

## Lab 22

**Instructions:** Complete the steps below. Be sure to upload a copy of all your source code (.java) files to the link on Brightspace by its deadline, so that you can receive credit for this lab.

1. Write a method that returns an array list of Character from a string using the following header:

```
public static ArrayList<Character> toCharacterArray(String s)
```

For example toCharacterArray("abc") returns an array list that contains characters 'a', 'b' and 'c'. Write a test method that prompts the user to enter a String. Call the method toCharacterArray() on the input string. Print the elements of the Character array list separated by exactly one space.

Here is a sample run:

Enter the input string: Stony Brook

Elements of the Character array list: S t o n y B r o o k

2. Given two ArrayLists of sorted strings (alphabetically ascending), write down a method to merge these sorted strings' ArrayLists into a single sorted ArrayList. The signature of the method is given below:

```
public static ArrayList<String> mergeList(ArrayList<String> lst1,  
ArrayList<String> lst2)
```

Write down a test method that tests the above method.

As an example if:

List1 has its elements: "Austin" "Dallas" "San Francisco" and

List2 has its elements : "Boston" "Chicago" "Denver" "Seattle" then the merged sorted list should have the elements in the following order : "Austin" "Boston" "Chicago", "Dallas" "Denver" "San Francisco" "Seattle"

**Grading Guidelines:** This lab is graded on a scale of **0-3 points**, assigned as follows:

- **0** - The student did not attend the lab,
- **3** - The solutions are complete OR the student spent the entire lab solving the required lab problems (in this case, the students may not arrive at the lab after the lab started and may not leave until the lab ends).