



Loreto Convent Intermediate College

Lucknow

Holiday HW for class XII

Type the following programs along with the algorithms and output and get a print out of the work in a well labelled folder.

Q1. WAP to enter a number and store its digits in an array. Sort the array using any standard sorting technique in descending order. Print the original number and the sorted array elements on the output screen with suitable message.

Q2. WAP to enter two numbers and print all the Goldbach numbers between the two numbers on the output screen.

Q3. Write a program in Java to accept a word and display the word in Piglatin Form. A word is said to be Piglatin by framing a new word with the first vowel present along with the remaining letters. The letters present before the first vowel are shifted towards the end and followed by 'ay'.

Q4. Write a Java program to find the penultimate word of a sentence by using with or without inbuilt functions. The penultimate word is the second last word present in the given sentence.

Q5. Write a program to input a sentence and create a new sentence by replacing each consonant with the previous letter. If the previous letter is a vowel, then replace it with the next letter (i.e., if the letter is B then replace it with C as the previous letter is A) and the other characters must remain the same. Display the new sentence.

You can encode or decode a string in many ways. One of them is to replace each vowel by two characters ahead in the ASCII table and each consonant by the next character. The replacement of characters may wrap around (i.e., A follows Z). Write a program in Java to accept a word and encrypt as follows.

Example:

Word: Computer

Encrypted Form: Dqnvwqugs

Q6. Write a program in Java to print the diamond pattern with * on the output screen.

Q7. One of the systems of calculating word value is Hebrew

Numerology, in which corresponding numeric values of letters are joined together. A HAPPY WORD is a word whose eventual sum of squares of the digits of its word value is equal to 1. Write a program to check whether it is a HAPPY WORD or not, display an appropriate message.

Q8. Write a program in Java to input two binary patterns. Find and display the HAMMING distance between them.

Q9. Write a program in Java to store numbers in a 4x4 matrix. Display the new matrix in such a way that the new matrix is the mirror image of the original matrix.

Q10. Write a program in Java to store the elements in two different matrices A and B of order 4x4. Find the product of both and store the result in matrix C. Display the C matrix.

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