

Aim: To perform String operations Using embedded in Lab view software (i.e String Length operation)

Algorithm :

- 1) Open LabVIEW and create a new VI
- 2) Add a string control from the Controls Palette to the front panel and name it "Input String"
- 3) Add a String Length function from the Functions Palette to the block diagram.
- 4) Connect the "Input String" control to the input of the String Length function.
- 5) Add a Numeric Indicator to the front panel, name it "String length" and connect it to the output of the String Length function

Result: Thus, the a VI performs String Length operation and display the result Using LABVIEW

String

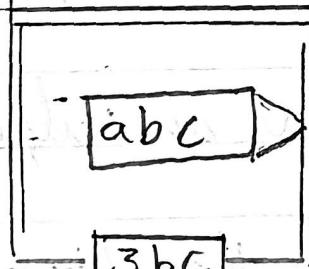
Hello world!

length

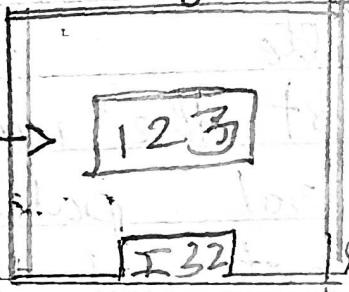
12

String

String length



3bc



123

32

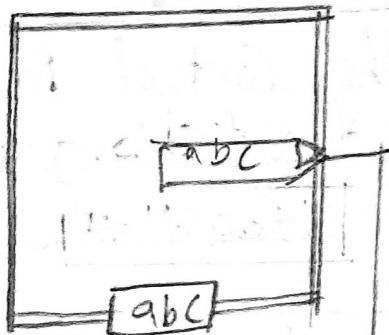
Aim : To build a VI that performs string concatenation and display the result using LABVIEW

Algorithm :

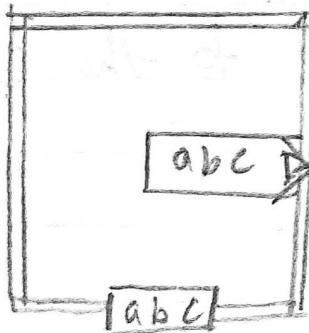
- 1) Open LabVIEW and create a new VI
- 2) Add two String Controls to the front panel. name them "String 1" and "String 2"
- 3) Add a Concatenate Strings function from the Functions Palette to the block diagram.
- 4) Connect the "String 1" and "String 2" controls to the inputs of the Concatenate Strings function.
- 5) Add a String Indicator to the front panel. name it "Concatenated String" and connect it to the output of the Concatenate Strings function.

Result : Thus, a VI performs String Concatenation Operation and displays the result using LABVIEW.

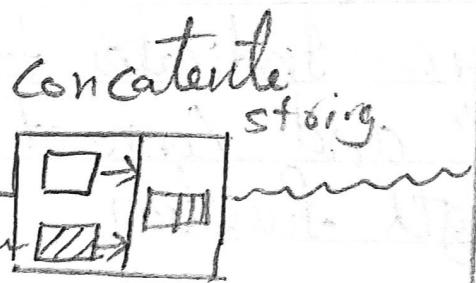
String Control 1



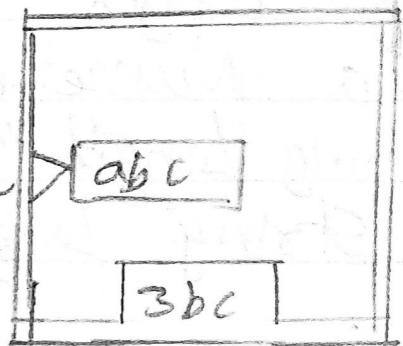
String Control 2



Palette: Programming/String



concatenated string indicated



Expt. No.: 7(c)

Expt. Name:

Ques: To build a VI that performs substring or slicing operation and display the result using LABVIEW

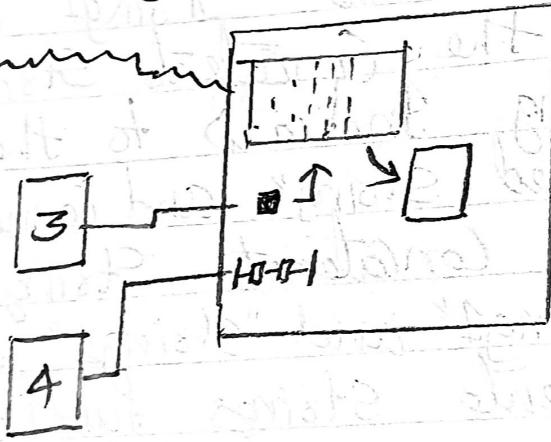
Procedure :

- 1) Open LabVIEW and create a new VI
- 2) Add a String Control to the front panel and name it "Input String"
- 3) Add two Numeric Controls to the front panel, name them "Start Index" and "Length"
- 4) Add a String Subset function from the Functions Palette to the block diagram
- 5) Connect the "Input String" control to the input of the String Subset function
- 6) Connect the "Start Index" and "Length" controls to the corresponding inputs of the String Subset function
- 7) Add a String Indicator to the front panel, name it "Substrin" and connect it to the output of the String Subset function.

Result: Thus, a VI performs String subset operation and displays the result using LABVIEW.

Lab view

String subset



Substring

view

Aim : To perform LED ON/OFF switch using Labview S/w

Algorithm :

1) Start the LabVIEW S/w

2) Click on File > New VI to create a new Virtual Instrument(VI)

3) Add Boolean Control

Drag and drop a Boolean control from the Controls Palette onto the front panel. Name it "LED SWITCH"

4) Add DAQ Assistant :

On the block diagram, right-click and select Measurement I/O > DAQmx Assistant

5) Configure DAQ Assistant to control a digital o/p channel.

Select the appropriate Arduino pin connected to the LED

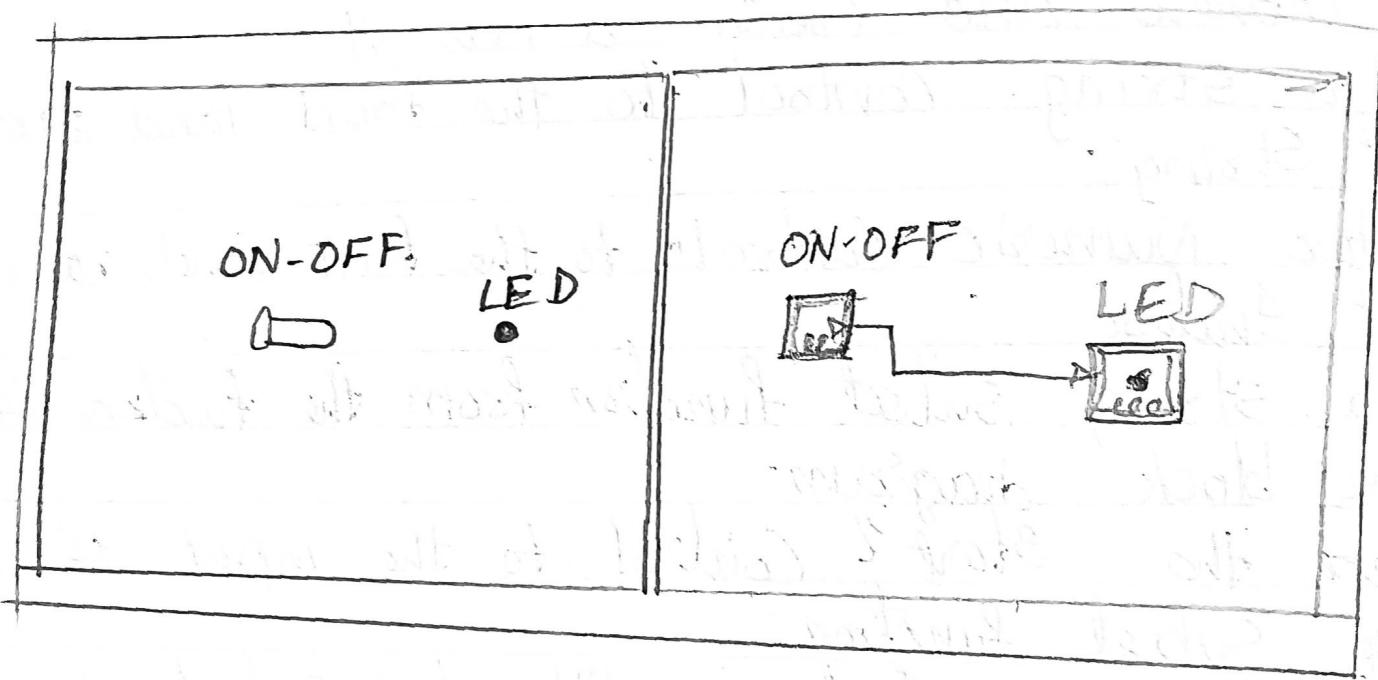
6) Connect the output of the "LED SWITCH" Boolean Control to the i/p of the DAQ Assistant

7) Click the run arrow on the toolbar to execute the VI

Use the "LED SWITCH" control on the front panel to toggle the LED ON and OFF

8) Ensure the LED responds correctly to the ON/OFF commands from the LabVIEW VI.

Result : Thus, a VI performs LED ON/OFF switch operation and displays the result using LabVIEW.



Aim: To design a traffic signal light using embedded components in LabVIEW S/W

Algorithm:

- 1) Open LabVIEW and create a new VI
- 2) Go to the Block diagram, from the Functions Palette navigate to MakerHub > LINX > Initialize
- 3) Place the LINX-Initialize block on the block diagram
- 4) From the Functions Palette, navigate to MakerHub > LINX > Digital. Place three Digital Write blocks on the block diagram.
- 5) Set the pins for each Digital Write block
 - Pin 2 for Red LED
 - Pin 3 for yellow LED
 - Pin 4 for Green LED

Connect each Digital Write block to the LINX-Initialize block

4) Create Traffic Light logic

Use the Sequence Structure from the Functions Palette to create a sequence of frames.

In Frame 0 - set the Red LED to HIGH, Yellow and Green to Low

Add Wait(ms) function (from Programming > Timing) and set it to 5000ms

In Frame 1 - Set the Red LED to Low, Green LED to HIGH

Add Wait (ms) function and set it to 5000 ms.

In Frame 2 - Set the Green LED to Low, RED LED to HIGH

Add a Wait (ms) function and set it to 2000 ms

In Frame 3 - set the yellow LED to low, Red LED to HIGH

Add a wait (ms) function and set it to 5000 ms

