



**End Semester Lab Examination, February-2024**  
**CSE 1001: Introduction to Computer Programming**  
**SET-A**

**Name of the Student:**

**Registration No.:**

**Q1.** Write a Java method that checks if an array of integers contains three sequential numbers (e.g., 4, 5, 6 or 9, 10, 11) anywhere within it.

public static boolean containsSequentialNumbers(int[] numbers)

Write a program that prompts the user to enter a sequence of numbers, checks for sequential numbers, and displays an appropriate message.

**Q2.** Create a Java program that prompts the user for a sentence and implements a method to format this sentence so that each word starts with an uppercase letter and the rest are lowercase, regardless of how the input text was originally formatted.

public static String formatSentence(String sentence)

Display the formatted sentence.



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**SET-B**

**Name of the Student:**

**Registration No.:**

**Q1.** Write a Java method that takes a string as input and returns a new string where every consonant is replaced by the next consonant in the alphabet (e.g., "b" becomes "c", "z" becomes "a"). Vowels should remain unchanged.

public static String transformString(String str)

Write a program that prompts the user to enter a string and displays the transformed string.

**Q2.** Write a Java program that includes a method to calculate the average value of each number in an array with its immediate neighbours, excluding the first and last elements of the array. The method should return a new array containing these calculated average values.



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**Name of the Student:**

**Registration No.:**

**Q1.** Write a complete Java program that implements a method to determine the missing number in a given array. The array contains integers from 1 to n, inclusive, with exactly one number missing. There are no duplicates within the array.

public static int findMissingNumber(int[] numbers)

**Q2.** Write a Java program that computes the smaller angle between the hour and minute hands of an analog clock based on a given time. Your program should include a method with the following signature to perform the calculation:

public static double clockAngle(int hour, int minute)