JAVA LAB WEEK-5 (2/3/2023) Batch – 1 Exercises

1) Write a java program to do the following operations:
   Take the input as Department of Computer Science and Engineering and print the result as DCSE.

2) Write a java program to count the number of words in a given string sentence and also reverse the words from it.

3) The split method in the String class returns an array of strings consisting of the substrings split by the delimiters. However, the delimiters are not returned. Implement the following new method that returns an array of strings consisting of the substrings split by the matching delimiters, including the matching delimiters.

   For example, split("ab#12#453", "#") returns ab, #, 12, #, 453 in an array

4) write a method that returns the longest common prefix of two strings. For example, the longest common prefix of distance and disinfection is dis. If the two strings don't have a common prefix, the method returns an empty string. Write a main method that prompts the user to enter two strings and displays their longest common prefix.

5) Write a method that returns a new string in which the uppercase letters are changed to lowercase and lowercase letters are changed to uppercase. Write a test program that prompts the user to enter a string and invokes this method, and displays the return value from this method

Use the below material for Reference:

java.lang.String	
+substring(beginIndex: int): String	Returns this string's substring that begins with the character at the specified beginIndex and extends to the end of the string, as shown in Figure 9.6.
+substring(beginIndex: int, endIndex: int): String	Returns this string's substring that begins at the specified beginIndex and extends to the character at index endIndex − 1, as shown in Figure 9.6. Note that the character at endIndex is not part of the substring.

java.lang.String	
+indexOf(ch: char): int	Returns the index of the first occurrence of ch in the string. Returns –1 if not matched.
+indexOf(ch: char, fromIndex: int): int	Returns the index of the first occurrence of ch after fromIndex in the string. Returns –1 if not matched.
+indexOf(s: String): int	Returns the index of the first occurrence of string s in this string. Returns –1 if not matched.
+indexOf(s: String, fromIndex: int): int	Returns the index of the first occurrence of string s in this string after fromIndex. Returns –1 if not matched.
+lastIndexOf(ch: int): int	Returns the index of the last occurrence of ch in the string. Returns –1 if not matched.
+lastIndexOf(ch: int, fromIndex: int): int	Returns the index of the last occurrence of ch before fromIndex in this string. Returns –1 if not matched.
+lastIndexOf(s: String): int	Returns the index of the last occurrence of string s. Returns –1 if not matched.
+lastIndexOf(s: String, fromIndex: int): int	Returns the index of the last occurrence of string s before fromIndex. Returns –1 if not matched.

E 9.8   The String class contains the methods for matching substrings.

java.lang.String	
+valueOf(c: char): String	Returns a string consisting of the character c.
+valueOf(data: char[]): String	Returns a string consisting of the characters in the array.
+valueOf(d: double): String	Returns a string representing the double value.
+valueOf(f: float): String	Returns a string representing the float value.
+valueOf(i: int): String	Returns a string representing the int value.
+valueOf(l: long): String	Returns a string representing the long value.
+valueOf(b: boolean): String	Returns a string representing the boolean value.

FIGURE 9.9   The String class contains the static methods for creating strings from primitive type values.

java.lang.String	
+toLowerCase(): String	Returns a new string with all characters converted to lowercase.
+toUpperCase(): String	Returns a new string with all characters converted to uppercase.
+trim(): String	Returns a new string with whitespace characters trimmed on both sides.
+replace(oldChar: char, newChar: char): String	Returns a new string that replaces all matching characters in this string with the new character.
+replaceFirst(oldString: String, newString: String): String	Returns a new string that replaces the first matching substring in this string with the new substring.
+replaceAll(oldString: String, newString: String): String	Returns a new string that replaces all matching substrings in this string with the new substring.
+split(delimiter: String): String[]	Returns an array of strings consisting of the substrings split by the delimiter.