## **ASSIGNMENTS:**

- 1. WAP to calculate the factorial of a given number.
- 2. WAP to calculate the sum of digits of a given number.
- 3. WAP to display the reverse of a number entered through keyboard.
- 4. WAP to find the GCD/HCF of two numbers.
- 5. WAP to check whether a number n is prime number or not. /\*Hints: A number is a perfect number if is equal to sum of its proper divisors, that is, sum of its positive divisors excluding the number itself. Write a function to check if a given number is perfect or not. The first perfect number is 6, because 1, 2, and 3 are its proper positive divisors, and 1 + 2 + 3 = 6\*/
- 6. WAP to print all odd and even numbers separately within a given range. The range is input through user.
- 7. WAP to evaluate the equation  $y=x^n$  where n is a non-negative integer.
- 8. WAP to check whether an input integer is perfect number or not.
- 9. WAP to check whether an input integer is strong number or not. (Hint: If the sum of factorials of all digits of a number are equal to the number are equal to the number, it is called a strong number )
- 10. WAP to find out the prime factors of a number entered through keyboard (distinct). /\*Hints: A prime number is any number with no divisors other than itself and 1, such as 2 and 5. Any number can be written as a product of prime numbers in a unique way (except for the order). These are called prime factors of a number. In other words, In number theory, the prime factors of a positive integer are the prime numbers that divide that integer exactly, without leaving a remainder. The process of finding these numbers is called integer factorization, or prime factorization.
  - Enter a number: 100
  - The prime factors of 100 are 2(2) and 5(2)
  - That is,  $100 = 2 \times 2 \times 5 \times 5$ , and those numbers are primes. \*/
- 11. WAP to find the first n numbers of a Fibonacci sequence.
- 12. WAP to print the series as 1 2 7 15 31 .....n, where n is given by user.
- 13. WAP to print the series as 3 5 7 11 13 17.....n, where n is given by user.
- 14. WAP to sum the following series S=1+(1+2)+(1+2+3)+...+(1+2+3+...+n)
- 15. WAP to print the following pattern for n rows. Ex. for n=5 rows

\* \*

\* \* \*

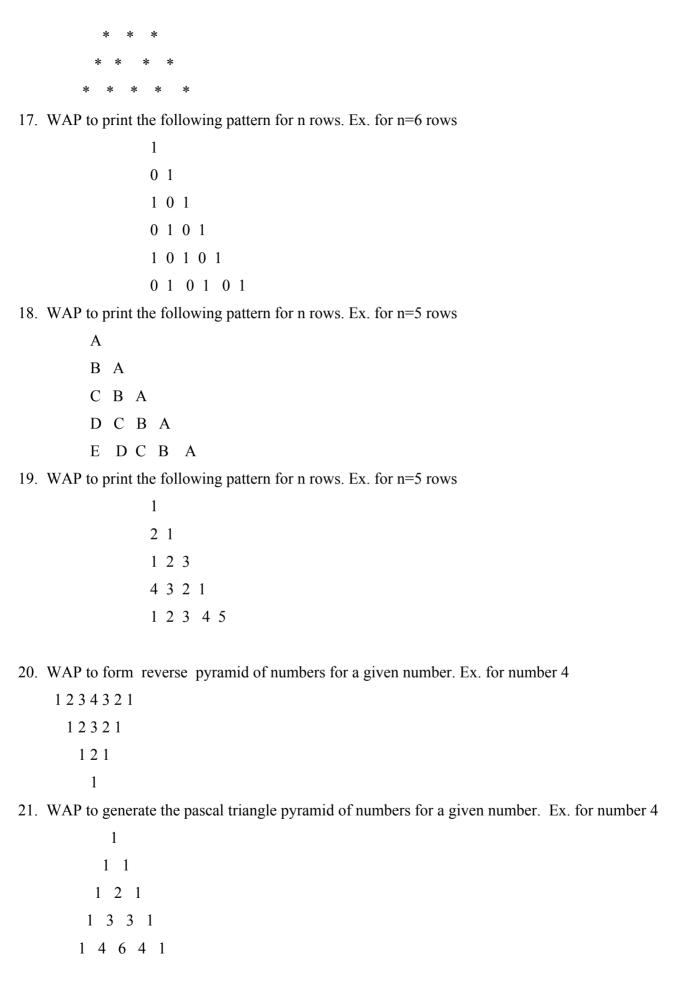
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16. WAP to print the Following pattern for n rows. Ex. for n=5 rows

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22. WAP to display the following style o/p for a given string input through keyboard.(Ex.for a string

"KIITCSIT")

KIITCSITTISCTIIK KIITCSI ISCTIIK KIITCS **SCTIIK** KIITC **CTIIK** KIIT TIIK KII IIK ΚI ΙK K K ΙK ΚI KII IIK TIIK **KIIT** KIITC CTIIK **SCTIIK** KIITCS KIITCSI **ISCTIIK** KIITCSITTISCTIIK

- 23. WAP to convert a decimal number into its equivalent number with base b. Decimal number and b are the user input.
- 24. WAP to convert a number with base b into its equivalent decimal number. Number with base b & b are the user input.
- 25. WAP to convert a binary number to its equivalent octal & hexa-decimal number system.