**CH 8: STRING HANDLING**

1) What is a string?

String is a sequence of characters. It is an immutable object in Java. Immutable simply

means unmodifiable or unchangeable. Once string object is created its data or state can't be

changed but a new string object is created.

2) What is string handling?

String Handling provides a lot of concepts that can be performed on a string such as concatenating string, comparing string, substring etc

3) What happens when we make a string?

Each time you create a string literal, the JVM checks the string constant pool first. If the string already exists in the pool, a reference to the pooled instance returns. If the string does not exist in the pool, a new String object instantiates, then is placed in the pool.

4) Where are string objects stored?

String objects are stored in a special memory area known as string constant pool inside the Heap memory.

5) Why does Java use the concept of string literal?

To make Java more memory efficient (because no new objects are created if it exists already in

string constant pool).

6) What is the difference between ==, .equals (), compareTo ()

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| == | .equals () | .compareTo () |
| The = = operator compares references not values. | equals() method compares the original content  of the string | compareTo() method compares strings lexicographically and  returns an int which tells if the values. It compares less than, equal, or greater than.  Suppose s1 and s2 are two string variables. If:  – s1 == s2 :0  – s1 > s2 :positive value  – s1 < s2 :negative value |
| Used in reference matching. | It is used in authentication. | It is used in sorting. |

7) Explain all string methods

All methods are stored in java.lang.String class

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| **S No.** | **Method & Description** |
| 1 | [**char charAt(int index)**](https://www.tutorialspoint.com/java/java_string_charat.htm)  Returns the character at the specified index. |
| 2 | [**int compareTo(Object o)**](https://www.tutorialspoint.com/java/java_string_compareto.htm)  Compares this String to another Object. |
| 3 | [**int compareTo(String anotherString)**](https://www.tutorialspoint.com/java/java_string_compareto_anotherstring.htm)  Compares two strings lexicographically. |
| 4 | [**int compareToIgnoreCase(String str)**](https://www.tutorialspoint.com/java/java_string_comparetoignorecase.htm)  Compares two strings lexicographically, ignoring case differences. |
| 5 | [**String concat(String str)**](https://www.tutorialspoint.com/java/java_string_concat.htm)  Concatenates the specified string to the end of this string. |
| 6 | [**boolean endsWith(String suffix)**](https://www.tutorialspoint.com/java/java_string_endswith.htm)  Tests if this string ends with the specified suffix. |
| 7 | [**boolean equals(Object anObject)**](https://www.tutorialspoint.com/java/java_string_equals.htm)  Compares this string to the specified object. |
| 8 | [**boolean equalsIgnoreCase(String anotherString)**](https://www.tutorialspoint.com/java/java_string_equalsignorecase.htm)  Compares this String to another String, ignoring case considerations. |
| 9 | [**int indexOf(int ch)**](https://www.tutorialspoint.com/java/java_string_indexof.htm)  Returns the index within this string of the first occurrence of the specified character. |
| 10 | [**int indexOf(int ch, int fromIndex)**](https://www.tutorialspoint.com/java/java_string_indexof_fromindex.htm)  Returns the index within this string of the first occurrence of the specified character, starting the search at the specified index. |
| 18 | [**int indexOf(String str)**](https://www.tutorialspoint.com/java/java_string_indexof_str.htm)  Returns the index within this string of the first occurrence of the specified substring. |
| 19 | [**int indexOf(String str, int fromIndex)**](https://www.tutorialspoint.com/java/java_string_indexof_strfromindex.htm)  Returns the index within this string of the first occurrence of the specified substring, starting at the specified index. |
| 21 | [**int lastIndexOf(int ch)**](https://www.tutorialspoint.com/java/java_string_lastindexof.htm)  Returns the index within this string of the last occurrence of the specified character. |
| 22 | [**int lastIndexOf(int ch, int fromIndex)**](https://www.tutorialspoint.com/java/java_string_lastindexof_chfromindex.htm)  Returns the index within this string of the last occurrence of the specified character, searching backward starting at the specified index. |
| 23 | [**int lastIndexOf(String str)**](https://www.tutorialspoint.com/java/java_string_lastindexof_str.htm)  Returns the index within this string of the rightmost occurrence of the specified substring. |
| 24 | [**int lastIndexOf(String str, int fromIndex)**](https://www.tutorialspoint.com/java/java_string_lastindexof_fromindex.htm)  Returns the index within this string of the last occurrence of the specified substring, searching backward starting at the specified index. |
| 25 | [**int length()**](https://www.tutorialspoint.com/java/java_string_length.htm)  Returns the length of this string. |
| 29 | [**String replace(char oldChar, char newChar)**](https://www.tutorialspoint.com/java/java_string_replace.htm)  Returns a new string resulting from replacing all occurrences of oldChar in this string with newChar. |
| 34 | [**boolean startsWith(String prefix)**](https://www.tutorialspoint.com/java/java_string_startswith.htm)  Tests if this string starts with the specified prefix. |
| 35 | [**boolean startsWith(String prefix, int toffset)**](https://www.tutorialspoint.com/java/java_string_startswith_prefixtoffset.htm)  Tests if this string starts with the specified prefix beginning a specified index. |
| 37 | [**String substring(int beginIndex)**](https://www.tutorialspoint.com/java/java_string_substring.htm)  Returns a new string that is a substring of this string. |
| 38 | [**String substring(int beginIndex, int endIndex)**](https://www.tutorialspoint.com/java/java_string_substring_beginendindex.htm)  Returns a new string that is a substring of this string. |
| 39 | [**char[] toCharArray()**](https://www.tutorialspoint.com/java/java_string_tochararray.htm)  Converts this string to a new character array. |
| 40 | [**String toLowerCase()**](https://www.tutorialspoint.com/java/java_string_tolowercase.htm)  Converts all of the characters in this String to lower case using the rules of the default locale. |
| 42 | [**String toString()**](https://www.tutorialspoint.com/java/java_string_tostring.htm)  This object (which is already a string!) is itself returned. |
| 43 | [**String toUpperCase()**](https://www.tutorialspoint.com/java/java_string_touppercase.htm)  Converts all of the characters in this String to upper case using the rules of the default locale. |
| 45 | [**String trim()**](https://www.tutorialspoint.com/java/java_string_trim.htm)  Returns a copy of the string, with leading and trailing whitespace omitted. |
| 46 | [**static String valueOf(primitive data type x)**](https://www.tutorialspoint.com/java/java_string_valueof.htm)  Returns the string representation of the passed data type argument. |