**String, String buffer And String builder Examples In Java**

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**STRING**

1. **Counting the Number of Vowels**

public class StringOperations {

public static int countVowels(String str) {

int count = 0;

String vowels = "AEIOUaeiou";

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

if (vowels.indexOf(str.charAt(i)) != -1) {

count++;

}

}

return count;

}

Public static void main (String [] args) {

String str = "Hello World";

System.out.println("Number of vowels: " + countVowels(str)); // Output: 3

}

}

1. **Deleting a Specific Character**

public class StringOperations {

public static String deleteCharacter(String str, char ch) {

return str.replace(String.valueOf(ch), ""); // Removes all occurrences of the specified character

}

public static void main(String[] args) {

String str = "Hello World";

System.out.println("After deleting 'o': " + deleteCharacter(str, 'o')); // Output: Hell Wrld

}

}

1. **Finding the Frequency of Each Character**

public class StringOperations {

public static int[] characterFrequency(String str) {

int[] frequencyArray = new int[256]; // For ASCII characters only

// Increment frequency for each character

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

frequencyArray[ch]++;

}

return frequencyArray;

}

public static void main(String[] args) {

String str = "Hello World";

int[] frequencyArray = characterFrequency(str);

System.out.println("Character Frequencies:");

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

if (frequencyArray[i] > 0) {

System.out.println((char)i + ": " + frequencyArray[i]);

}

}

}

}

**STRINGBUFFER**

1. **Counting the Number of Vowels**

public class StringBufferOperations {

public static int countVowels(StringBuffer str) {

int count = 0;

String vowels = "AEIOUaeiou";

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

if (vowels.indexOf(str.charAt(i)) != -1) {

count++;

}

}

return count;

}

public static void main(String[] args) {

StringBuffer str = new StringBuffer("Hello World");

System.out.println("Number of vowels: " + countVowels(str)); // Output: 3

}

}

**2 ) Deleting a Specific Character**

public class StringBufferOperations {

public static StringBuffer deleteCharacter(StringBuffer str, char ch) {

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

if (str.charAt(i) == ch) {

str.deleteCharAt(i);

i--; // Adjust index after deletion

}

}

return str;

}

public static void main(String[] args) {

StringBuffer str = new StringBuffer("Hello World");

System.out.println("After deleting 'o': " + deleteCharacter(str, 'o')); // Output: Hell Wrld

}

}

**3 Finding the Frequency of Each Character**

public class StringBufferOperations {

public static int[] characterFrequency(StringBuffer str) {

int[] frequencyArray = new int[256]; // For ASCII characters

// Increment frequency for each character

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

char ch = str.charAt(i);

frequencyArray[ch]++;

}

return frequencyArray;

}

public static void main(String[] args) {

StringBuffer str = new StringBuffer("Hello World");

int[] frequencyArray = characterFrequency(str);

System.out.println("Character Frequencies:");

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

if (frequencyArray[i] > 0) {

System.out.println((char)i + ": " + frequencyArray[i]);

}

}

}

}

**STRINGBUILDER**

**1 ) Counting the Number of Vowels**

public class StringBuilderOperations {

public static int countVowels(StringBuilder str) {

int count = 0;

String vowels = "AEIOUaeiou";

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

if (vowels.indexOf(str.charAt(i)) != -1) {

count++;

}

}

return count;

}

public static void main(String[] args) {

StringBuilder str = new StringBuilder("Hello World");

System.out.println("Number of vowels: " + countVowels(str)); // Output: 3

}

}

1. **Deleting a Specific Character**

public class StringBuilderOperations {

public static StringBuilder deleteCharacter(StringBuilder str, char ch) {

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

if (str.charAt(i) == ch) {

str.deleteCharAt(i);

i--; // Adjust index after deletion

}

}

return str;

}

public static void main(String[] args) {

StringBuilder str = new StringBuilder("Hello World");

System.out.println("After deleting 'o': " + deleteCharacter(str, 'o')); // Output: Hell Wrld

}

}

**3 ) Finding the Frequency of Each Character**

public class StringBuilderOperations {

public static int[] characterFrequency(StringBuilder str) {

int[] frequencyArray = new int[256]; // Array to store character counts

// Loop through each character in the StringBuilder

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

char ch = str.charAt(i);

frequencyArray[ch]++; // Increment the count at the index of the character

}

return frequencyArray;

}

public static void main(String[] args) {

StringBuilder str = new StringBuilder("Hello World");

int[] frequencyArray = characterFrequency(str);

System.out.println("Character Frequencies:");

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

if (frequencyArray[i] > 0) { // Only print characters that appear

System.out.println((char) i + ": " + frequencyArray[i]);

}

}

}

}