Lab 8 - Strings

CSE 110 Principles of Programming with Java
Spring 2021
Due April 4th 2021, 11:59PM Arizona Time

1   Lab Objectives

The following objectives will be met at the end of this lab -

- Declare and define String objects
- Find the length of a String object
- Use various String functions
- Perform String manipulation

1.1   Lab Objectives

The source code file **Lab8.java** that you will create in this section, is what you will upload as your submission file to Canvas by the due date for this lab. Please ensure that the source code runs on your machine and produces the correct output as required.

Overall Objective: **For this lab, you will accept two Strings from the user and then perform the following operations on them - find the length of the two Strings, determine if they are uppercase, lowercase or mixed case Strings and finally you will check if the two user-input Strings are equal or not.**

For this section, you will create a new project in your IDE called **Lab8** and create a source file called **Lab8.java** inside that project. The following requirements must be met to successfully complete this section -

Obj.1 [**1 point**] Within the **main()** function create an object of the **Scanner** class for user input.

Obj.2 [**2 points**] Within the **main()** function, create two **String** objects to hold the user input.

Obj.3 [**2 points**] Within the **main()** function, accept two Strings from the user using the **Scanner** object.

Obj.4 [**2 points**] Within the **main()** function, determine and display the length of the two user-input **String** objects.

Obj.5 [**5 points**] Within the **main()** function, determine if the user input Strings are alphanumeric or if they contain any special characters in them. Display a message letting the user what type of Strings have been entered.

Obj.6 [**(2+4) points**] Define a **static boolean** function called **compareStrings(String s1, String s2)** that returns **true** if the Strings **s1** and **s2** are the same.

Obj.7 [**2 points**] Within the **main()** function, call the function **compareStrings(...)** to compare and display if the two user input Strings are the same or not.

Note: You can use extra functions as you see fit. There is no limitation on how many functions you use to achieve the end result.

Once you are done editing your source code, make sure to save it (save often to prevent loss of data and work) and then compile your source code. The next step is to follow the submission guidelines in Section 2 of this document and turn your lab in.

1.2   Comment Header

Please include the following comment lines at the top of your **Lab8.java** file. Make sure you fill in the required fields as well.

Listing 1: Comment Header

```
1  // ================================
2  // Lab8.java
3  // Name :
4  // ASU ID:
5  // Time taken to complete this lab:
6  // ================================
```

2   Submission Guidelines

Please follow the guidelines listed below prior to submitting your source code file **Lab8.java** on Canvas -

1. Make sure that your source code file is named as **Lab8.java** prior to submitting.

2. Make sure that you have completed all the objectives listed in section 1.1.

3. Include the completed comment header shown in section 1.3 at the top of your source code file

4. Submit your **Lab8.java** file only to the Canvas link for Lab 8 by **April 4th 2021, 11:59PM Arizona Time**.

3   Grading Rubric

As noted in Section 1.1, each of the seven objectives have their own points. They are independent of each other and you will be scored for each objective that you complete successfully. Partial points will be awarded for partially completing objectives.