be printed to STDOUT.