# JAVA STRING PROGRAMS

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## Java String Programs:

**1. Write a java program to count the number of words in a string?**

```
class CountTheWords
{
   public static void main(String[] args)
   {
      System.out.println("Enter the string");
      Scanner sc = new Scanner(System.in);
      String s=sc.nextLine();
       int count = 1;
       for (int i = 0; i < s.length()-1; i++)
      {
         if((s.charAt(i) == ' ') && (s.charAt(i+1) != ' '))
         {
            count++;
         }
      }
       System.out.println("Number of words in a string = "+count);
   }
}
```

---

**2)Write a java program to find the duplicate words and their number of occurrences in a string?**

```
public class duplicateWordsInString
{
   static void duplicateWords(String inputString)
   {
      //Splitting inputString into words
      String[] words = inputString.split(" ");

      //Creating one HashMap with words as key and their count as value
```

```
    HashMap<String, Integer> wordCount = new HashMap<String, Integer>();
    //Checking each word
    for (String word : words)
    {
       //whether it is present in wordCount
       if(wordCount.containsKey(word.toLowerCase()))
       {
          //If it is present, incrementing it's count by 1
          wordCount.put(word.toLowerCase(), wordCount.get(word.toLowerCase())+1);
       }
       else
       {
          //If it is not present, put that word into wordCount with 1 as it's value
          wordCount.put(word.toLowerCase(), 1);
       }
    }
    //Extracting all keys of wordCount
    Set<String> wordsInString = wordCount.keySet();
    //Iterating through all words in wordCount
    for (String word : wordsInString)
    {
       //if word count is greater than 1
       if(wordCount.get(word) > 1)
       {
          //Printing that word and it's count
          System.out.println(word+" : "+wordCount.get(word));
       }
    }
 }
  public static void main(String[] args)
```

```
  {
     duplicateWords("Bread butter and bread");
     duplicateWords("Java is java again java");
     duplicateWords("Super Man Bat Man Spider Man");
  }
}
```

Output :

bread : 2

java : 3

man : 3

---

**3)Write a java program to reverse a string?**

```
String str = "MyJava";

char[] strArray = str.toCharArray();

for (int i = strArray.length - 1; i >= 0; i--)
{
    System.out.print(strArray[i]);     //Output : avaJyM
}
```

---

4) **Removing Duplicate Elements From ArrayList Using LinkedHashSet**

```
public class MainClass
{
    public static void main(String[] args)
    {
        //Constructing An ArrayList

        ArrayList<String> listWithDuplicateElements = new ArrayList<String>();

        listWithDuplicateElements.add("JAVA");

        listWithDuplicateElements.add("J2EE");

        listWithDuplicateElements.add("JSP");

        listWithDuplicateElements.add("SERVLETS");

        listWithDuplicateElements.add("JAVA");

        listWithDuplicateElements.add("STRUTS");

        listWithDuplicateElements.add("JSP");

        //Printing listWithDuplicateElements

        System.out.print("ArrayList With Duplicate Elements :");
```

```
        System.out.println(listWithDuplicateElements);

        //Constructing LinkedHashSet using listWithDuplicateElements

        LinkedHashSet<String> set = new LinkedHashSet<String>(listWithDuplicateElements);

        //Constructing listWithoutDuplicateElements using set

        ArrayList<String> listWithoutDuplicateElements = new ArrayList<String>(set);

        //Printing listWithoutDuplicateElements

        System.out.print("ArrayList After Removing Duplicate Elements :");

        System.out.println(listWithoutDuplicateElements);
    }
}
```

---

```
5)public class CountCharacterOccurence {

      /**
       * @param args
       */
      public static void main(String[] args) {
            // TODO Auto-generated method stub s.length() -
            String s = "Java is java again java again";

       int count = s.length() - s.replace("a", "").length();

       System.out.println("Number of occurances of 'a' in "+s+" = "+count);
      }

}
```

---

```
6)public class PromrammingExample
{
    public static void main(String[] args)
    {
        String s = "JAVAJ2EE";

        char[] c = s.toCharArray();

        for(int i = 0; i < c.length; i++)
        {
            for(int j = 0; j <= i; j++)
            {
                System.out.print(c[j]+" ");
            }
            System.out.println();
        }
    }
}
```

```
J
J A
J A V
```

```
J A V A
J A V A J
J A V A J 2
J A V A J 2 E
J A V A J 2 E E
```

**7)Write a Java program to print the current date in "dd MMM yyyy" format?**

```
public class CurrentDate
{
    public static void main(String[] args)
    {
        Date date = new Date();

        SimpleDateFormat formatter = new SimpleDateFormat("dd MMM yyyy");

        System.out.println(formatter.format(date));
    }
}
```

8)How To Reverse Each Word Of A String In Java?

```
public class ReverseEachWord
{
    static void reverseEachWordOfString(String inputString)
    {
        String[] words = inputString.split(" ");

        String reverseString = "";

        for (int i = 0; i < words.length; i++)
        {
            String word = words[i];

            String reverseWord = "";

            for (int j = word.length()-1; j >= 0; j--)
            {
                reverseWord = reverseWord + word.charAt(j);
            }

            reverseString = reverseString + reverseWord + " ";
        }

        System.out.println(inputString);

        System.out.println(reverseString);

        System.out.println("-------------------------");
    }

    public static void main(String[] args)
    {
        reverseEachWordOfString("Java Concept Of The Day");

        reverseEachWordOfString("Java J2EE JSP Servlets Hibernate Struts");
```

```
        reverseEachWordOfString("I am string not reversed");

        reverseEachWordOfString("Reverse Me");
    }
}
```

**Output :**

Java Concept Of The Day
avaJ tpecnoC fO ehT yaD

---

**9)Java Program To Convert Decimal To Binary :**

```
public class DecimalToBinary
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);

        //Taking input from the user

        System.out.println("Enter The Decimal Number : ");

        int inputNumber = sc.nextInt();

        //Copying inputNumber into copyOfInputNumber

        int copyOfInputNumber = inputNumber;

        //Initializing binary to empty string

        String binary = "";

        //Defining rem to store remainder

        int rem = 0;

        //See the below explanation to know how this loop works

        while (inputNumber > 0)
        {
            rem = inputNumber % 2;

            binary =  rem + binary;

            inputNumber = inputNumber/2;
        }

        System.out.println("Binary Equivalent of "+copyOfInputNumber+" is "+binary);
    }
}
```

---

**For Octal:**

```
while (inputNumber > 0)
```

```
        {
            rem = inputNumber%8;

            octal =  rem + octal;

            inputNumber = inputNumber/8;
        }
```

**10)Java Program To Count Occurrences Of Each Character In String :**

```
class EachCharCountInString
{
    static void characterCount(String inputString)
    {
        //Creating a HashMap containing char as a key and occurrences as  a value

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

        //Converting given string to char array

        char[] strArray = inputString.toCharArray();

        //checking each char of strArray

        for (char c : strArray)
        {
            if(charCountMap.containsKey(c))
            {
                //If char is present in charCountMap, incrementing it's count by 1

                charCountMap.put(c, charCountMap.get(c)+1);
            }
            else
            {
                //If char is not present in charCountMap,
                //putting this char to charCountMap with 1 as it's value

                charCountMap.put(c, 1);
            }
        }

        //Printing the charCountMap

        System.out.println(charCountMap);
    }

    public static void main(String[] args)
    {
       characterCount("Java J2EE Java JSP J2EE");

       characterCount("All Is Well");

       characterCount("Done And Gone");
    }
}
```

**Output :**

{E=4, 2=2, v=2, =4, P=1, S=1, a=4, J=5}
{W=1, =2, e=1, s=1, A=1, l=4, I=1}
{D=1, d=1, =2, G=1, e=2, A=1, n=3, o=2}

### 11) How To Convert String To Integer In Java?

```
public class StringToInteger
{
    public static void main(String[] args)
    {
        String s = "2015";

        int i = Integer.valueOf(s);

        System.out.println(i);          //Output : 2015
    }
}
```

### 12) How To Convert Integer To String In Java?

```
public class IntegerToString
{
    public static void main(String[] args)
    {
        int i = 2015;

        String s = String.valueOf(i);

        System.out.println(s);     //Output : 2015
    }
}
```

### 13) How To Swap Two String Variables Without Using Third Variable in Java?

```
public class SwapTwoStrings
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter First String :");

        String s1 = sc.next();

        System.out.println("Enter Second String :");

        String s2 = sc.next();

        System.out.println("Before Swapping :");

        System.out.println("s1 : "+s1);

        System.out.println("s2 : "+s2);

        //Swapping starts
```

```
        s1 = s1 + s2;

        s2 = s1.substring(0, s1.length()-s2.length());

        s1 = s1.substring(s2.length());

        //Swapping ends

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

        System.out.println("s1 : "+s1);

        System.out.println("s2 : "+s2);
    }
}
```