H006
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Signal Processing Lab

Subject- Virtual Instrumentation

EXPERIMENT NO. 8

Aim:
8a – Create a VI which consists of 2 string inputs. Find the length of each string input. The output string should be combining 2 strings and also find the length of the output string.
8b – Build a VI which finds the number of occurrences of a particular string in an array of string.

Software Used : PC with software (NI LabVIEW)

Theory:
In LabVIEW, a string is a data type that represents a sequence of characters. Strings can be created by typing text directly into a string constant or control, or by converting other data types, such as numeric values, into strings using the "String" function.
LabVIEW provides a variety of functions for manipulating strings, including:
1. "Length": Returns the number of characters in a string.
2. "Concatenate Strings": Combines two or more strings into a single string.
3. "Search and Replace String": Searches a string for a specified substring and replaces it with another substring.
4. "Split String": Separates a string into multiple substrings based on a specified delimiter.
5. "Format Into String": Converts numeric or other data types into a string with specified formatting.
6. "Substring": Returns a portion of a string, specified by a starting index and a length.
7. "To Upper/Lower Case": Converts a string to all upper or lower case.
8. "Trim Whitespace": Removes leading and trailing whitespace characters from a string.

These functions can be found in the "String" palette in the LabVIEW Functions palette. In addition to these basic string functions, LabVIEW also provides more advanced functions for working with regular expressions, which allow you to search for patterns within strings. Regular expressions can be used to perform complex searches and manipulations on strings, such as finding all email addresses in a block of text or removing all non-alphanumeric characters from a string.
Overall, strings are a fundamental data type in LabVIEW, and the ability to manipulate them using a variety of built-in functions can be a powerful tool for building complex applications.

Front Panel:

Exp 8a: Create a VI which consists of 2 string inputs. Find the length of each string input. The output string should be combining 2 strings and also find the length of the output string.
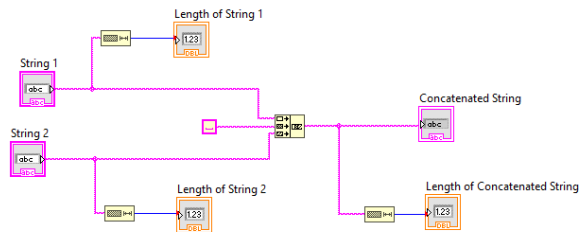
String 1

Adnan Made

Length of String 1

10

String 2

This Program

Length of String 2

12

Concatenated String

Adnan Made This Program

Length of Concatenated String

23

Exp 8b: Build a VI which finds the number of occurrences of a particular string in an array of string
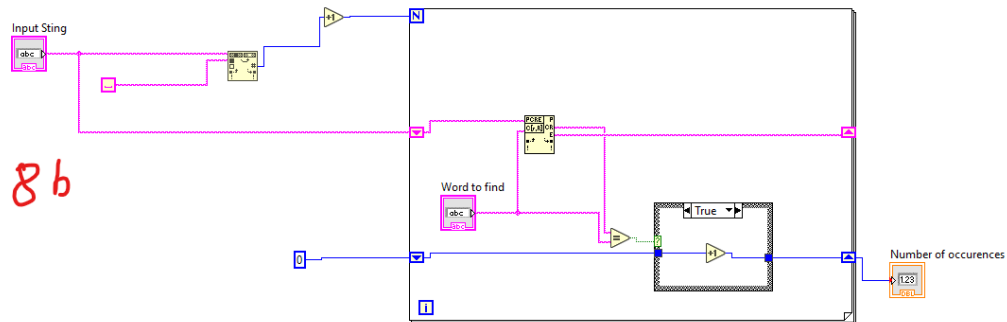
Input Sting

defeat the defeat before the defeat defeat you

Word to find

defeat

Number of occurences

4

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Block Diagram:

8a

8b

Output :

Exp 8a: Create a VI which consists of 2 string inputs. Find the length of each string input.
The output string should be combining 2 strings and also find the length of the output string.

String 1	Length of String 1
Adnan Made	10

String 2	Length of String 2
This Program	12

Concatenated String	Length of Concatenated String
Adnan Made This Program	23

Exp 8b: Build a VI which finds the number of occurrences of a particular string in an array of string

Input Sting
defeat the defeat before the defeat defeat you

Word to find
defeat

Number of occurences
4

Conclusion: The experiment was successfully performed in LabView.

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