Home/Student Edition
Producer/Consumer Design Pattern (Events)
C:\Users\Benny Aw\Desktop\Labview\Simple-Calculator-LABVIEW-\calculator.vi
Last modified on 3/2/2020 at 10:41 AM
Printed on 3/2/2020 at 10:43 AM

Page 1

Connector Pane

Producer/Consumer Design Pattern (Events)

Use this template to build a producer/consumer design pattern with events to produce queue items. Use this design pattern instead of the User Interface Event Handler pattern for user interfaces when you want to execute code asynchronously in response to an event without slowing the user interface responsiveness.

Front Panel

Screen

OFF

7	8	9	/
4	5	6	X
1	2	3	-

| 0 | . | + |

=

error out

status   code

✔   0

source

NATIONAL INSTRUMENTS
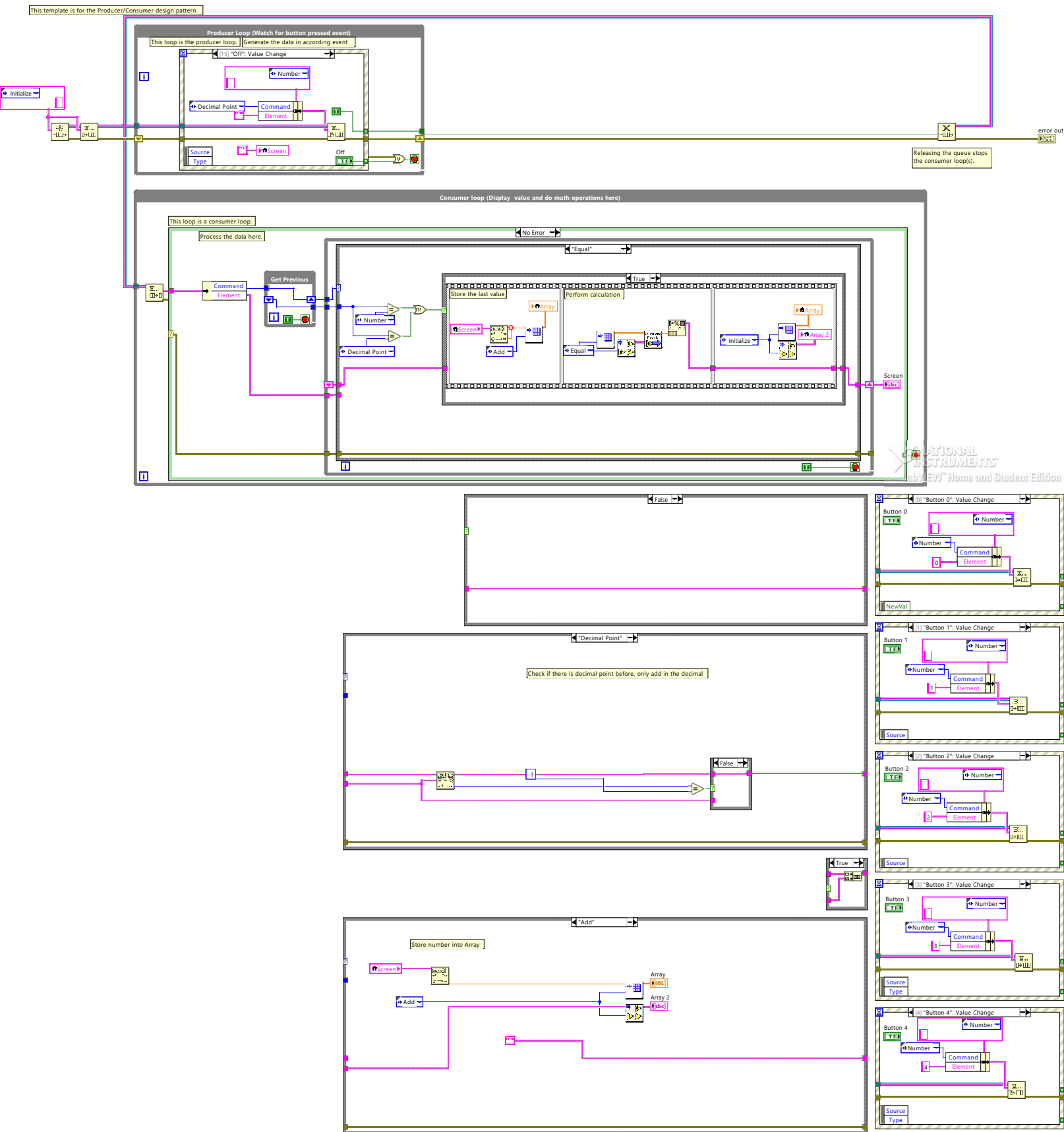LabVIEW™ Home and Student Edition

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Block Diagram

This template is for the Producer/Consumer design pattern.

Producer Loop (Watch for button pressed event)
This loop is the producer loop. Generate the data in according event

[15] "Off": Value Change

Number

Decimal Point

Command Element

Source Type

Screen

Off

Initialize

Releasing the queue stops the consumer loop(s).

error out

Consumer loop (Display value and do math operations here)
This loop is a consumer loop.
Process the data here.

No Error

"Equal"

True

Command Element

Get Previous

Number

Decimal Point

Store the last value

Array

Screen

Add

Perform calculation

Equal

Array

Array 2

Initialize

Screen

False

"Decimal Point"
Check if there is decimal point before, only add in the decimal

-1

False

"Add"
Store number into Array

Screen

Array

Add

Array 2

[0] "Button 0": Value Change
Button 0
Number
Number
Command Element
0
NewVal

[1] "Button 1": Value Change
Button 1
Number
Number
Command Element
1
Source

[2] "Button 2": Value Change
Button 2
Number
Number
Command Element
2
Source

True

[3] "Button 3": Value Change
Button 3
Number
Number
Command Element
3
Source Type

[4] "Button 4": Value Change
Button 4
Number
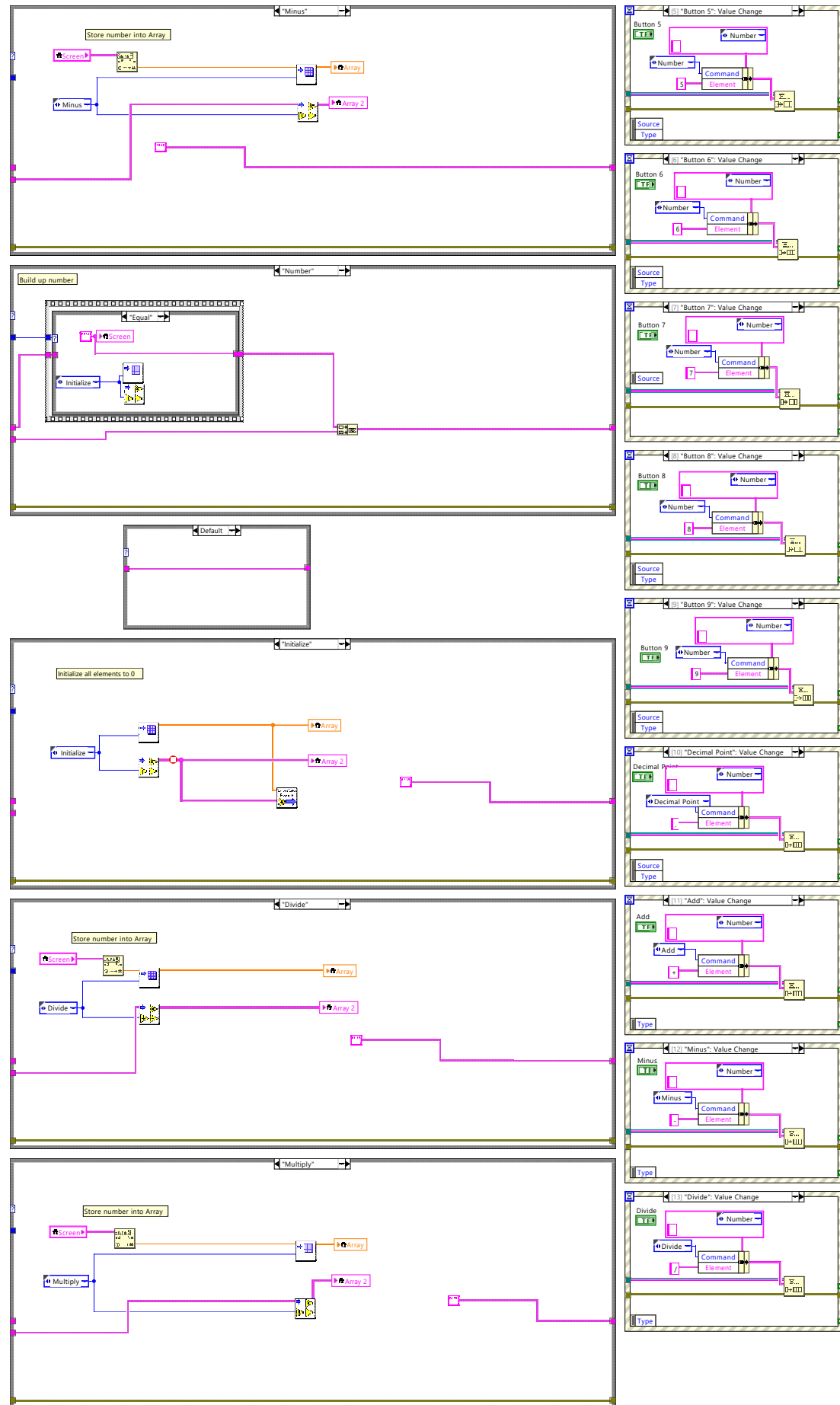Number
Command Element
4
Source Type

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Error

Return true in any case that should stop the loop.

Initialize

[14] "Multiply": Value Change

Multiply

Number

Multiply

Command

Element

Type

[16] "Equal": Value Change

Equal

Number

Equal

Command

Element

Source
Type