1. package Assign\_day3;

public class Add\_two\_numbers {

public static void main(String[] args) {

int num1 = 10;

int num2 = 20;

int sum = num1 + num2;

// System.out.println("First Number: " + num1);

// System.out.println("Second Number: " + num2);

// System.out.println("Sum: " + sum);

System.***out***.println("sum="+sum);

}

}

2. package Assign\_day3;

public class AreaOfRectangle {

public static void main(String[] args) {

int length = 10;

int breadth = 5;

int area = length \* breadth;

System.***out***.println("Length: " + length);

System.***out***.println("Breadth: " + breadth);

System.***out***.println("Area of Rectangle: " + area);

}

}

3. package Assign\_day3;

public class ArrayPalindrome {

public static void main(String[] args) {

int[] arr = {1, 2, 3, 2, 1};

boolean isPalindrome = true;

int n = arr.length;

for (int i = 0; i < n / 2; i++) {

if (arr[i] != arr[n - 1 - i]) {

isPalindrome = false;

break;

}

}

if (isPalindrome) {

System.***out***.println("The array is a palindrome.");

} else {

System.***out***.println("The array is NOT a palindrome.");

}

}

}

4. package Assign\_day3;

public class CheckString {

public static void main(String[] args) {

String input = "java";

input = input.toLowerCase();

if (input.startsWith("j") && input.endsWith("a")) {

System.***out***.println("The string \"" + input + "\" starts with 'j' and ends with 'a'.");

} else {

System.***out***.println("The string \"" + input + "\" does NOT start with 'j' and end with 'a'.");

}

}

}

5. package Assign\_day3;

public class CopyArray {

public static void main(String[] args) {

int[] originalArray = {10, 20, 30, 40, 50};

int[] copiedArray = new int[originalArray.length];

for (int i = 0; i < originalArray.length; i++) {

copiedArray[i] = originalArray[i];

}

System.***out***.println("Original Array:");

for (int num : originalArray) {

System.***out***.print(num + " ");

}

System.***out***.println("\nCopied Array:");

for (int num : copiedArray) {

System.***out***.print(num + " ");

}

}

}

6. package Assign\_day3;

public class CountCharTypes {

public static void main(String[] args) {

String input = "Java 123 @Code!";

int letters = 0;

int digits = 0;

int spaces = 0;

int specialChars = 0;

for (int i = 0; i < input.length(); i++) {

char ch = input.charAt(i);

if (Character.*isLetter*(ch)) {

letters++;

} else if (Character.*isDigit*(ch)) {

digits++;

} else if (Character.*isWhitespace*(ch)) {

spaces++;

} else {

specialChars++;

}

}

System.***out***.println("Input String: " + input);

System.***out***.println("Letters: " + letters);

System.***out***.println("Digits: " + digits);

System.***out***.println("Spaces: " + spaces);

System.***out***.println("Special Characters: " + specialChars);

}

}

7. package Assign\_day3;

public class CountEvenAndOdd {

public static void main(String[] args) {

int[] numbers = {10, 23, 45, 66, 78, 89, 90};

int evenCount = 0;

int oddCount = 0;

for (int num : numbers) {

if (num % 2 == 0) {

evenCount++;

} else {

oddCount++;

}

}

System.***out***.println("Array Elements:");

for (int num : numbers) {

System.***out***.print(num + " ");

}

System.***out***.println("\nTotal Even Numbers: " + evenCount);

System.***out***.println("Total Odd Numbers: " + oddCount);

}

}

8. package Assign\_day3;

public class CountVowels {

public static void main(String[] args) {

String input = "Programming";

int vowelCount = 0;

input = input.toLowerCase();

for (int i = 0; i < input.length(); i++) {

char ch = input.charAt(i);

if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {

vowelCount++;

}

}

System.***out***.println("Input: " + input);

System.***out***.println("Output: " + vowelCount + " Vowels");

}

}

9. package Assign\_day3;

import java.util.HashMap;

public class ElementFrequency {

public static void main(String[] args) {

int[] numbers = {10, 20, 10, 30, 20, 40, 10, 50, 20};

HashMap<Integer, Integer> frequencyMap = new HashMap<>();

for (int num : numbers) {

if (frequencyMap.containsKey(num)) {

frequencyMap.put(num, frequencyMap.get(num) + 1);

} else {

frequencyMap.put(num, 1);

}

}

System.***out***.println("Frequency of each element:");

for (int key : frequencyMap.keySet()) {

System.***out***.println(key + " → " + frequencyMap.get(key));

}

}

}

10. package Assign\_day3;

public class Employee\_class {

String name;

int id;

static String *companyName* = "TechCorp";

public Employee\_class(String empName, int empId) {

name = empName;

id = empId;

}

public void displayEmployeeDetails() {

String role = "Software Developer";

System.***out***.println("Employee Name: " + name);

System.***out***.println("Employee ID: " + id);

System.***out***.println("Company Name: " + *companyName*);

System.***out***.println("Role: " + role);

}

public static void main(String[] args) {

Employee\_class emp1 = new Employee\_class("Narasimha", 101);

emp1.displayEmployeeDetails();

}

}

11. package Assign\_day3;

import java.util.HashMap;

public class FrequencyOfCharacter {

public static void main(String[] args) {

String input = "programming";

// Convert to lowercase (optional) and remove spaces if needed

input = input.toLowerCase().replaceAll("\\s", "");

// Create a HashMap to store character frequencies

HashMap<Character, Integer> freqMap = new HashMap<>();

// Loop through each character

for (char ch : input.toCharArray()) {

if (freqMap.containsKey(ch)) {

freqMap.put(ch, freqMap.get(ch) + 1);

} else {

freqMap.put(ch, 1);

}

}

// Display character frequencies

System.***out***.println("Character frequencies:");

for (char key : freqMap.keySet()) {

System.***out***.println(key + " → " + freqMap.get(key));

}

}

}

12. package Assign\_day3;

public class MaxMInArray {

public static void main(String[] args) {

int[] numbers = {25, 89, 12, 56, 90, 3, 77};

int max = numbers[0];

int min = numbers[0];

for (int num : numbers) {

if (num > max) {

max = num;

}

if (num < min) {

min = num;

}

}

System.***out***.println("Array Elements:");

for (int num : numbers) {

System.***out***.print(num + " ");

}

System.***out***.println("\nMaximum Element: " + max);

System.***out***.println("Minimum Element: " + min);

}

}

13. package Assign\_day3;

import java.util.Arrays;

public class MergeAndSortArrays {

public static void main(String[] args) {

int[] array1 = {30, 10, 50};

int[] array2 = {20, 40, 60};

int[] mergedArray = new int[array1.length + array2.length];

for (int i = 0; i < array1.length; i++) {

mergedArray[i] = array1[i];

}

for (int i = 0; i < array2.length; i++) {

mergedArray[array1.length + i] = array2[i];

}

Arrays.*sort*(mergedArray);

System.***out***.println("Merged and Sorted Array:");

for (int num : mergedArray) {

System.***out***.print(num + " ");

}

}

}

14. package Assign\_day3;

public class PalindromeCheck {

public static void main(String[] args) {

String input = "ATTA";

input = input.toLowerCase();

String reversed = "";

for (int i = input.length() - 1; i >= 0; i--) {

reversed += input.charAt(i);

}

if (input.equals(reversed)) {

System.***out***.println("The string \"" + input + "\" is a Palindrome.");

} else {

System.***out***.println("The string \"" + input + "\" is NOT a Palindrome.");

}

}

}

15. package Assign\_day3;

public class PrimeInArray {

public static boolean isPrime(int num) {

if (num <= 1) return false; // 0 and 1 are not prime

for (int i = 2; i <= Math.*sqrt*(num); i++) {

if (num % i == 0)

return false;

}

return true;

}

public static void main(String[] args) {

int[] numbers = {2, 3, 4, 5, 10, 13, 17, 22, 29, 33};

System.***out***.println("Prime numbers in the array:");

for (int num : numbers) {

if (*isPrime*(num)) {

System.***out***.print(num + " ");

}

}

}

}

16. package Assign\_day3;

import java.util.LinkedHashSet;

public class RemoveDulicates {

public static void main(String[] args) {

int[] numbers = {10, 20, 10, 30, 40, 20, 50};

LinkedHashSet<Integer> uniqueSet = new LinkedHashSet<>();

for (int num : numbers) {

uniqueSet.add(num);

}

System.***out***.println("Original Array:");

for (int num : numbers) {

System.***out***.print(num + " ");

}

System.***out***.println("\n\nArray after removing duplicates:");

for (int num : uniqueSet) {

System.***out***.print(num + " ");

}

}

}

17.package Assign\_day3;

public class ReplaceSpaces {

public static void main(String[] args) {

String input = "Welcome to Java Programming";

String result = input.replace(" ", "\_");

System.***out***.println("Original String: " + input);

System.***out***.println("Modified String: " + result);

}

}

18. package Assign\_day3;

public class ReverseArray {

public static void main(String[] args) {

int[] numbers = {10, 20, 30, 40, 50};

System.***out***.println("Original Array:");

for (int num : numbers) {

System.***out***.print(num + " ");

}

System.***out***.println("\n\nArray in Reverse Order:");

for (int i = numbers.length - 1; i >= 0; i--) {

System.***out***.print(numbers[i] + " ");

}

}

}

19. package Assign\_day3;

import java.util.Scanner;

public class SearchNumberInArray {

public static void main(String[] args) {

int[] numbers = {10, 20, 30, 40, 50, 60, 70};

Scanner sc = new Scanner(System.***in***);

System.***out***.print("Enter a number to search: ");

int searchNum = sc.nextInt();

boolean found = false;

for (int i = 0; i < numbers.length; i++) {

if (numbers[i] == searchNum) {

System.***out***.println("Number " + searchNum + " found at index " + i);

found = true;

break;

}

}

if (!found) {

System.***out***.println("Number " + searchNum + " not found in the array.");

}

sc.close();

}

}

20. package Assign\_day3;

public class SecondHigh {

public static void main(String[] args) {

int[] numbers = {45, 22, 89, 33, 89, 90, 76};

int highest = Integer.***MIN\_VALUE***;

int secondHighest = Integer.***MIN\_VALUE***;

for (int num : numbers) {

if (num > highest) {

secondHighest = highest;

highest = num;

} else if (num > secondHighest && num != highest) {

secondHighest = num;

}

}

System.***out***.println("Array Elements:");

for (int num : numbers) {

System.***out***.print(num + " ");

}

if (secondHighest == Integer.***MIN\_VALUE***) {

System.***out***.println("\nNo second highest element found (all elements might be equal).");

} else {

System.***out***.println("\nSecond Highest Element: " + secondHighest);

}

}

}

21. package Assign\_day3;

public class SegeragateEvenOdd {

public static void main(String[] args) {

int[] arr = {12, 7, 5, 10, 8, 3, 6};

System.***out***.println("Original Array:");

*printArray*(arr);

System.***out***.println("\nEven Numbers:");

for (int num : arr) {

if (num % 2 == 0) {

System.***out***.print(num + " ");

}

}

System.***out***.println("\n\nOdd Numbers:");

for (int num : arr) {

if (num % 2 != 0) {

System.***out***.print(num + " ");

}

}

}

public static void printArray(int[] array) {

for (int num : array) {

System.***out***.print(num + " ");

}

}

}

22. package Assign\_day3;

public class simpleInterest {

public static void main(String[] args) {

float principal = 10000;

float rate = 5;

float time = 2;

float interest = (principal \* rate \* time) / 100;

System.***out***.println("Principal: " + principal);

System.***out***.println("Rate of Interest: " + rate + "%");

System.***out***.println("Time: " + time + " years");

System.***out***.println("Simple Interest: " + interest);

}

}

23. package Assign\_day3;

import java.util.Arrays;

public class SortAlphabatically {

public static void main(String[] args) {

String input = "programming";

char[] chars = input.toCharArray();

Arrays.*sort*(chars);

String sortedString = new String(chars);

System.***out***.println("Original String: " + input);

System.***out***.println("Sorted Characters: " + sortedString);

}

}

24. package Assign\_day3;

import java.util.Arrays;

public class SortAscendingArray {

public static void main(String[] args) {

int[] numbers = {40, 10, 30, 20, 50};

//

System.***out***.println("Original Array:");

for (int num : numbers) {

System.***out***.print(num + " ");

}

Arrays.*sort*(numbers);

System.***out***.println("\n\nSorted Array (Ascending Order):");

for (int num : numbers) {

System.***out***.print(num + " ");

}

}

}

25. package Assign\_day3;

import java.util.Arrays;

public class SplitSentence {

public static void main(String[] args) {

int[] numbers = {40, 10, 30, 20, 50};

//

System.***out***.println("Original Array:");

for (int num : numbers) {

System.***out***.print(num + " ");

}

Arrays.*sort*(numbers);

System.***out***.println("\n\nSorted Array (Ascending Order):");

for (int num : numbers) {

System.***out***.print(num + " ");

}

}

}

26. package Assign\_day3;

public class SumOfAllElements {

public static void main(String[] args) {

int[] numbers = {10, 20, 30, 40, 50};

int sum = 0;

for (int num : numbers) {

sum += num;

}

System.***out***.println("Array Elements: ");

for (int num : numbers) {

System.***out***.print(num + " ");

}

System.***out***.println("\nSum of all elements: " + sum);

}

}

28. package Assign\_day3;

public class SumOfAllElements {

public static void main(String[] args) {

int[] numbers = {10, 20, 30, 40, 50};

int sum = 0;

for (int num : numbers) {

sum += num;

}

System.***out***.println("Array Elements: ");

for (int num : numbers) {

System.***out***.print(num + " ");

}

System.***out***.println("\nSum of all elements: " + sum);

}

}

29. package Assign\_day3;

public class SwapWithThirdVariable {

public static void main(String[] args) {

int a = 5;

int b = 10;

int temp = a;

a = b;

b = temp;

System.***out***.println("After Swapping:");

System.***out***.println("a = " + a);

System.***out***.println("b = " + b);

}

}

30. package Assign\_day3;

public class WordCount {

public static void main(String[] args) {

String sentence = "Java is a powerful programming language";

String[] words = sentence.trim().split("\\s+");

int wordCount = words.length;

System.***out***.println("Sentence: " + sentence);

System.***out***.println("Word Count: " + wordCount);

}

}