

IT2030 – Object Oriented Programming**Semester 1, 2024**

In this lab sheet, you will learn and practice how to use String, String buffer and String Builder class in JAVA. You are given a starter lab code in the course web. Download the project and continue in below exercises.

Exercise 01 - Immutability of Strings (Compulsory)

- I. Create a new String object str using the Following Methods. **(5 minutes)**
 - a. Using String Literal “Hello”
 - b. Using an Array of Characters {'H','e','l','l','o'}
 - c. Using another String object – String s = “Hello” and a String Literal

- II. Visit Java Docs and Check the String Class. ([String \(Java Platform SE 7 \) \(oracle.com\)](#)). Go to the concat() method ([String \(Java Platform SE 7 \) \(oracle.com\)](#)) and checkout the structure of concat() method. And try out the below exercise. **(20 Minutes)**
 - a. Use the String concat() method to concatenate str with “ World” to generate “Hello World” and Print str.
 - b. Similarly check the replace() method([String \(Java Platform SE 7 \) \(oracle.com\)](#)) and use replace method to replace 'H' with 'h' in str.
 - c. Did the Values Change?
 - d. If “No” explain why ? Think of how we can Fix it without using StringBuilder or StringBuffer?
 - e. If “Yes” explain why your values changed even though Strings are immutable.

Exercise 02- StringBuilder Class (Mutable, Non-Synchronized) ([StringBuilder \(Java Platform SE 7 \) \(oracle.com\)](#)) (15 mins) (Compulsory)

- I. Create a StringBuilder object with value “Hello ”. Browse the Javadoc or use eclipse tooltip if you are not sure how to Create a StringBuilder Object.
- II. Append the String “ World” to the StringBuilder object created in the above Question.
- III. Delete the word “Hello ” from the StringBuilder object.
- IV. Insert “Hi”
- V. Use Replace Method to replace “Hi” With “Hello”.