System Requirements Specification Index

For

String Manipulation with Special Characters

Version 1.0

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Table of Contents

USE CASE DESCRIPTION

System Requirements Specification

1 Project Abstract

This project focuses on manipulating strings that contain special characters. Special characters are non-alphanumeric symbols like punctuation marks, spaces, escape sequences, or any character other than letters and numbers.

2 Assessment Tasks

1. **Declare a variable:**
   - A variable named `str1` of `String` datatype, initialized with the value `Hello, World! How's everything?"`.
2. **Replace Special Characters:**
   - Remove all special characters from `str1`, keeping only letters and numbers.
   - Use `replaceAll("[^a-zA-Z0-9]", "")` to achieve this.
   - Store the result in a variable named `replaced` of `String` datatype.
3. **Escape Special Characters:**
   - Escape all special characters in `str1`, ensuring they are prefixed with `\`.
   - Use `replaceAll("[^a-zA-Z0-9]", "\\$0")` to achieve this.
   - Store the result in a variable named `escaped` of `String` datatype.
4. **Trim Leading and Trailing Special Characters:**
   - Remove any leading or trailing spaces in `str1` using `trim()`.
   - Store the result in a variable named `trimmed` of `String` datatype.
5. **Check if the String Contains Special Characters:**
   - Check if `str1` contains any special characters using `matches(".*[!@#$%^&*(),.?\":{}|<>].*")`.
   - Store the result in a variable named `hasSpecialChars` of `boolean` datatype.

Expected Output:

```
Replaced Special Characters: HelloWorldHowseverything
Escaped Special Characters: Hello$0$0World$0$0How$0s$0everything$0
Trimmed String: 'Hello, World! How's everything?'
Contains Special Characters: true
```

3 Template Code Structure

3.1 Package: com.yaksha.assignment.StringWithSpecialCharactersAssignment

Resources

Class/Interface	Description	Status
StringWithSpecialCharactersAssignment (class)	● Main class demonstrating string operations involving special characters, such as replacing, escaping, trimming, and checking for special characters in a string.	Need to be implemented.

4 Execution Steps to Follow

1. **All actions like build, compile, running application, running test cases will be through Command Terminal.**
2. **To open the command terminal the test takers, need to go to Application menu (Three horizontal lines at left top) □ Terminal □New Terminal.**
3. **This editor Auto Saves the code.**
4. **If you want to exit(logout) and continue the coding later anytime (using Save & Exit option on Assessment Landing Page) then you need to use CTRL+Shift+B-command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository. Else the code will not be available in the next login.**
5. **These are time bound assessments the timer would stop if you logout and while logging in back using the same credentials the timer would resume from the same time it was stopped from the previous logout.**
6. **To run your project use command:**

   ```
   mvn compile exec:java
   -Dexec.mainClass="com.yaksha.assignment.StringWithSpecialCharactersAssignment"
   ```

7. **To test your project test cases, use the command**

   ```
   mvn test
   ```

8. **You need to use CTRL+Shift+B - command compulsorily on code IDE, before final submission as well. This will push or save the updated contents in the internal git/repository, and will be used to evaluate the code quality.**