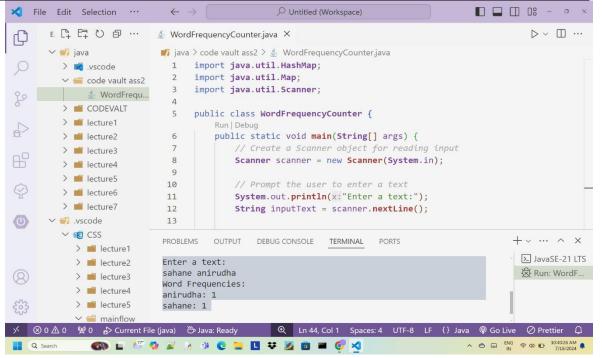
ASSIGNMENT NO:-2

NAME:-SHENDE NIKITA KISHOR

<u>Task 1:-</u> write the program to count word frequencies in a given text in java

```
import java.util.HashMap;
import java.util.Map; import
java.util.Scanner;
                                                                 // If the word is already in the map, increment its frequency
public class WordFrequencyCounter {    public
                                                               if (wordFrequencies.containsKey(word)) {
static void main(String[] args) {
                                   // Create a
                                                               wordFrequencies.put(word,
Scanner object for reading input
                                                               wordFrequencies.get(word) + 1);
    Scanner scanner = new Scanner(System.in);
                                                                      } else {
                                                                        // Otherwise, add the word to the map with a
    // Prompt the user to enter a text
                                                               frequency of 1
    System.out.println("Enter a text:");
                                                                        wordFrequencies.put(word, 1);
    String inputText = scanner.nextLine();
                                                                      }
                                                                    }
    // Split the input text into words
    String[] words = inputText.split("\\s+");
                                                                    // Print the word frequencies
                                                                    System.out.println("Word Frequencies:");
    // Create a HashMap to store word frequencies
                                                               for (Map.Entry<String, Integer> entry:
                                                               wordFrequencies.entrySet()) {
    Map<String, Integer> wordFrequencies = new
                                                                      System.out.println(entry.getKey() + ": " +
HashMap<>();
                                                               entry.getValue());
                                                                    }
    // Iterate through each word in the array
for (String word: words) {
                                                                    // Close the scanner
      // Convert the word to lowercase to ensure
                                                                    scanner.close();
caseinsensitive counting
```



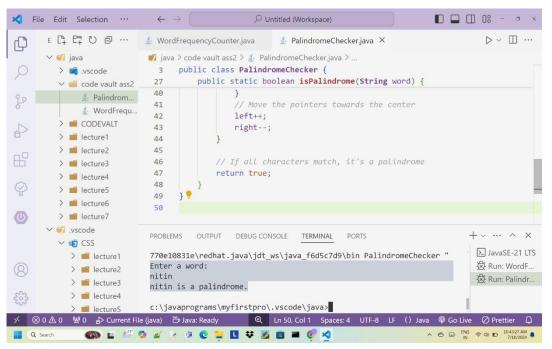
word = word.toLowerCase();	_}
	_ }

Output:-

<u>Task 2:-</u> write a program that checks if a given word is palindrome or not

```
import java.util.Scanner;
                                                            // Method to check if a given word is a palindrome
                                                          public static boolean isPalindrome(String word) {
                                                          // Convert the word to lowercase to ensure
public class PalindromeChecker {     public static
                                                          caseinsensitive comparison
void main(String[] args) {
                              // Create a
                                                               word = word.toLowerCase();
Scanner object for reading input
    Scanner = new Scanner(System.in);
                                                               // Initialize pointers for the start and end of the
                                                          word
    // Prompt the user to enter a word
                                                               int left = 0;
    System.out.println("Enter a word:");
                                                               int right = word.length()- 1;
    String word = scanner.nextLine();
                                                               // Compare characters from the start and end
    // Check if the word is a palindrome
                                                          moving towards the center
    boolean isPalindrome = isPalindrome(word);
                                                          while (left < right) {
                                                                 // If characters do not match, it's not a
    // Print the result
                                                          palindrome
if (isPalindrome) {
                                                                 if (word.charAt(left) != word.charAt(right)) {
       System.out.println(word + " is a
                                                          return false;
palindrome.");
    } else {
                                                                 // Move the pointers towards the center
       System.out.println(word + " is not a
                                                          left++;
                                                                        right--;
palindrome.");
                                                               // If all characters match, it's a palindrome
    // Close the scanner
                                                          return true:
scanner.close();
                                                              }
```

Output:-



<u>Task 3:-</u>create a list of number then write a program that prints the square of each number in the list

```
import java.util.ArrayList; import
                                                                    String input = scanner.next();
                                                           (input.equalsIgnoreCase("done")) {
java.util.List;
import java.util.Scanner;
                                                           break;
                                                                    } else {
                                                                       System.out.println("Invalid input. Please
public class SquareOfNumbers {
                                                           enter a number or 'done' to finish.");
  public static void main(String[] args) {
                                             //
Create a Scanner object for reading input
    Scanner = new Scanner(System.in);
                                                                  }
                                                                }
    // Create a list to store the numbers
    List<Integer> numbers = new ArrayList<>();
                                                                // Print the square of each number in the list
                                                           System.out.println("Squares of the numbers:");
                                                                                                                 for
                                                           (int number: numbers) {
    // Prompt the user to enter numbers
                                                                  System.out.println(number + " squared is " +
    System.out.println("Enter numbers (type 'done' to
                                                           (number * number));
finish):");
                                                                }
    // Read numbers from the user until 'done' is
             while (scanner.hasNext()) {
                                                                // Close the scanner
(scanner.hasNextInt()) {
                                                                scanner.close();
         numbers.add(scanner.nextInt());
} else {
                                                                  }
```

Output:-

