**JAVA Arrays and String Test**

**1. Write a program to copy the elements of one array into another array**

**package** Test;

**public** **class** Aarray {

**public** **static** **void** main(String[] args) {

**int**[] sourceArray = {1, 2, 3, 4, 5};

**int**[] destinationArray = **new** **int**[sourceArray.length];

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

destinationArray[i] = sourceArray[i];

}

System.***out***.println("Elements of the destination array:");

**for** (**int** element : destinationArray) {

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

}

}

}

Elements of the destination array:

1. 2 3 4 5

2.Write a program to array elements print all Even number

package Test;

public class averagevalue {

public static void main(String[] args) {

int[] array = {5, 10, 15, 20, 25};

int sum = 0;

for (int number : array) {

sum += number;

}

double average = (double) sum / array.length;

System.out.println("Average value of array elements: " + average);

}

}

Original String: Hello World

Character Array:

H e l l o W o r l d

3.Write a program to array elements print all Odd number

**package** Test;

**public** **class** canonical {

**public** **static** **void** main(String[] args) {

String str1 = **new** String("Hello World");

String canonicalStr = str1.intern();

System.***out***.println("Original String: " + str1);

System.***out***.println("Canonical String: " + canonicalStr);

String str2 = "Hello World"; // This string is in the string pool

System.***out***.println("Are str1 and str2 the same reference? " + (str1 == str2));

System.***out***.println("Are canonicalStr and str2 the same reference? " + (canonicalStr == str2));

}

}

Original String: Hello World

Canonical String: Hello World

Are str1 and str2 the same reference? false

Are canonicalStr and str2 the same reference? true

4. Write a program to search an element in an array

**package** Test;

**public** **class** characterarray {

**public** **static** **void** main(String[] args) {

String originalString = "Hello World";

**char**[] charArray = originalString.toCharArray();

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

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

**for** (**char** c : charArray) {

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

}

}

}

Original String: Hello World

Character Array:

H e l l o W o r l d

5. Write a program to array elements to print sum of Negative Numbers

**package** Test;

**public** **class** charactersequence {

**public** **static** **void** main(String[] args) {

String str = "Hello World";

CharSequence charSeq = "Hello World";

**boolean** isEqual = str.contentEquals(charSeq);

**if** (isEqual) {

System.***out***.println("The string is equal to the specified character sequence.");

} **else** {

System.***out***.println("The string is NOT equal to the specified character sequence.");

}

}

}

The string is equal to the specified character sequence.

6. Write a program to Print Unique Elements in Array

**package** Test;

**public** **class** concatenate {

**public** **static** **void** main(String[] args) {

String str1 = "Hello";

String str2 = "World";

String concatenatedString = str1 + " " + str2;

System.***out***.println("Concatenated String: " + concatenatedString);

}

}

Concatenated String: Hello World

7. Write a program to array elements print all Positive number

**package** Test;

**public** **class** countnumber {

**public** **static** **void** main(String[] args) {

String inputString = "Hello World!";

// counts of uppercase and lowercase letters

**int** uppercaseCount = 0;

**int** lowercaseCount = 0;

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

**char** ch = inputString.charAt(i);

// Check is uppercase

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

uppercaseCount++;

}

// Check is lowercase

**else** **if** (Character.*isLowerCase*(ch)) {

lowercaseCount++;

}

}

System.***out***.println("Number of Uppercase Letters: " + uppercaseCount);

System.***out***.println("Number of Lowercase Letters: " + lowercaseCount);

}

}

Number of Uppercase Letters: 2

Number of Lowercase Letters: 8

8. Write a program to calculate the average value of array elements

**package** Test;

**public** **class** even {

**public** **static** **void** main(String[] args) {

**int**[] array = {10, 25, 30, 45, 60, 75};

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

**for** (**int** number : array) {

**if** (number % 2 == 0) {

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

}

}

}

}

Even numbers in the array:

10 30 60

9. Write a program in to find the sum of all elements of the array

**package** Test;

**public** **class** maximum {

**public** **static** **void** main(String[] args) {

String str1 = "apple";

String str2 = "banana";

**int** result = str1.compareTo(str2);

**if** (result > 0) {

System.***out***.println("Maximum String: " + str1);

} **else** **if** (result < 0) {

System.***out***.println("Maximum String: " + str2);

} **else** {

System.***out***.println("Both strings are equal.");

}

}

}

Maximum String: banana

10.Write a program to merge two arrays elements to store third array

**package** Test;

**public** **class** mergetwo {

**public** **static** **void** main(String[] args) {

**int**[] array1 = {1, 2, 3};

**int**[] array2 = {4, 5, 6};

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

**int** index = 0;

// Copy elements of array1

**for** (**int** element : array1) {

mergedArray[index++] = element;

}

// Copy elements of array2

**for** (**int** element : array2) {

mergedArray[index++] = element;

}

System.***out***.println("Merged array:");

**for** (**int** number : mergedArray) {

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

}

}

}

Merged array:

1 2 3 4 5 6

11.Write a program to get the canonical representation of the string object

**package** Test;

**public** **class** newstringrepeating {

**public** **static** **void** main(String[] args) {

String originalString = "Hello";

StringBuilder newString = **new** StringBuilder();

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

**char** ch = originalString.charAt(i);

newString.append(ch).append(ch);

}

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

System.***out***.println("New String: " + newString.toString());

}

}

Original String: Hello

New String: HHeelllloo

12.Write a program to check whether a given string ends with the contents of another string

**package** Test;

**public** **class** odd {

**public** **static** **void** main(String[] args) {

**int**[] array = {11, 22, 33, 44, 55, 66};

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

**for** (**int** number : array) {

**if** (number % 2 != 0) {

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

}

}

}

}

Odd numbers in the array:

11 33 55

13.Write a program to check whether two String objects contain the same data

**package** Test;

**public** **class** positive {

**public** **static** **void** main(String[] args) {

**int**[] array = {-4, 5, -9, 8, -3, 10};

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

**for** (**int** number : array) {

**if** (number > 0) {

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

}

}

}

}

Positive numbers in the array:

5 8 10

14.Write a program to count a number of Unicode code points in the specified text range of a String

**package** Test;

**import** java.util.Scanner;

**public** **class** searchelement {

**public** **static** **void** main(String[] args) {

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

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

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

**int** key = scanner.nextInt();

**boolean** found = **false**;

**for** (**int** element : array) {

**if** (element == key) {

found = **true**;

**break**;

}

}

**if** (found) {

System.***out***.println(key + " is found in the array.");

} **else** {

System.***out***.println(key + " is not found in the array.");

}

scanner.close();

}

}

Enter element to search: 23

23 is not found in the array.

15.Write a program to compare a given string to the specified character sequence

**package** Test;

**public** **class** stringends {

**public** **static** **void** main(String[] args) {

String mainString = "Hello World!";

String suffix = "World!";

**if** (mainString.endsWith(suffix)) {

System.***out***.println("The main string ends with the specified suffix.");

} **else** {

System.***out***.println("The main string does NOT end with the specified suffix.");

}

}

}

The main string ends with the specified suffix.

16.Write a program to concatenate Two strings

**package** Test;

**public** **class** stringobject {

**public** **static** **void** main(String[] args) {

String str1 = "Hello";

String str2 = "Hello";

**if** (str1.equals(str2)) {

System.***out***.println("Both strings contain the same data.");

} **else** {

System.***out***.println("The strings contain different data.");

}

}

}

Both strings contain the same data.

17.Write a program to Count Number of Uppercase and Lowercase letters

**package** Test;

**public** **class** sumelement {

**public** **static** **void** main(String[] args) {

**int**[] array = {7, 14, 21, 28, 35};

**int** sum = 0;

**for** (**int** number : array) {

sum += number;

}

System.***out***.println("Sum of all elements in the array: " + sum);

}

}

Sum of all elements in the array: 105

18.Write a program to create a character array containing the contents of a string

**package** Test;

**public** **class** sumofnegative {

**public** **static** **void** main(String[] args) {

**int**[] array = {-5, 3, -7, 9, -2, 6};

**int** sum = 0;

**for** (**int** number : array) {

**if** (number < 0) {

sum += number;

}

}

System.***out***.println("Sum of negative numbers: " + sum);

}

}

Sum of negative numbers: -14

19.Write a program to find maximum between two string

**package** Test;

**public** **class** unicode {

**public** **static** **void** main(String[] args) {

String str = "Hello World!";

**int** startIndex = 0;

**int** endIndex = str.length(); // You can change this range as needed

**int** codePointCount = str.codePointCount(startIndex, endIndex);

// Display the result

System.***out***.println("Number of Unicode code points in the specified range: " + codePointCount);

}

}

Number of Unicode code points in the specified range: 12

20.Write a program to create a new string repeating every character twice of a given string

**package** Test;

**import** java.util.HashSet;

**public** **class** unique {

**public** **static** **void** main(String[] args) {

**int**[] array = {2, 3, 5, 3, 7, 5, 9};

HashSet<Integer> uniqueElements = **new** HashSet<>();

**for** (**int** number : array) {

uniqueElements.add(number);

}

System.***out***.println("Unique elements in the array:");

**for** (**int** element : uniqueElements) {

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

}

}

}

Unique elements in the array:

2 3 5 7 9