# CLAD Sample Exam 06

1. Which of the following user interface events will allow your code to respond before LabVIEW performs the default action associated with that event?

    A. Mouse Down

    B. Panel Resize

    C. Panel Close?

    D. Value Change

2. The **Trigger** control is configured with a switching mechanical action. The VI's requirement is to display a **Count** value that tracks the number of "value change" events, for changes to TRUE, that occur for the **Trigger**.
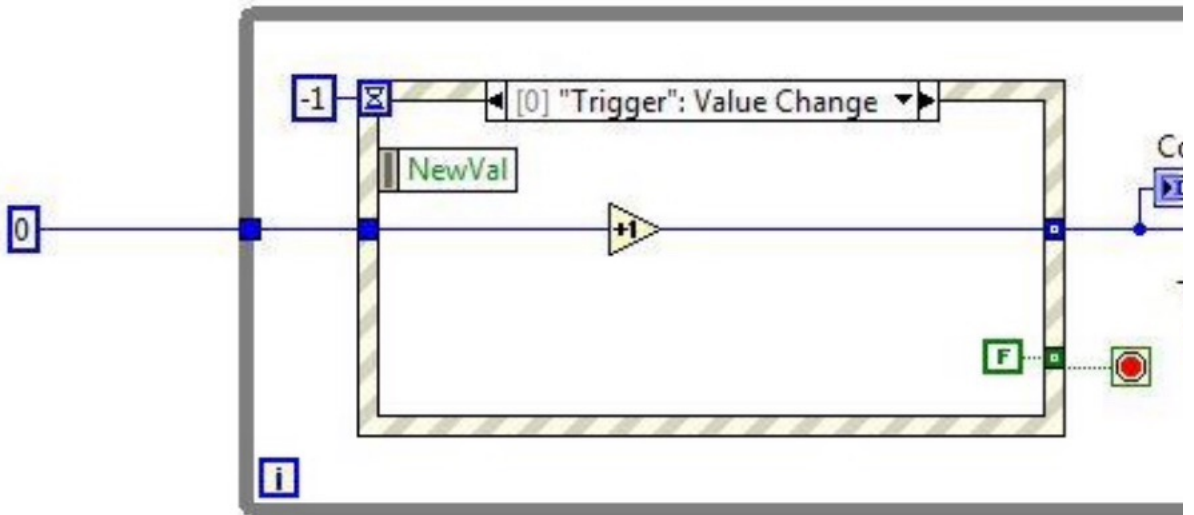   Which of the code snippets meets that requirement when the VI is run?
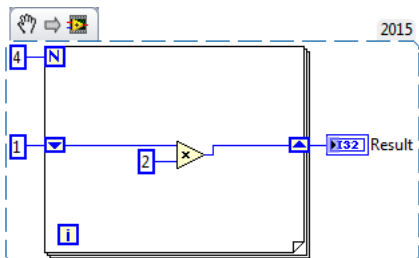
    A.
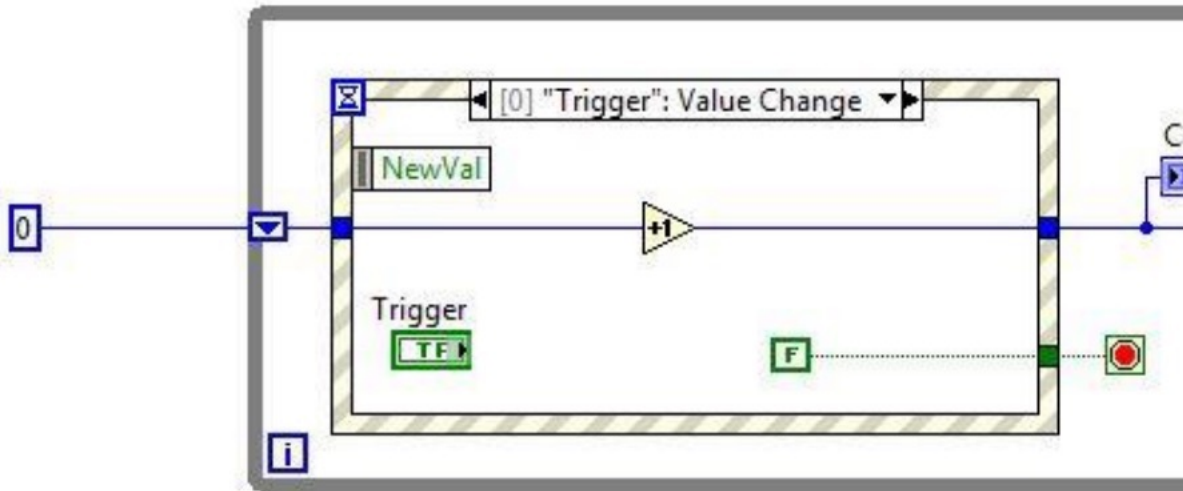


    B.
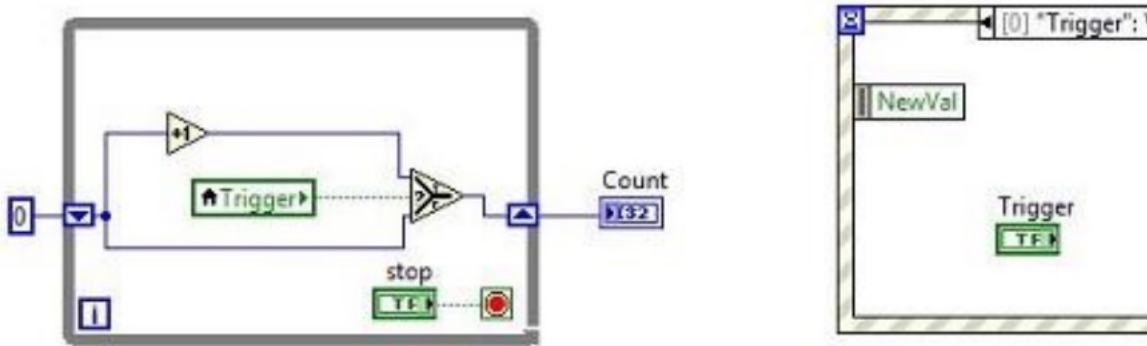
C.
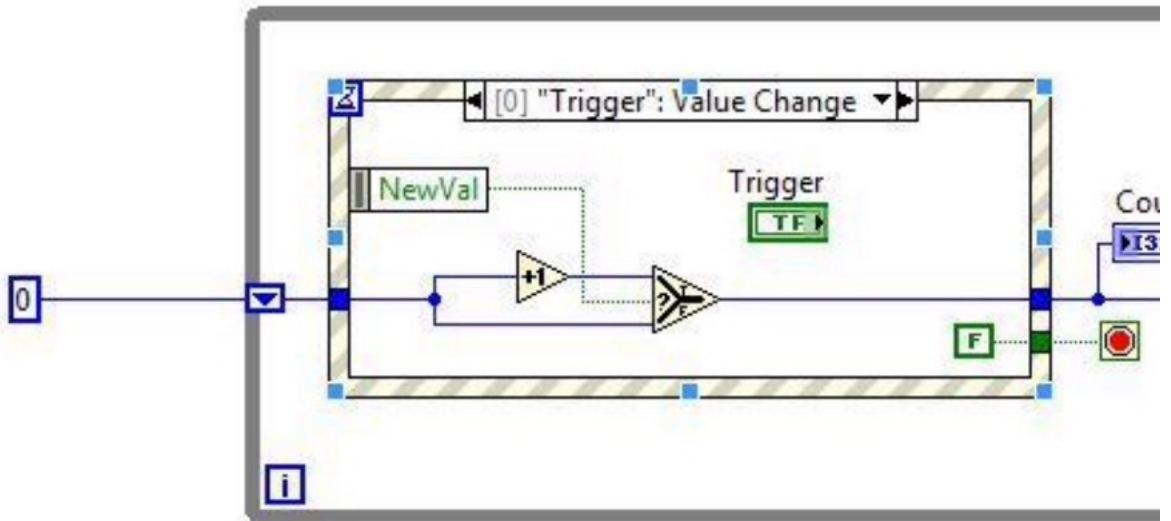


D.



3. What is the value in the **Result** indicator after the VI completes execution?
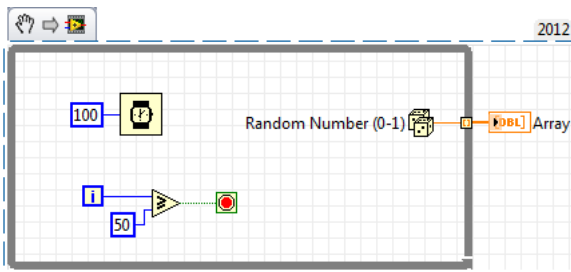
A. 16

B. 24

C. 32

D. 10

4. Which of the following terminals cannot control how many times a For loop executes?

A. 

B. 

C. 

D. 

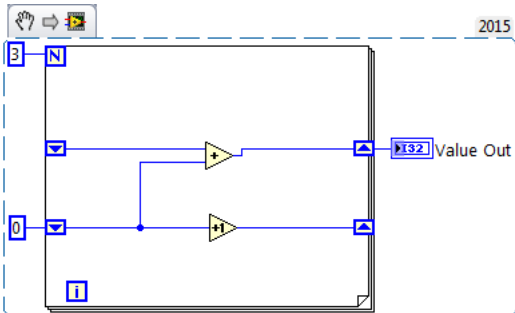5. Which of the following statements is **TRUE** regarding the execution of the following code?



A. The loop will iterate 51 times.

B. The loop will iterate 50 times.

C. The loop will iterate 49 times.

D. A random number of times

6. The VI is open and run twice without being closed or modified.

What value is displayed in the **Value Out** indicator after the second execution of the VI?



A. 3

B. 4

C. 5

D. 6

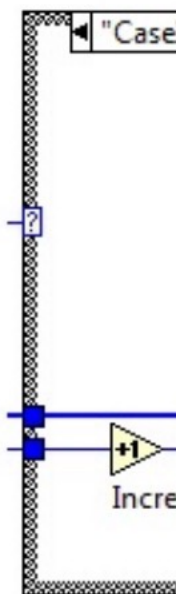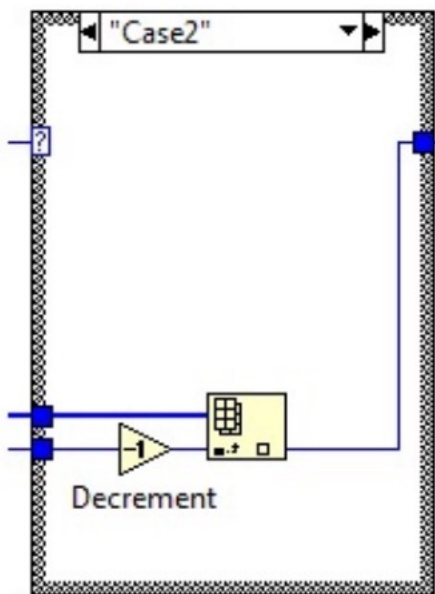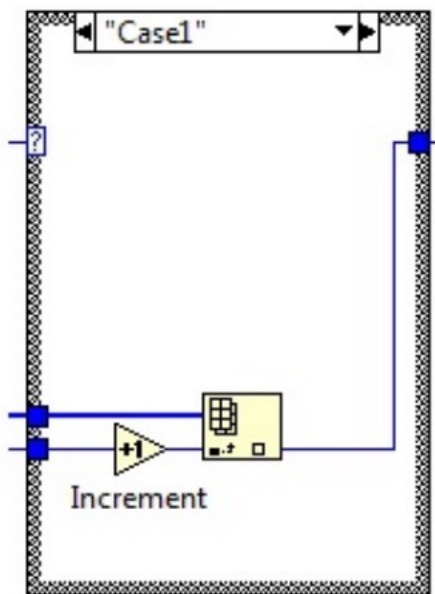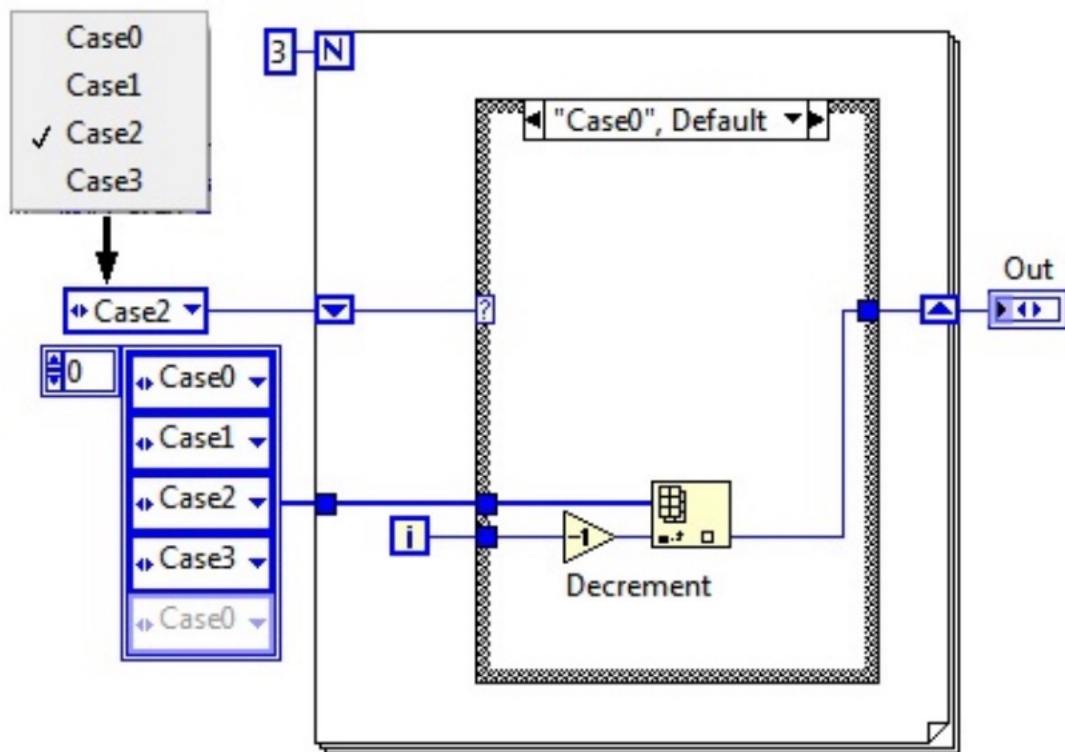7. What value is displayed in the **Numeric** indicator after the VI executes?
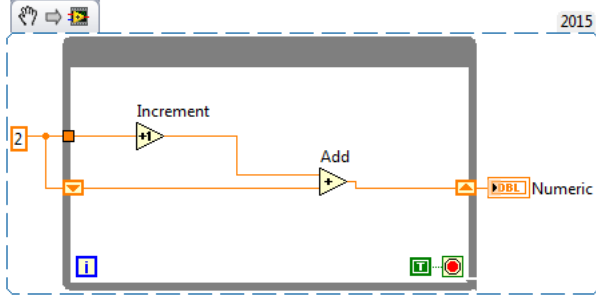

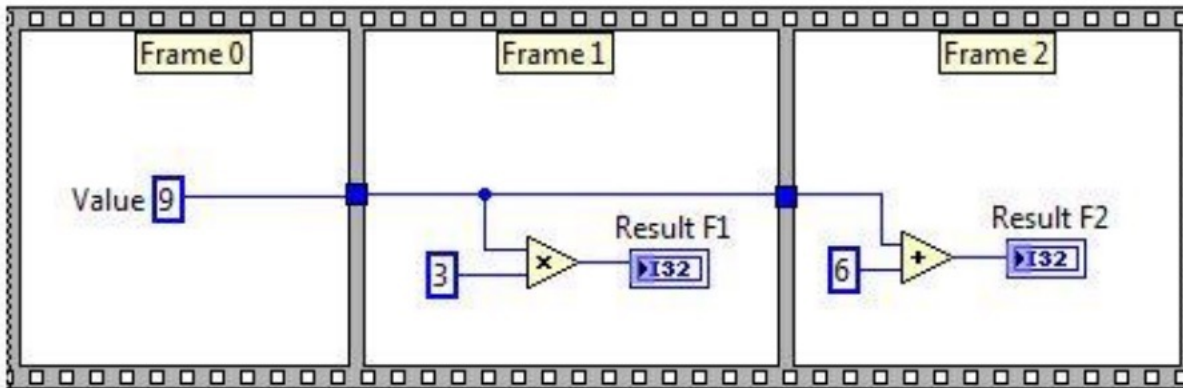
A. 0

B. 4

C. 5

D. The While Loop iterates indefinitely

8. What value will be displayed in the Out indicator when this VI completes execution?

A. Case 0

B. Case 1

C. Case 2

D. Case 3

9. Which code snippet is functionally equivalent to this sequence structure?



A.



B.



C.

Value 9

Frame 0

3

×

Result F1

I32

Frame 1

Result F2

6

+

I32

D.

Value 9

Frame 0

3

×

Result F1

I32

Frame 1

Result F2

6

+

I32
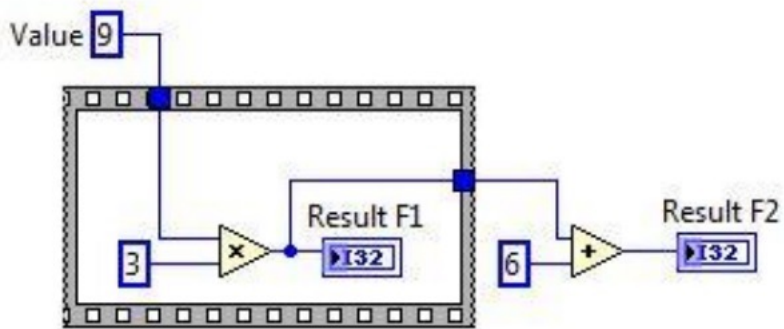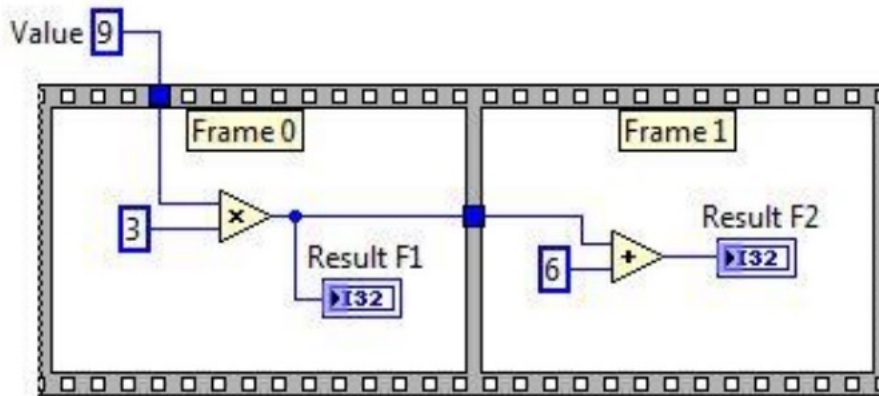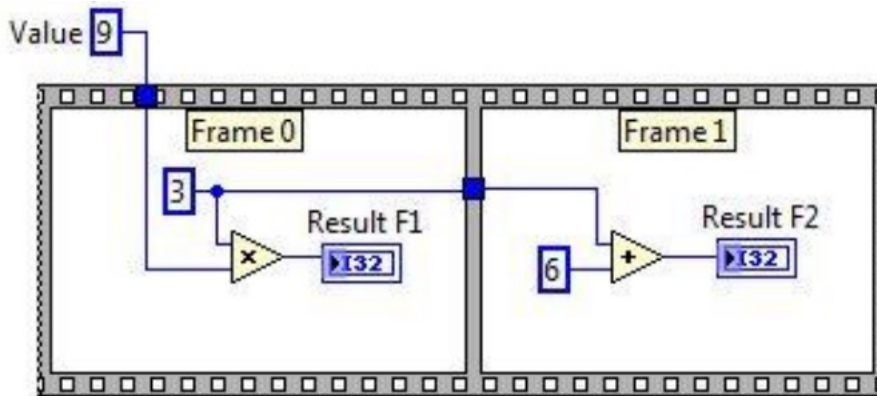
10. The Wait function can be added to While Loops:

    A. To free up available memory.

    B. To allocate memory used by the CPU.

    C. To allow the processor time to complete other tasks.

    D. To reserve which processor the code is running on.

11. While the VI executes, the user presses and then releases **Boolean Control** with Switch Until Released mechanical action. The starting value of **Boolean Control** is FALSE.
What value does the **Result** indicator display after execution?

switch until released    Boolean Control

OK

2013

[0] "Boolean Control": Value Change

Boolean Control **TF**

0

+1

I32 Result

NewVal

i
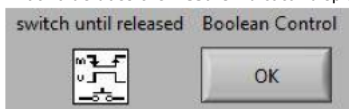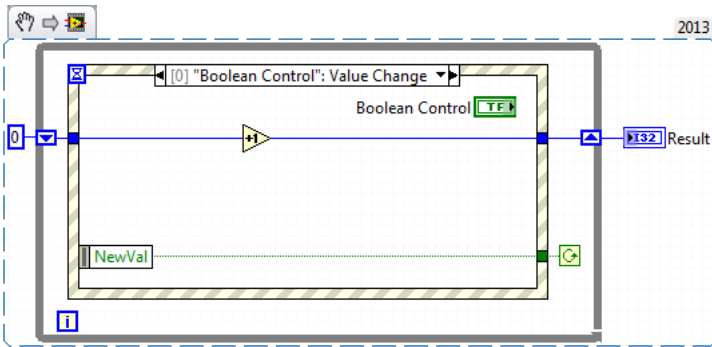
A. 0

B. 1

C. 2

D. 3

12. What value is displayed in the **X+Y** indicator after the code completes execution?

2012

0

80
20

40
10
-60

0

+

I32 x+y

A.

X+Y

0

80
20
40
10
-60
0

B.

X+Y

0

120
30
-60
0

C.

|  | X+Y | | | |
|---|---|---|---|---|
| 0 | 120 | | | |
|  | 30 | | | |
|  | 0 | | | |

D.

|  | X+Y | | | |
|---|---|---|---|---|
| 0 | 120 | 90 | 20 | 0 |
| 0 | 60 | 30 | -40 | 0 |
|  | 0 | 0 | 0 | 0 |
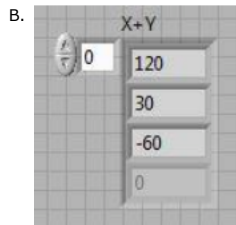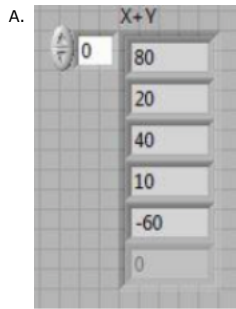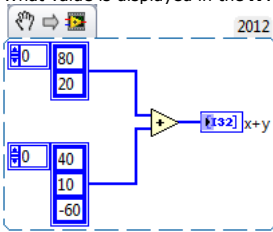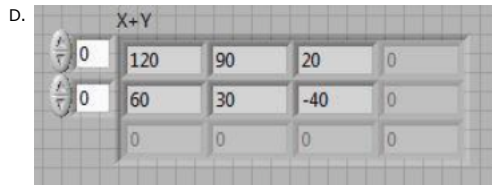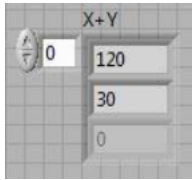
13. Why does an error occur when the code executes?



A. File path not wired to the input of the Open/Create/Replace File function.

B. File opened with the incorrect access.

C. File reference not closed.

D. File data type is incorrect.

14. Which equation is equivalent to the code?



A. $x = \dfrac{1}{((a+b+c+d)^2+d)-a}$

B. $x = \dfrac{1}{d-(a+b+c+d)^2+a}$

C.

$$x = \dfrac{1}{a - \left((a+b+c+d)^2 + d\right)}$$

D.

$$x = \dfrac{1}{a - \left(\left(a^2+b^2+c^2+d^2\right)+d\right)}$$

15. What value will be displayed in the **Numeric** indicator when the VI completes execution?

2015

3—N

i—N

Decrement

5

Numeric

i

A. 0

B. 1

C. 2

D. 4

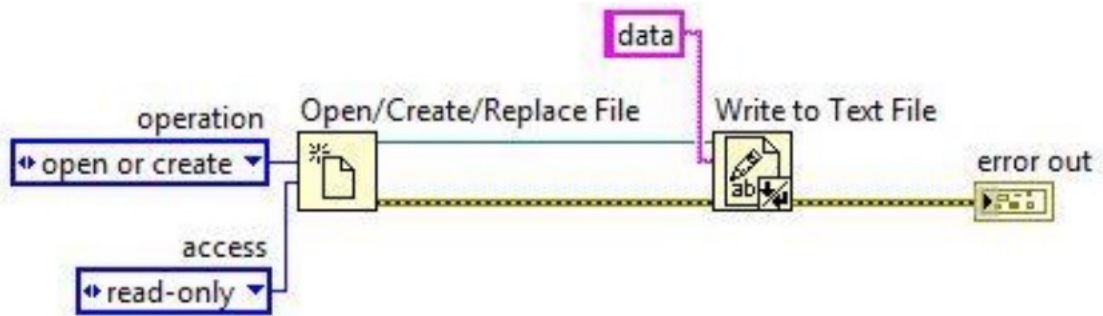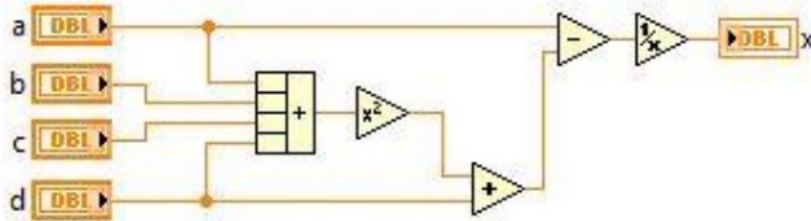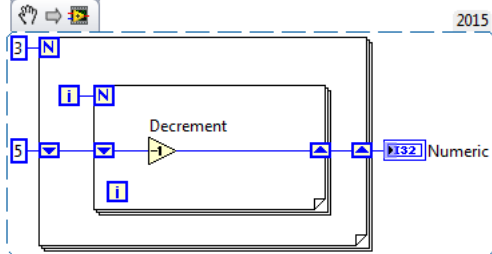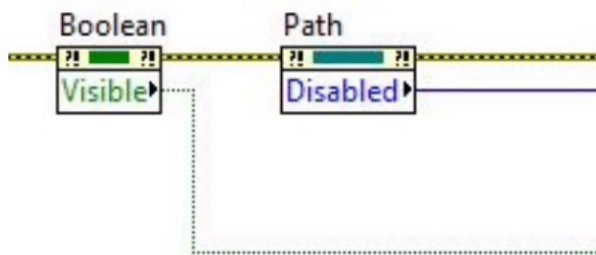16. You are creating a SubVI by selecting a portion of code from an existing VI. The selection contains an implicitly linked property node and an implicitly linked invoke node for two different front panel controls.
What new items are placed on the block diagram of the existing VI when the SubVI is created?

Boolean          Path

Visible          Disabled

A. Local Variables are added for property and invoke nodes

B. Global Variables are added for property and invoke nodes

C. Control References are added for property and invoke nodes

D. Control Terminals are added for property and invoke nodes

17. What is the best choice for the case selector input for a Functional Global Variable design pattern?

A.

"Initialize"

Enum

B.

"Initialize"

Enum

C.

"Initialize"

String

D.

"Initialize"

String
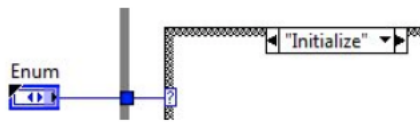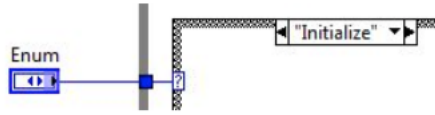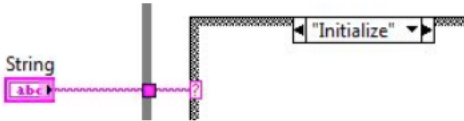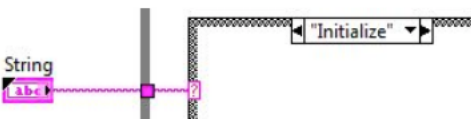
18. Which component is not required for a state machine?

    A.  Case Structure

    B.  While Loop

    C.  Enum

    D.  Shift Register

19. What is the name of this common design pattern?
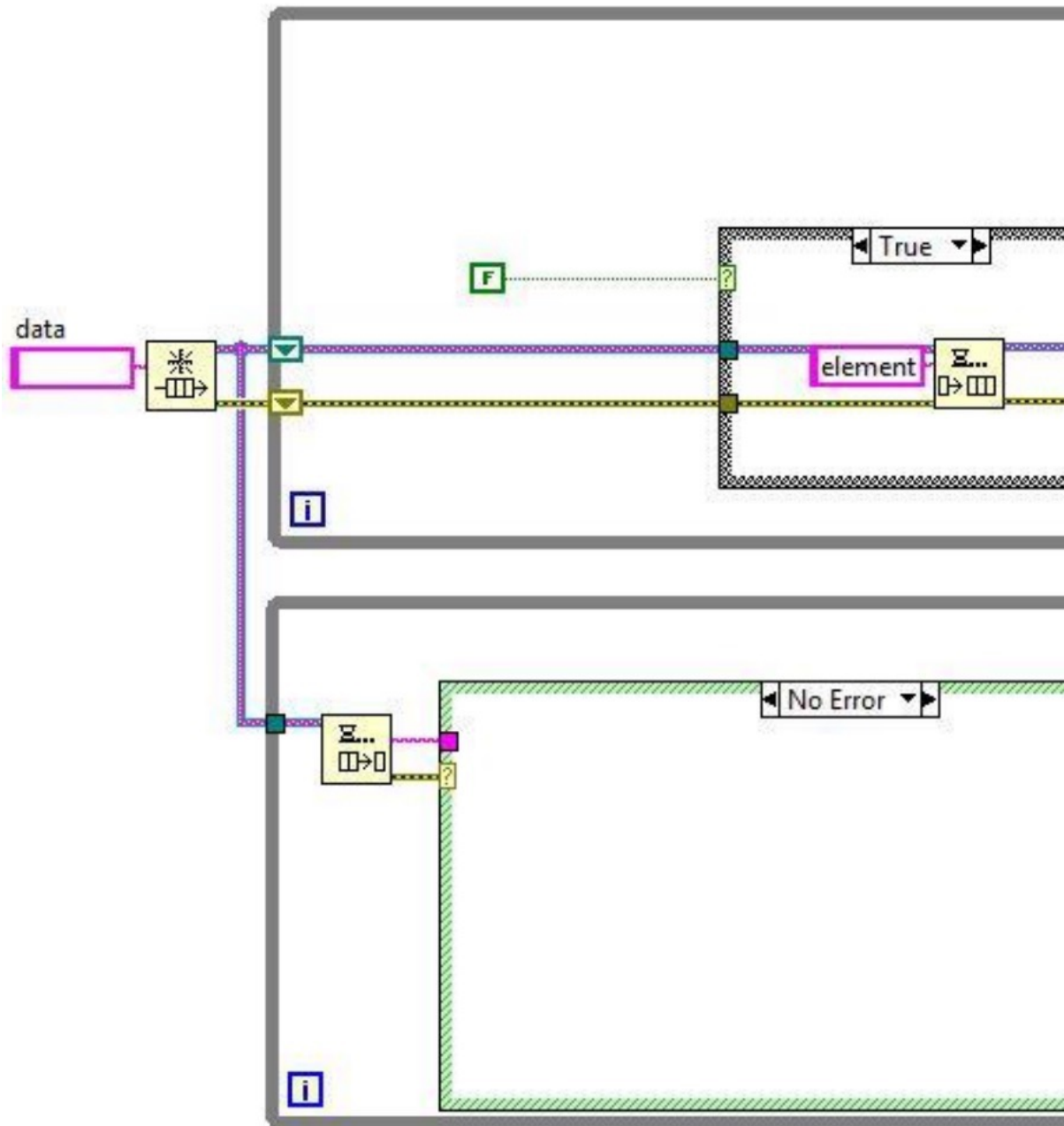
A. State Machine

B. Producer Consumer (data)

C. Producer Consumer (events)

D. Queued Message Handler

20. The VI begins execution with the value of **Numeric** as 1. At the end of the 3th loop iteration (i=2), the user changes the front panel control **Numeri**
What will be the final value of the front panel **Numeric Indicator** after the VI completes execution?

Front Panel Controls

Enum

Enum One

Numeric

5
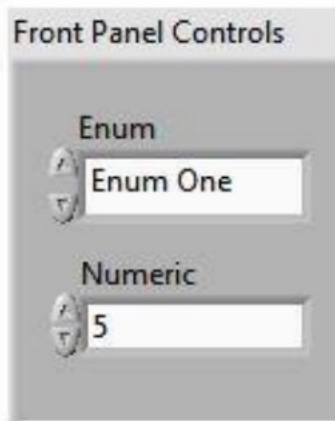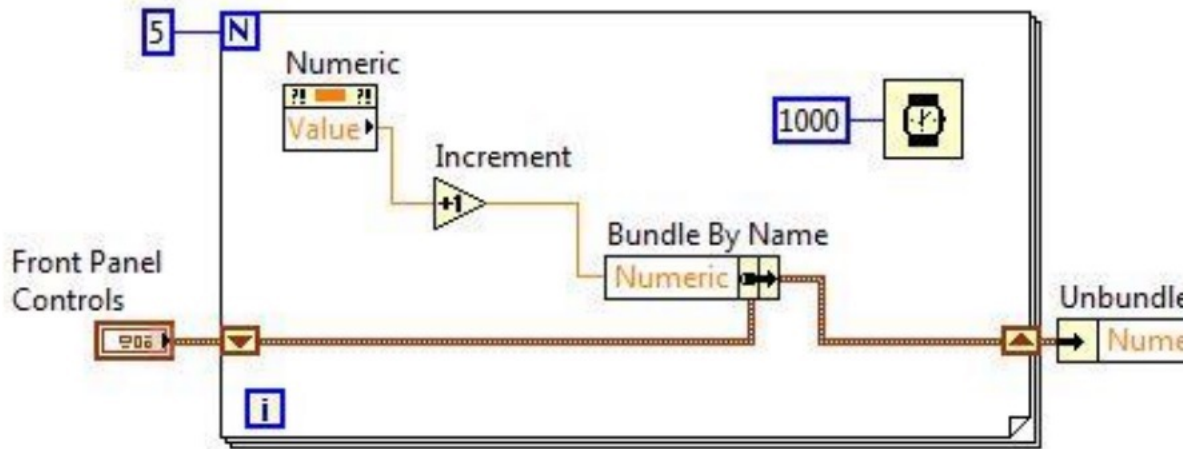
A. 2

B. 4

C. 5

D. 6

21. What value is displayed in the **Output** indicator when the fifth iteration (i=4) of Loop 2 completes?
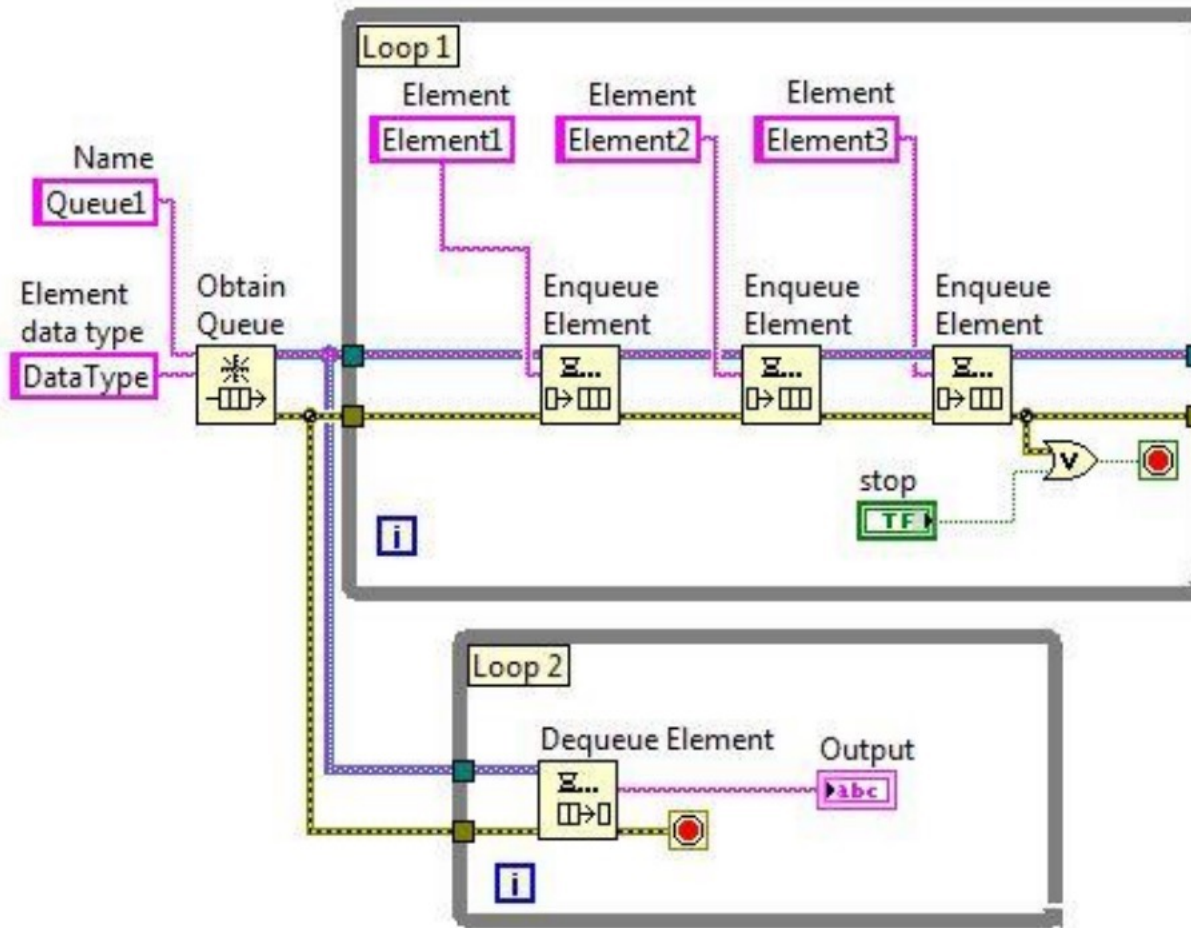
A. Element1

B. Element2

C. Element3

D. Element1Element2Element3

22. What is the behavior when the code below executes?

A. Loop 1 and Loop 2 run simultaneously.

B. Both loops run one time and stop.

C. Loop 2 runs after Loop 1 stops.

D. Loop 1 runs forever and Loop 2 never runs.

23. What does this function do?
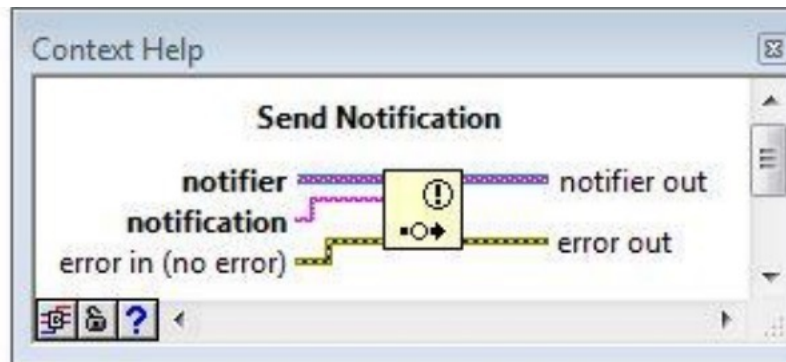


A. Buffers multiple notifications to be read by a Wait on Notification function

B. Sends a notification to be read by Wait on Notification functions
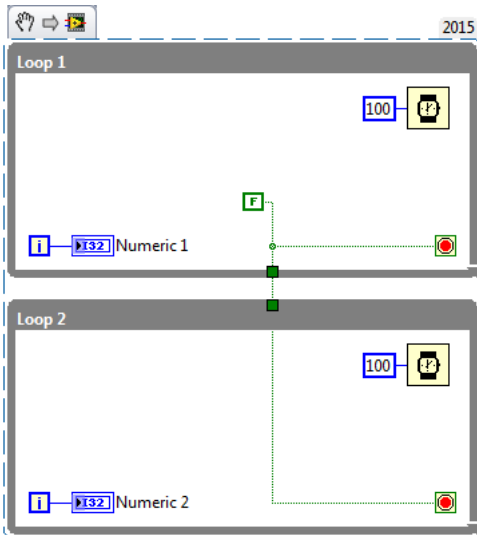
C. Enqueues notifications in the Notifier Queue

D. Sends a pause execution notification to a Wait on Notification function

24. What is the purpose of these block diagram toolbar buttons?
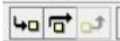


A. To display the data flowing through wires as the VI runs

B. To step through the block diagram when execution is paused

C. To start or skip SubVIs

D. To run the VI in continuous or single run mode.

25. When using single step debugging with a SubVI which of the following is not possible?

A.
Step Into (  ) while the execution flow is paused on the SubVI icon

B.
Step Out (  ) while the execution flow is paused on a node inside the block diagram of the SubVI.

C.
Finish VI (  ) while the execution flow is paused on the block diagram of the SubVI

D.
Finish Block Diagram (  ) while the execution flow is paused on a node inside the SubVI

26. What value will be displayed in the **Output** indicator when the VI completes execution?
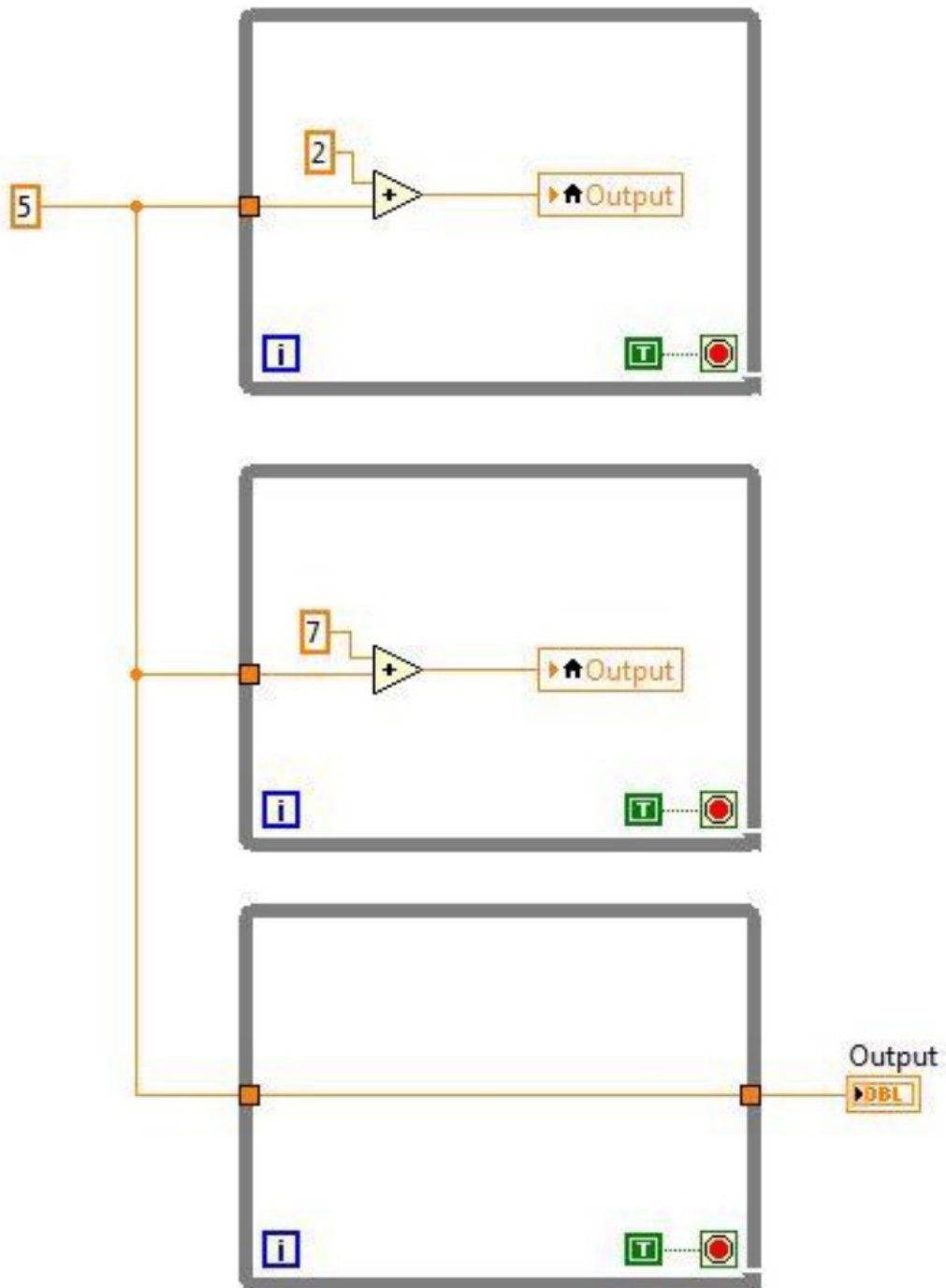
A. 5

B. 7

C. 12

D. Indeterminate

27. Which Mechanical Action changes a Boolean when the button is pressed and returns it to its default value after LabVIEW reads the value?

    A. Latch when pressed

    B. Switch when released

    C. Switch until released

    D. Latch when released

28. Which of the following statements is TRUE about **Numeric Array**?



    A. It is an indicator

    B. It contains exactly 10 elements

    C. It contains exactly 12 elements

    D. It contains exactly 8 elements

29. Which of the following statements is TRUE ?
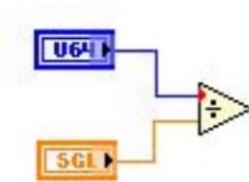


    A. The output of the divide function will be a U64

    B. The output of the divide function will be a U32

    C. The output of the divide function will be a SGL

    D. A VI containing this diagram will have a broken run arrow

30. What are the datatype and value at the output terminal of the Round Toward +Infinity function after the VI completes execution?

**DBL**

**-3.95**

**Round Toward +Infinity**

A. I32 with value -4

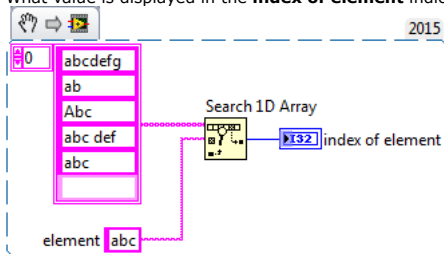B. I32 with value -3

C. DBL with value -4

D. DBL with value -3

31. The "start index (0)" input terminal of Search 1D Array is unwired.
What value is displayed in the **index of element** indicator after this code runs?

2015

0

abcdefg
ab
Abc
abc def
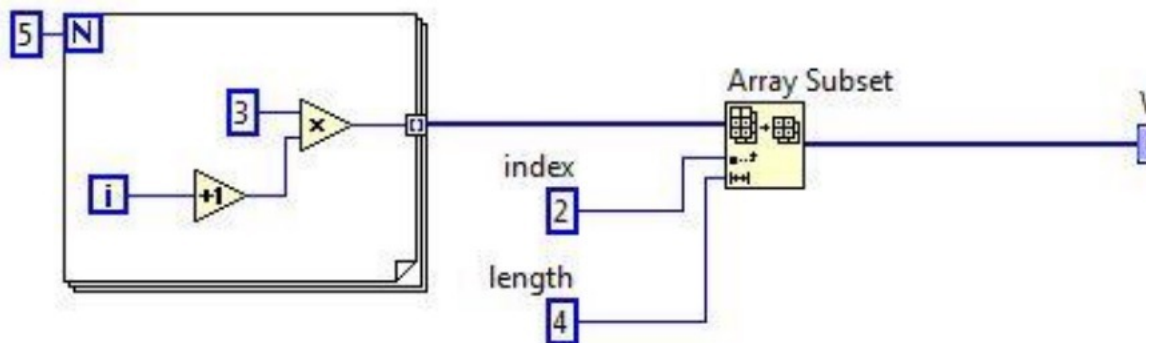abc

Search 1D Array

I32  index of element

element  abc

A. 0

B. 2

C. 3

D. 4
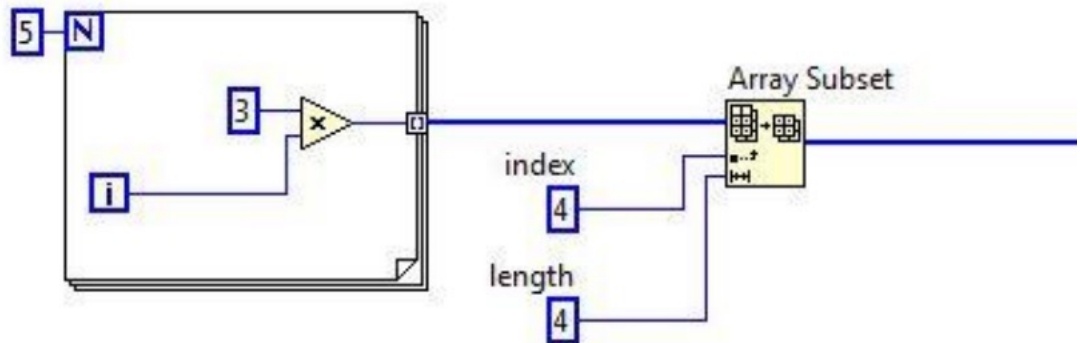
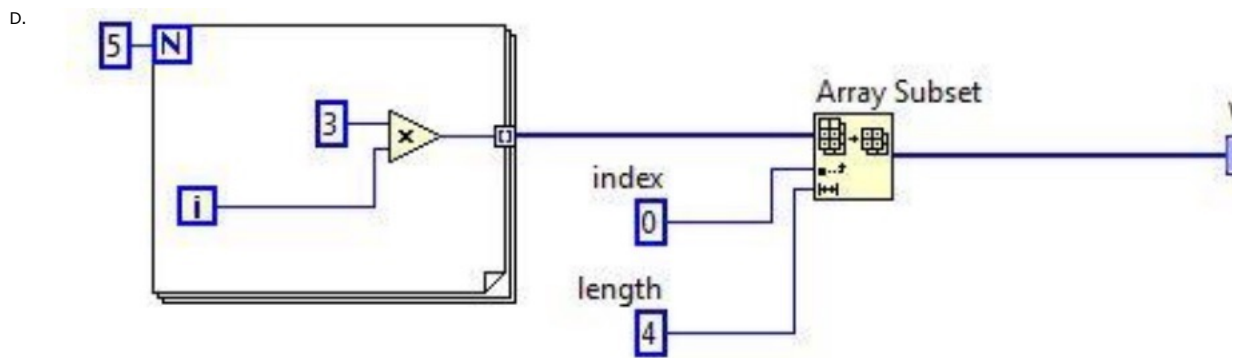32. Which block diagram produces the result in **Waveform Graph**?
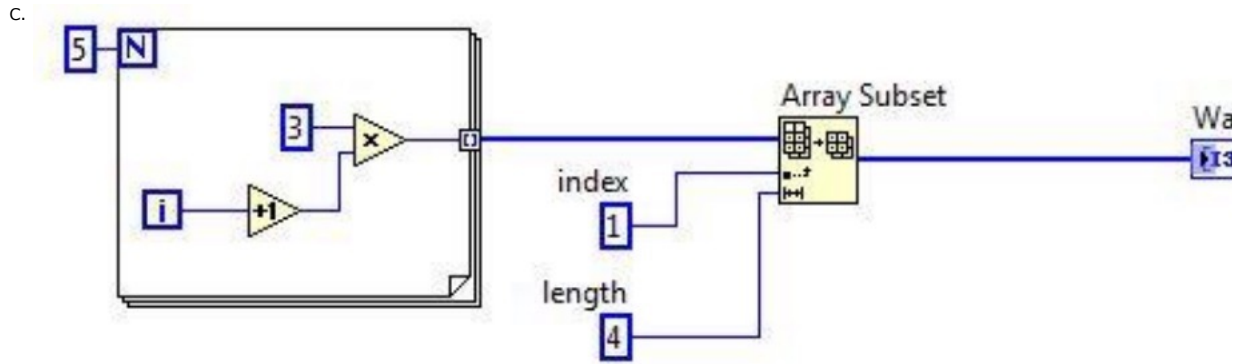
A.



B.

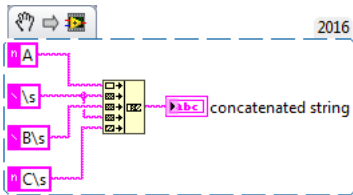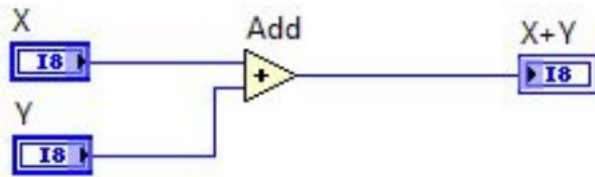C.



D.
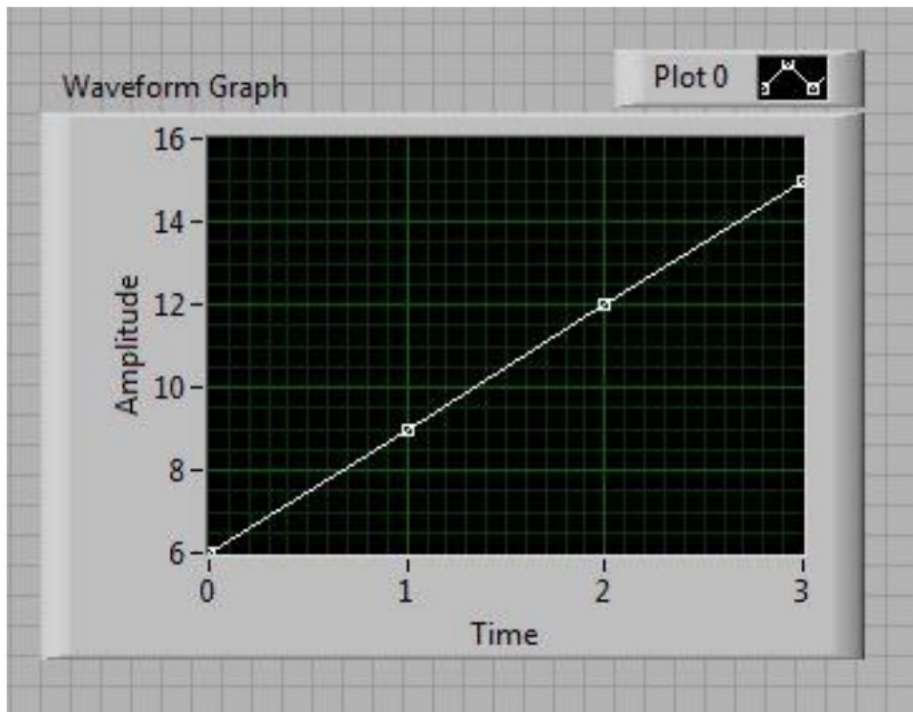


33. What will be the value of the **concatenated string** indicator after the VI completes execution?



A.

A B  C\s    concatenated string

B.

ABC    concatenated string

C.

A\sB\s\sC\s    concatenated string
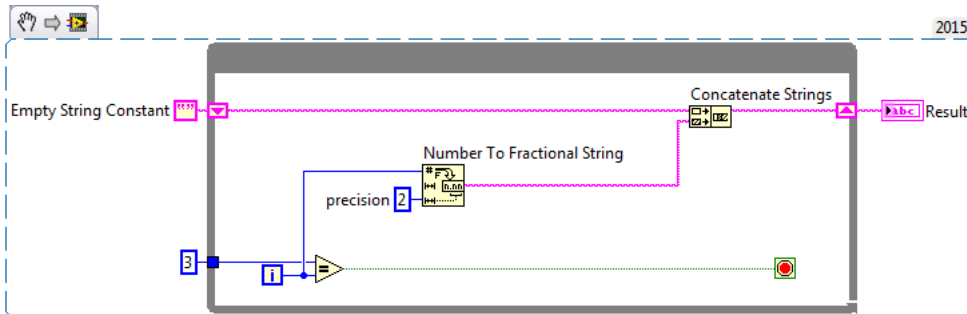
D.

A B C          concatenated string

34. The VI begins execution with the values of **X** = 127 and **Y** = 1.What value will be displayed in the **X+Y** indicator after the VI completes execution?

X
I8

Add

X+Y
I8

Y
I8

A. 0

B. 128

C. -128

D. -127

35. What string is displayed in the **Result** indicator after the VI completes execution?

2015

Empty String Constant

Concatenate Strings
abc Result

Number To Fractional String

precision 2

3

A. 123

B. 0123

C. 1.00 2.00 3.00

D. 0.001.002.003.00
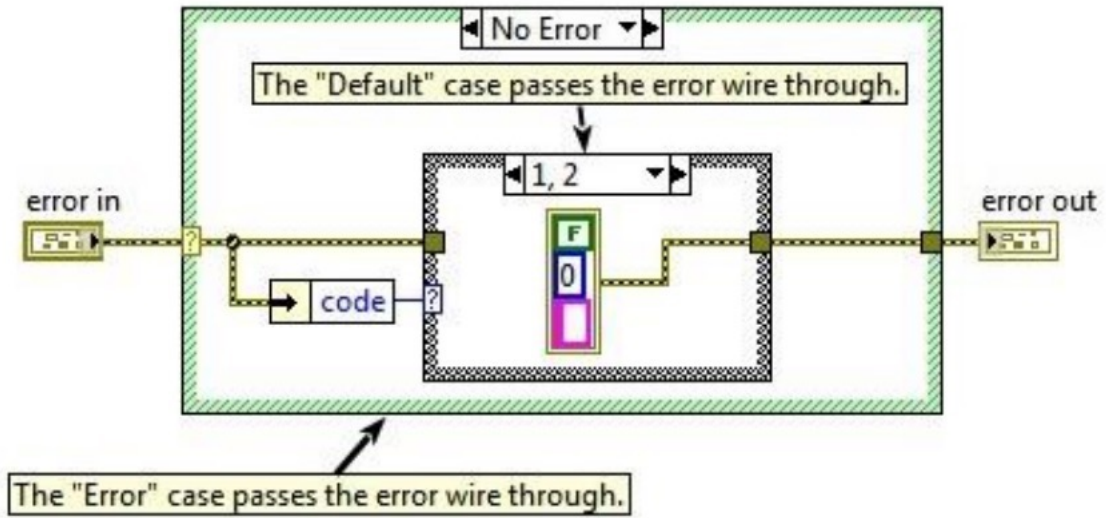
36. What VI or function is typically used to display an error dialogue?
   A. Merge Errors function

   B. One Button Dialog function

   C. Generate Front Panel Activity function
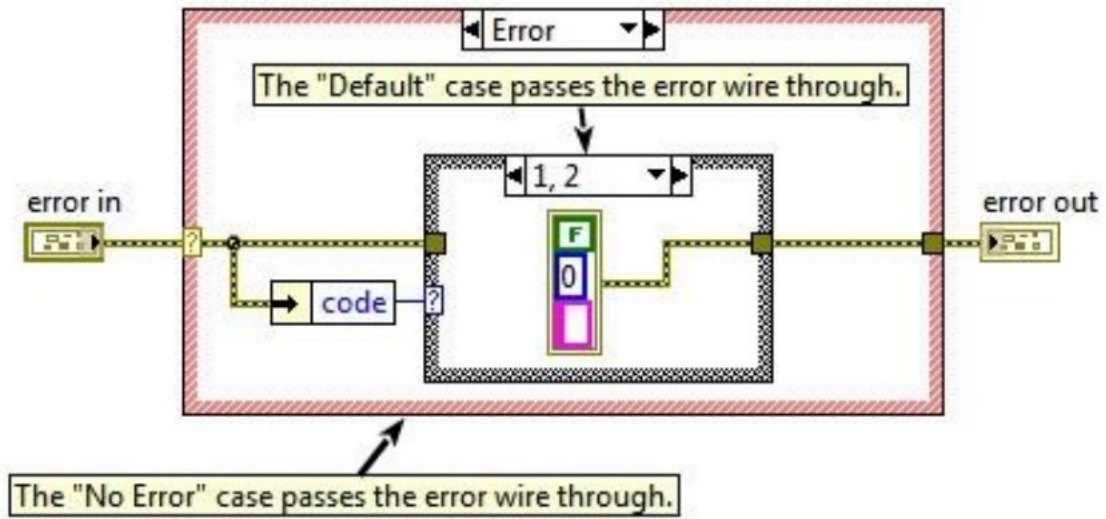
   D. Simple Error Handler.vi

37. A VI takes an input error cluster. If the cluster contains an error or a warning with code = 1 or code = 2, the VI should clear the error or warning.

Which diagram implements this functionality?

A.



No Error

The "Default" case passes the error wire through.

1, 2

error in                                                                          error out

code

The "Error" case passes the error wire through.

B.



Error

The "Default" case passes the error wire through.

1, 2

error in                                                                          error out

code

The "No Error" case passes the error wire through.

C.



The "Default" case passes the error wire through.

1, 2

error in                                                                          error out

code

D.

error in

Select

error out

code
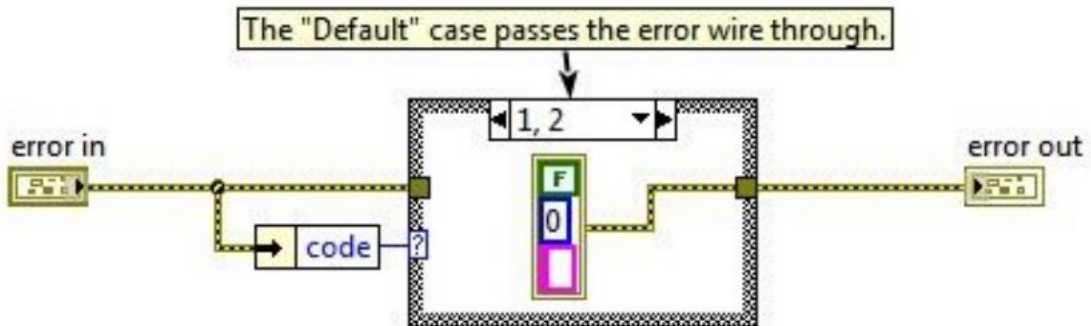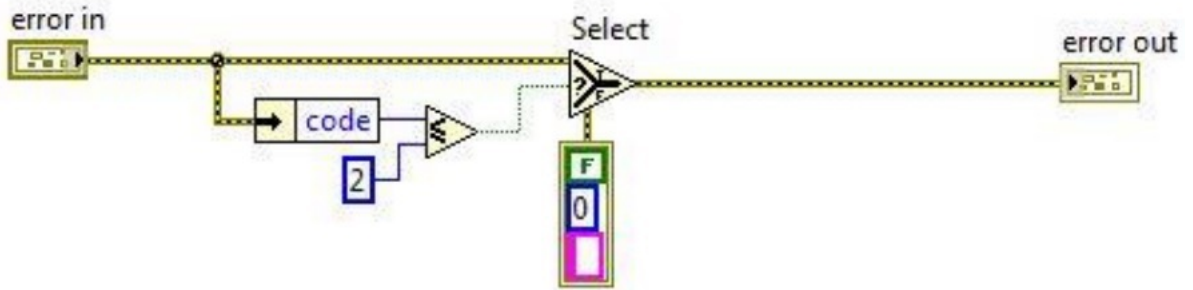
2
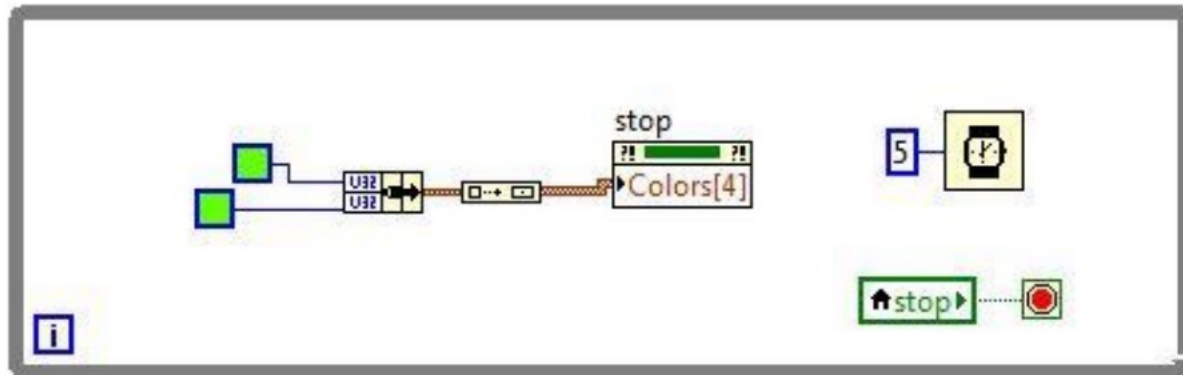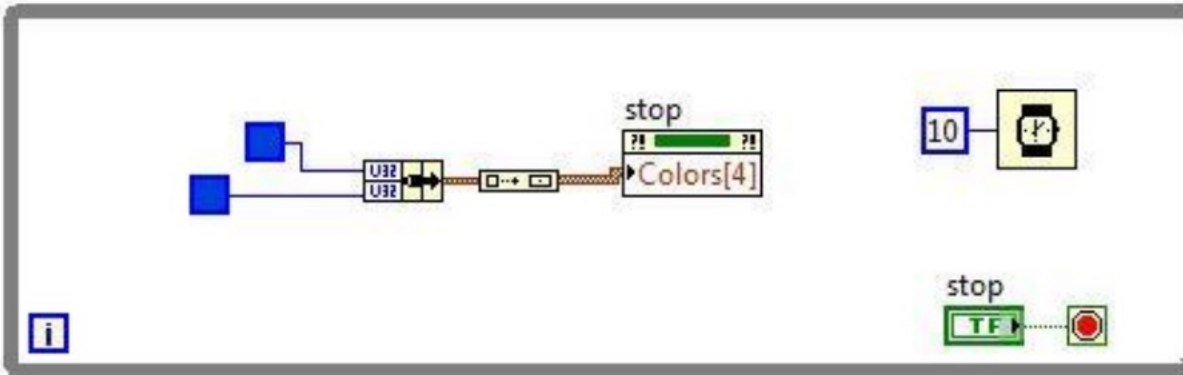
F

0

38. The following VI has two parallel While Loops, and runs for 11 ms.
What color is the **stop** Boolean when the VI completes execution?

stop

Colors[4]

10

stop

TF

stop

Colors[4]

5

stop

A. Blue

B. Green

C. Both colors will be present

D. Indeterminate

39. Which do you use to initialize all front panel objects to their default values?
    A. Application Reference

    B. Invoke Node

    C. User Interface Event

    D. User Event

40. What results from dragging a Numeric Control into a Control Refnum on the front panel?



Drag Numeric into the Ctl Refnum

Numeric

0
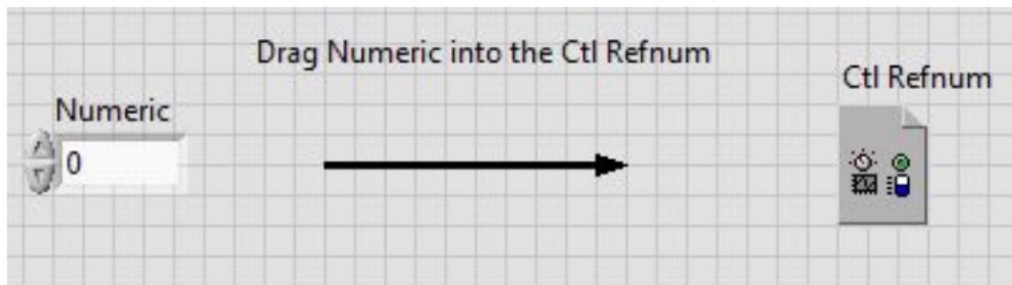
Ctl Refnum

A. An error is returned if the control is not initialized

B. The Control takes on only generic properties

C. The Control Refnum changes into that control

D. The Control Refnum becomes strictly typed