

# *Java Project*

## String in Java:

Generally, String is a sequence of characters. But in Java, string is an object that represents a sequence of characters. The `java.lang.String` class is used to create a string object.

How to create a string object?

There are two ways to create String object:

- By string literal     `String s="welcome";`
- By new keyword     `String s=new String("Welcome");`

## Java String format()

This method supports various data types and formats them into a string type.

| Format Specifier | Data Type                                                   | Output                                                                                                                   |
|------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| %a               | floating point (except <i>BigDecimal</i> )                  | Returns Hex output of floating point number.                                                                             |
| %b               | Any type                                                    | "true" if non-null, "false" if null                                                                                      |
| %c               | character                                                   | Unicode character                                                                                                        |
| %d               | integer (incl. byte, short, int, long, bigint)              | Decimal Integer                                                                                                          |
| %e               | floating point                                              | decimal number in scientific notation                                                                                    |
| %f               | floating point                                              | decimal number                                                                                                           |
| %g               | floating point                                              | decimal number, possibly in scientific notation depending on the precision and value.                                    |
| %h               | any type                                                    | Hex String of value from <code>hashCode()</code> method.                                                                 |
| %n               | none                                                        | Platform-specific line separator.                                                                                        |
| %o               | integer (incl. byte, short, int, long, bigint)              | Octal number                                                                                                             |
| %s               | any type                                                    | String value                                                                                                             |
| %t               | Date/Time (incl. long, Calendar, Date and TemporalAccessor) | %t is the prefix for Date/Time conversions. More formatting flags are needed after this. See Date/Time conversion below. |
| %x               | integer (incl. byte, short, int, long, bigint)              | Hex string.                                                                                                              |

## Java String length()

The `java string length()` method length of the string. It returns count of total number of characters. The length of java string is same as the unicode code units of the string.

### **Java String charAt()**

The Java String class charAt() method returns a char value at the given index number.

The index number starts from 0 and goes to n-1, where n is the length of the string. It returns StringIndexOutOfBoundsException, if the given index number is greater than or equal to this string length or a negative number.

### **Java String substring()**

The java string substring() method returns a part of the string.

We pass begin index and end index number position in the java substring method where start index is inclusive and end index is exclusive. In other words, start index starts from 0 whereas end index starts from 1.

### **Java String contains()**

The Java String class contains() method searches the sequence of characters in this string. It returns true if the sequence of char values is found in this string otherwise returns false.

### **Java String join()**

The java string join() method returns a string joined with given delimiter. In string join method, delimiter is copied for each elements.

delimiter : char value to be added with each element

### **Java String equals()**

The Java String class equals() method compares the two given strings based on the content of the string. If any character is not matched, it returns false. If all characters are matched, it returns true.

### **Java String isEmpty()**

The java string isEmpty() method checks if this string is empty or not. It returns true, if length of string is 0 otherwise false. In other words, true is returned if string is empty otherwise it returns false.

### **Java String concat()**

The Java String class concat() method combines specified string at the end of this string. It returns a combined string. It is like appending another string.

### **Java String replace()**

The java string replace() method returns a string replacing all the old char or CharSequence to new char or CharSequence.

### **Java String equalsIgnoreCase()**

The Java String class equalsIgnoreCase() method compares the two given strings on the basis of the content of the string irrespective of the case (lower and upper) of the string. It is just like the equals() method but doesn't check the case sensitivity. If any character is not matched, it returns false, else returns true.

### **Java String split()**

The java string split() method splits this string against given regular expression and returns a char array.