

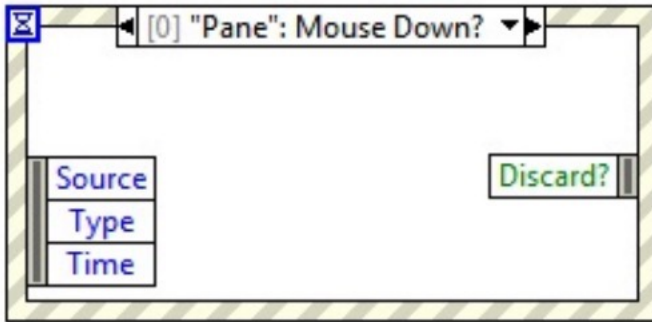
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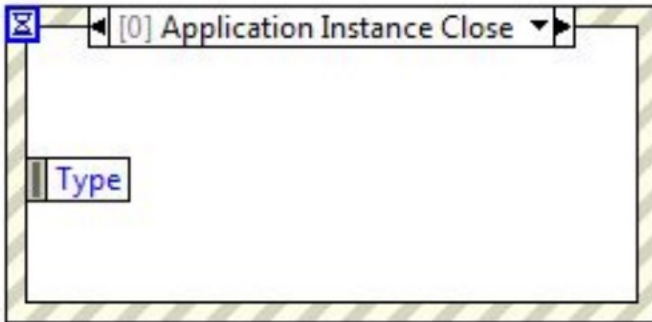
### CLAD Sample Exam 05

1. You must include the option to cancel when a user attempts to interactively close the front panel by selecting File->Close. Which Event case allows this functionality?

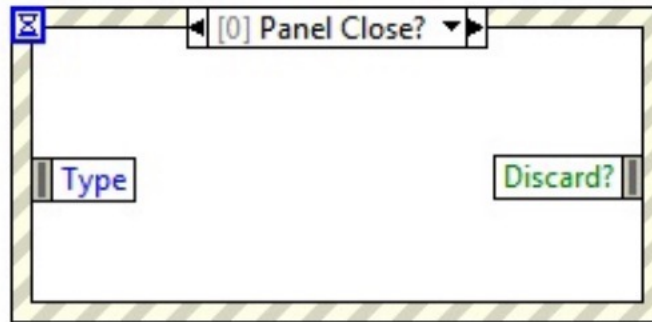
A.



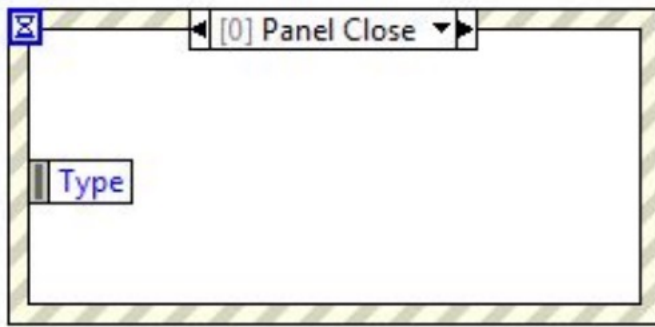
B.



C.

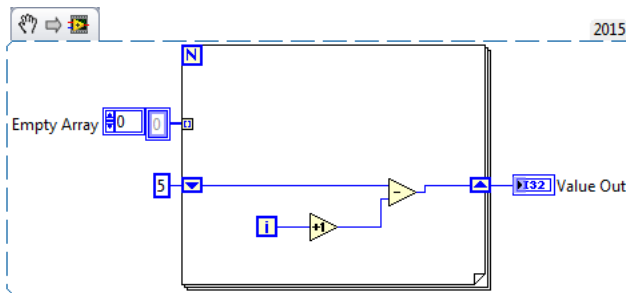


D.



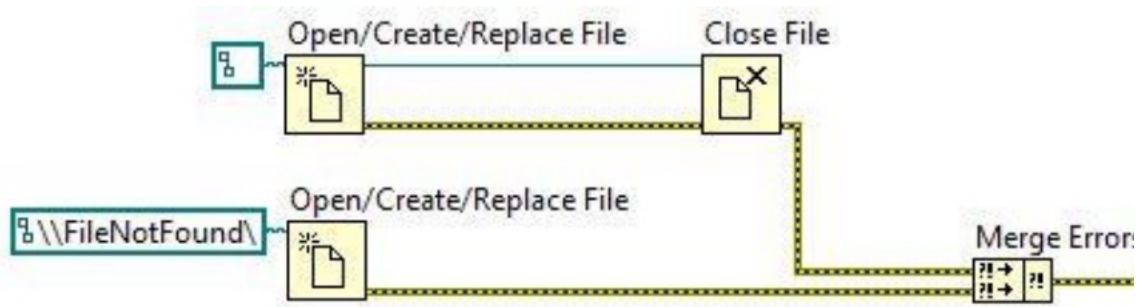
2. You must generate code that responds to multiple value change events using a Boolean control while maintaining a latching mechanical action. Which programming step is NOT required?
- A. Including or reading the Boolean control terminal in a loop
  - B. Including the Event Structure within a loop
  - C. Configuring a Timeout case within the Event Structure
  - D. Configuring a Value Change event case for the Boolean control

3. What value is displayed in the **Value Out** indicator after the VI completes execution?



- A. 0
- B. 4
- C. 5
- D. 6

4. How many errors does LabVIEW display at the end of execution?

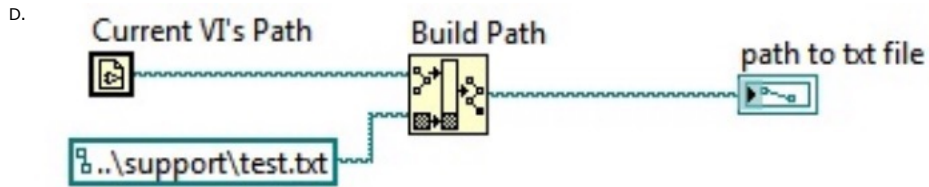
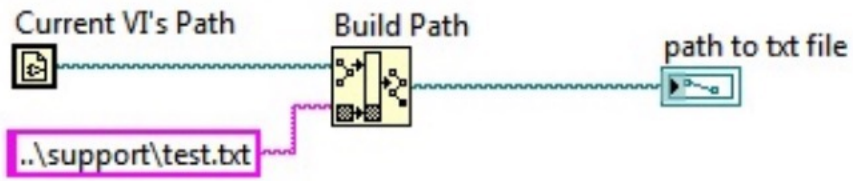


- A. No Errors
- B. One Error
- C. Two Errors
- D. Three Errors

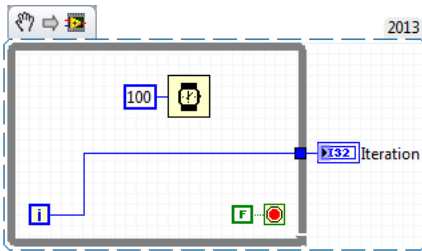
5. You have been asked to write a VI called CLAD505 that will generate a path to test.txt. This txt file is in a folder called CLAD505\_Support, and the folder is in the current VI's path. Which diagram best illustrates how you should write the VI?

Name	Date modified	Type
Support	8/5/2014 3:14 PM	File folder
CLAD505.vi	8/5/2014 2:59 PM	LabVIEW I

- A.
- B.
- C.

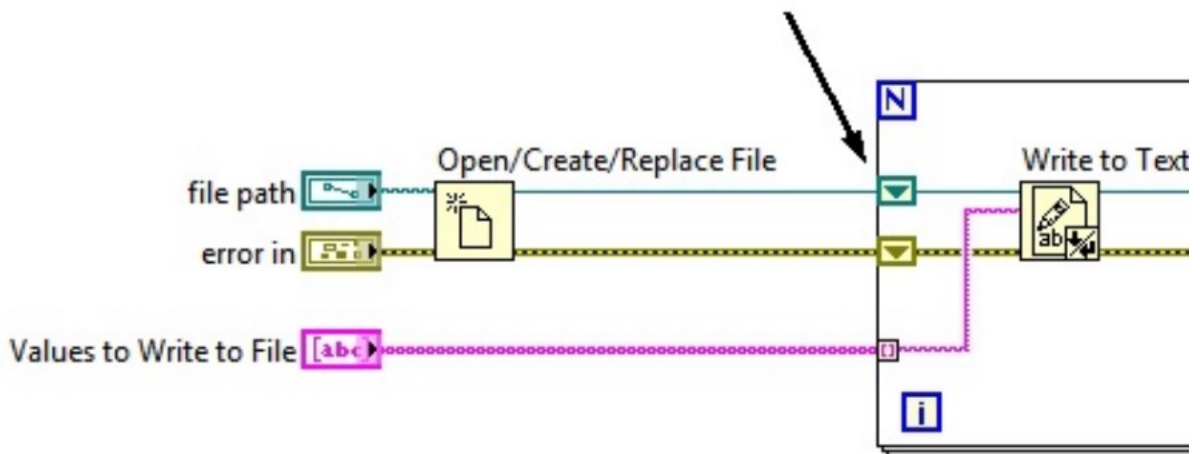


6. Which of the following statements is **TRUE** about the following code segment?



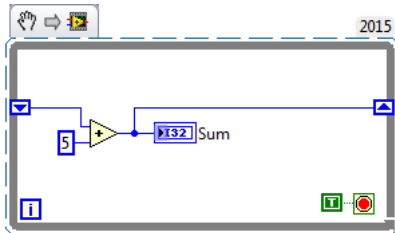
- A. The loop will execute once and the indicator **Iteration** will have value of one.
- B. The loop will execute once and the indicator **Iteration** will have a value of zero.
- C. The loop will execute infinitely and the program will have to be aborted.
- D. The loop will not execute and the indicator Iteration will have a value of zero.

7. Why is a shift register used for the file refnum input on the For Loop?



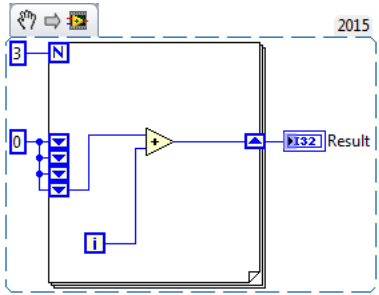
- A. If the Values to Write to File array is empty, the For Loop will run zero times, but the refnum value will be passed through to the shift register output
- B. The Write to Text File function modifies the value of the refnum on each For Loop iteration
- C. It is the only way to prevent the For Loop from building an array at the refnum output terminal
- D. No reason. A regular tunnel would provide identical functionality to the shift register

8. The following SubVI is loaded into memory and then run. At some later time it is still in memory and is run a second time. What is the value is displayed in the **Sum** indicator when the SubVI completes execution the second time it is run?



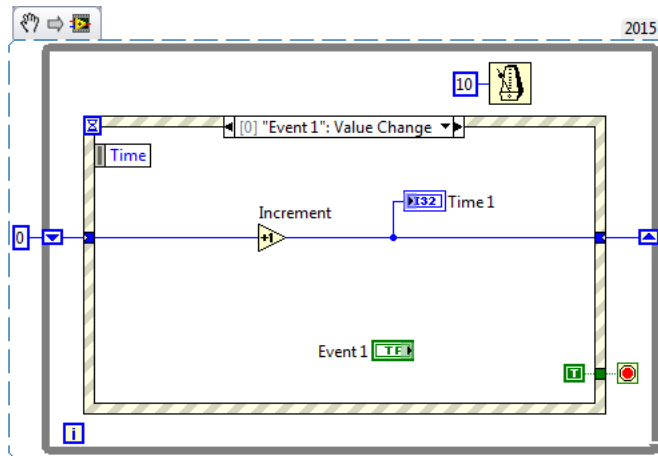
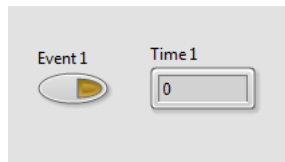
- A. 0
  - B. 5
  - C. 10
  - D. There is no way to know
9. Which of the following is FALSE about File I/O using binary or TDMS file formats?
- A. Binary files can accept any LabVIEW data type
  - B. TDMS can accept any LabVIEW data type
  - C. TDMS is generally faster in writing than binary
  - D. Binary file I/O can be used by all versions of LabVIEW
10. How does a producer consumer design pattern process excessive amounts of data?
- A. Using a single element queue the Producer Consumer processes only current data.
  - B. Using a queue for storage the Consumer loop processes all data when it has time.
  - C. The Producer loop will slow its cycle time to allow the consumer loop to catch up.
  - D. The consumer loop will increase its processing time to match the producer loop.
11. Unlike graphs, which display an entire waveform that \_\_\_\_\_ the data already displayed, charts update periodically and \_\_\_\_\_ the data previously displayed.
- A. Maintains a history of; overwrite
  - B. Overwrites; maintain a history of
  - C. Appends to; overwrite
  - D. None of the above

12. What value is displayed in the **Result** indicator after the VI completes execution?



- A. 3
- B. 2
- C. 1
- D. 0

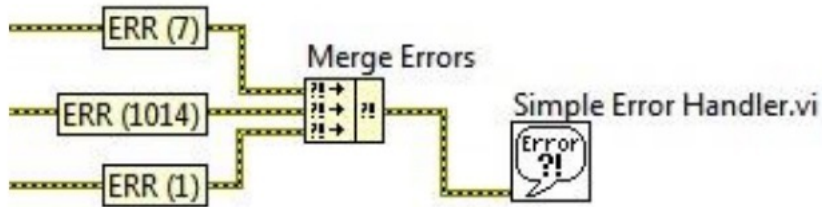
13. After the VI starts running, the user clicks the "Event1" button twice. The event structure has no other event cases. What will be displayed in the "Time 1" indicator when the VI stops executing?



- A. 0
- B. 1
- C. 2
- D. Undetermined





14. You have written a LabVIEW VI with three parallel code paths. All three error cluster wires are wired into a Merge Errors function.

What error is reported to the user?

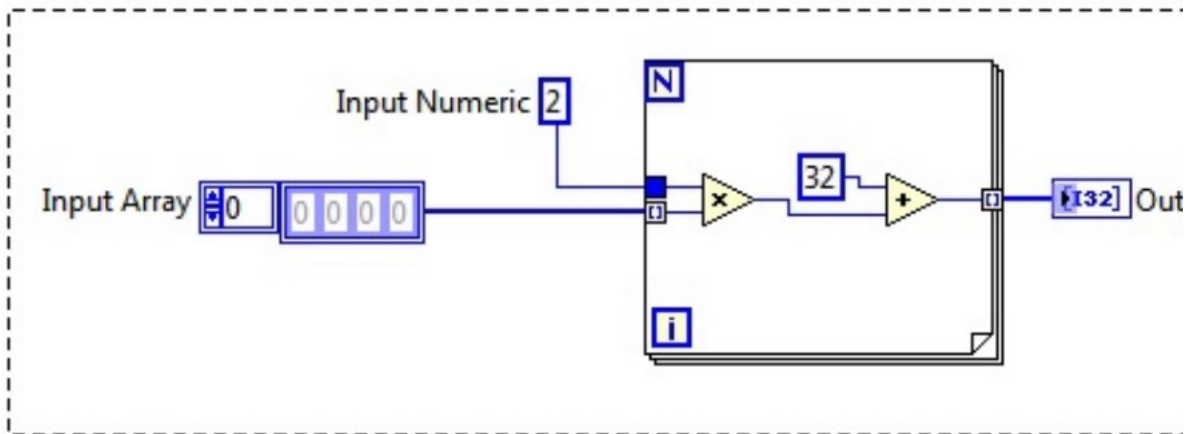


- A. Error 1014, because Merge Errors outputs the first error to occur chronologically
- B. Error 7, because Merge Errors outputs the first error wired in to it from the top down
- C. Error 1, because Merge Errors outputs the most significant error of the errors wired in to it
- D. All three errors are reported, because Merge Errors concatenates the errors into a single error message to display to the user

15. Which timing function can result in logic errors when it rolls over to zero?

- A. Wait Until Next ms Multiple 
- B. Tick Count (ms) 
- C. Get Date/Time In Seconds 
- D. Wait (ms) 

16. You select "Create SubVI" from LabVIEW's Edit menu with the code below selected. What will the resulting block diagram look like?



A.



B.



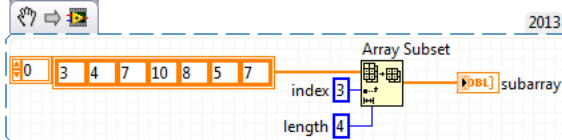
C.



D.



17. What is the result in subarray after the following code has executed?



- A. A 1-D Array of {8, 5, 7}
- B. A 1-D Array of {10, 8, 5}
- C. A 1-D Array of {10, 8, 5, 7}
- D. A 1-D Array of {7, 10, 8, 5}

18. Which of the following statements is NOT valid?

- A. You can make a Cluster of Clusters
- B. You can make an Array of Arrays
- C. You can make a Cluster of Arrays
- D. You can make an Array of Clusters

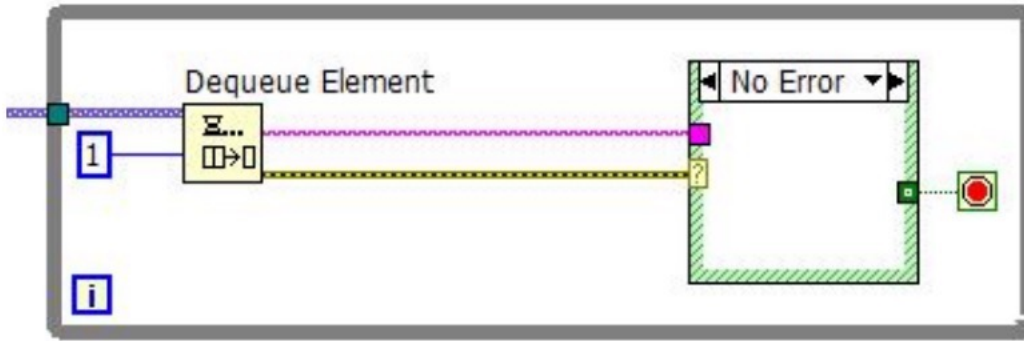
19. Which of the following cannot be used to transfer data between two parallel loops?

- A. Wires
- B. Queues



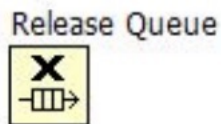
- C. Notifiers
- D. Local Variables

20. The time out input terminal of the Dequeue Element function is wired with the value 1. While the VI is running, how long does this Dequeue Element function wait to receive data?



- A. 1 millisecond
- B. 1 second
- C. Indefinitely
- D. It does not wait. It returns immediately.

21. What does this function do?



- A. Transfers the queue reference to other callers
- B. Sorts all of the queue elements in order and returns them as an array
- C. Clears all elements from the queue
- D. Removes one reference to the queue and returns any remaining elements

22. When a VI is paused, clicking on the \_\_\_\_\_ button allows you to bypass a node in the Block Diagram without single-stepping through the node.

- A. Step Into
- B. Step Over
- C. Step Out
- D. Step Through

23. Which is a native debugging feature in LabVIEW?

- A. Step Back
- B. Step Over
- C. Step Around
- D. Step Above

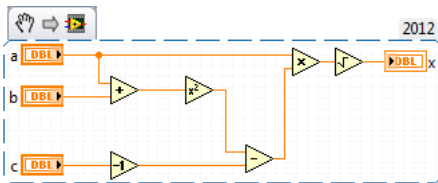
24. Which data type is not accepted by the case selector terminal on a case structure?

- A. Arrays
- B. Enumerated type values
- C. Strings
- D. Integers

25. Which statement about sequence structures is FALSE?

- A. Sequence structures support parallel operations within frames.
- B. Terminating the execution of a sequence structure before the entire sequence is completed is not possible without aborting.
- C. Sequence structures execute frames in a sequential order.
- D. Sequence structures stop when an error is detected.

26. What equation is equivalent to the code?



- A.  $x = \sqrt{a \cdot ((a+b)^2 - (c-1))}$
- B.  $x = \sqrt{a \cdot ((c-1) - (a+b)^2)}$
- C.  $x = \sqrt{a \cdot ((a+b^2) - (c-1))}$
- D.  $x = \sqrt{a^2 \cdot ((a+b)^2 - (c-1))}$

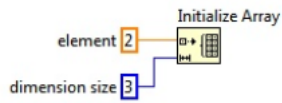
27. When clicking a broken run arrow, the Error list window shows all of the following EXCEPT:

- A. Items with errors
- B. Errors and warnings
- C. Details about the warnings
- D. Error Codes

28. How do you document a VI so that the description appears in the Show Context Help popup window?

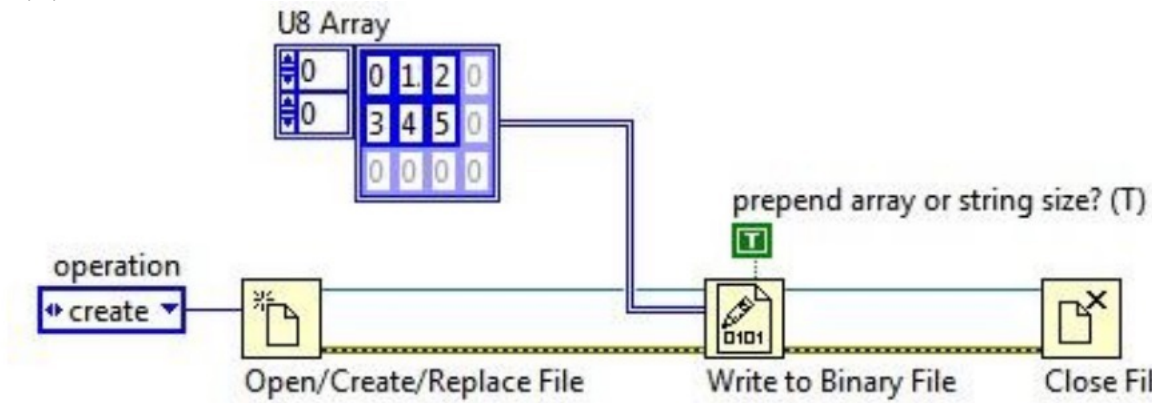
- A. Use the VI Properties Documentation window
- B. Type in the Show Context Help window
- C. Create a free label on the front panel
- D. Edit the LabVIEW Help Files

29. What is the output of the Initialize Array function after the following code has completed execution?



- A.
- B.
- C.
- D.

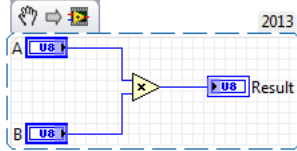
30. How many bytes does LabVIEW write to the file when the code executes?



- A. 5 Bytes

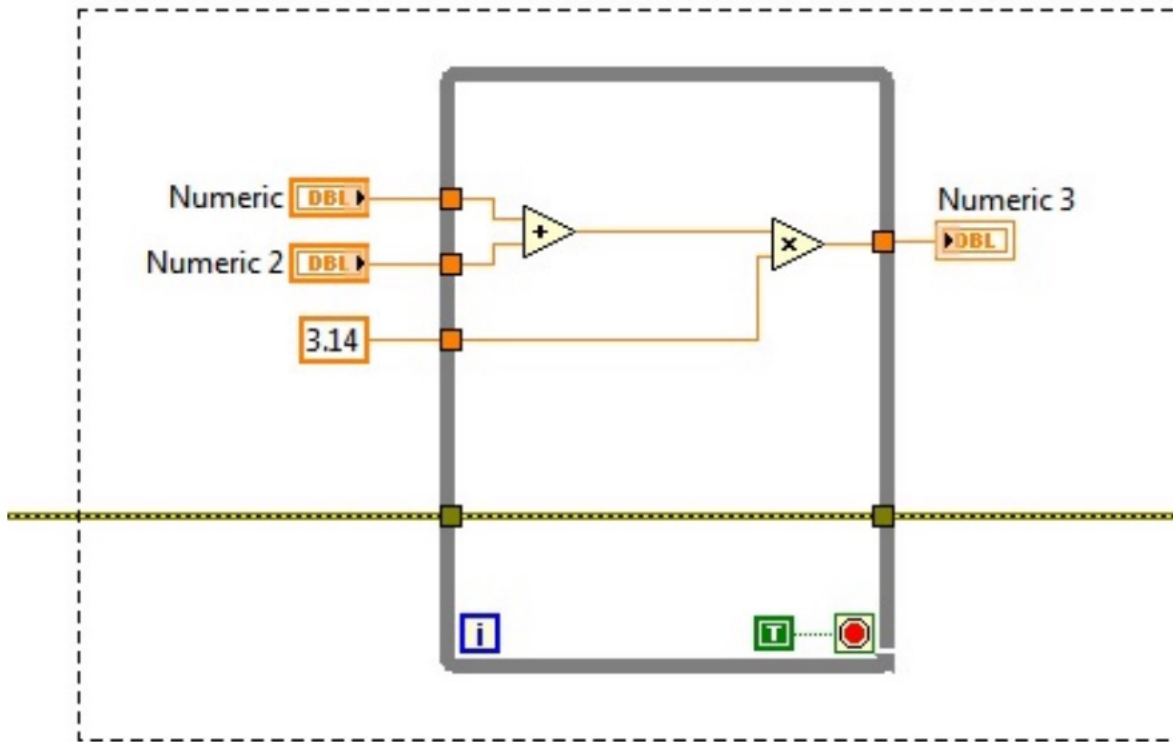
- B. 6 Bytes
- C. 12 Bytes
- D. 14 Bytes

31. The value in Control **A** is 2 and in Control **B** is 128.  
 What value does the **Result** indicator display after the VI executes?



- A. -128
- B. 0
- C. 255
- D. 256

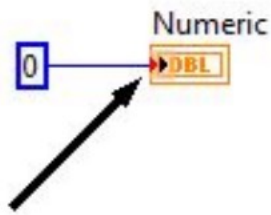
32. A SubVI is created by selecting the code from a block diagram.  
 How many terminals will the SubVI have?



- A. 3
- B. 4
- C. 5

D. 6

33. What is the red dot called?



- A. Coercion Dot
- B. Data Truncation Dot
- C. Data Typecast Dot
- D. Buffer Allocation Dot

34. What do coercion dots indicate?

- A. Incompatible data types
- B. A mathematical operation will be performed on the data
- C. The input data will be copied and converted to a different data type
- D. The location where an error will occur

35. What settings should be selected for a custom control so that all copies of the control are of the same data type yet have the flexibility to use different colors and styles?

- A. Control
- B. Type Def.
- C. Strict Type Def.
- D. Flex Def.

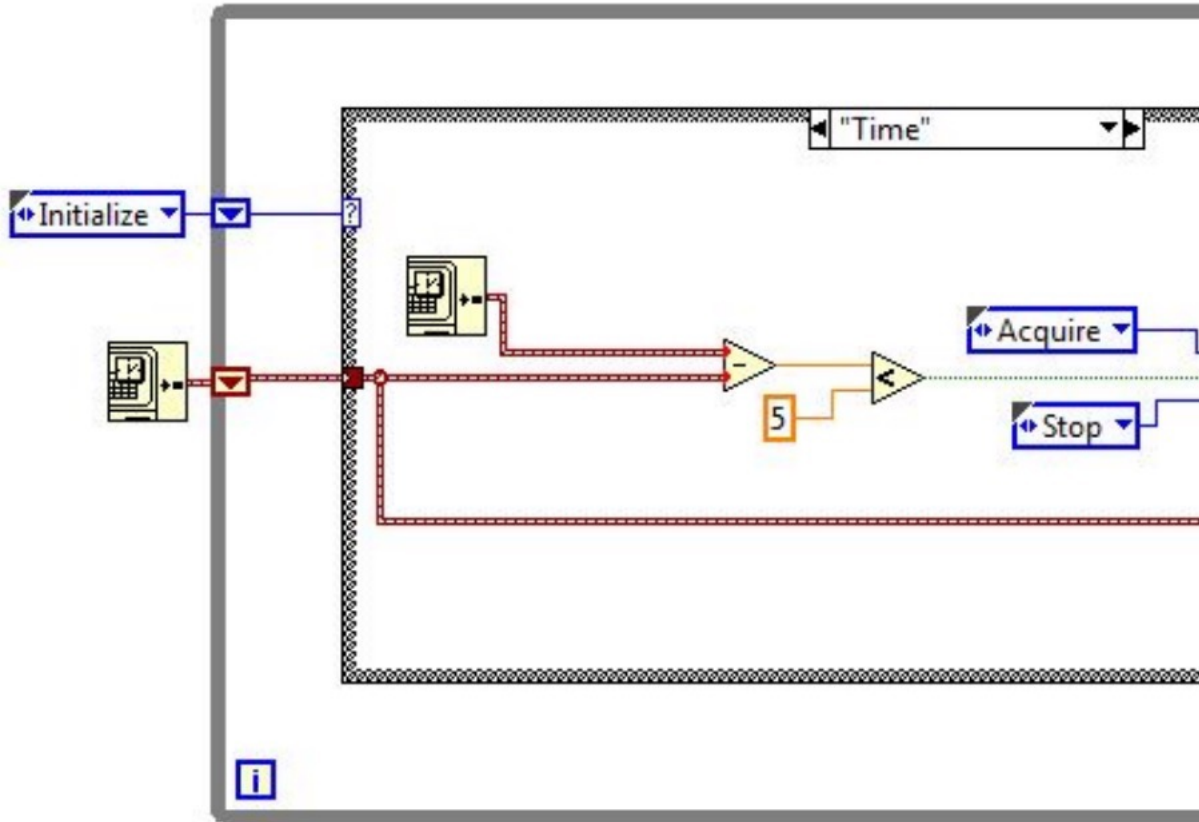
36. In a Simple State Machine design pattern, which of the following stores the state information?

- A. Shift Register
- B. Queue
- C. Notifier
- D. Functional Global Variable

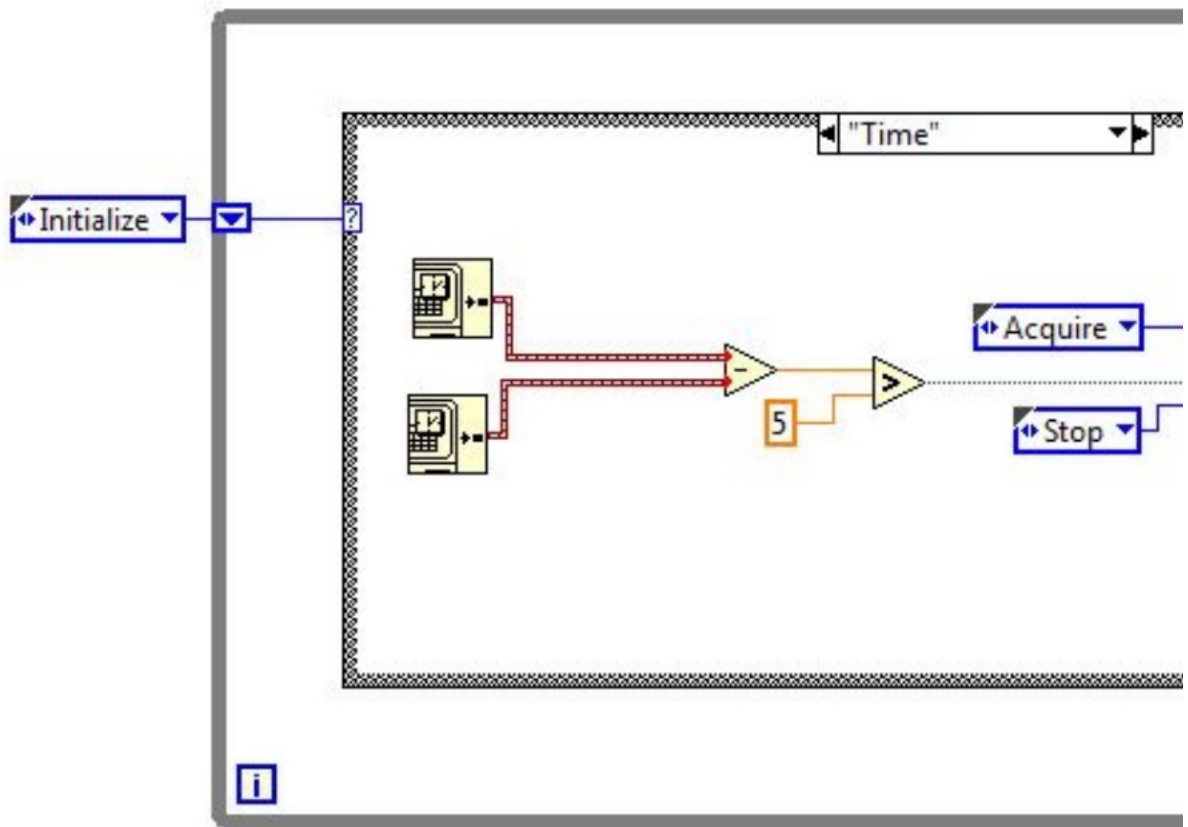
37. You are required to use the Get Date/Time in Seconds function for timing in a state machine. The state machine has an acquire state and must acquire for 5 seconds. If the hardware fails during acquisition the state machine must be able to transition to the stop state.

Which of the following design patterns will provide timing for a state machine and allow responsiveness to acquire state requirements?

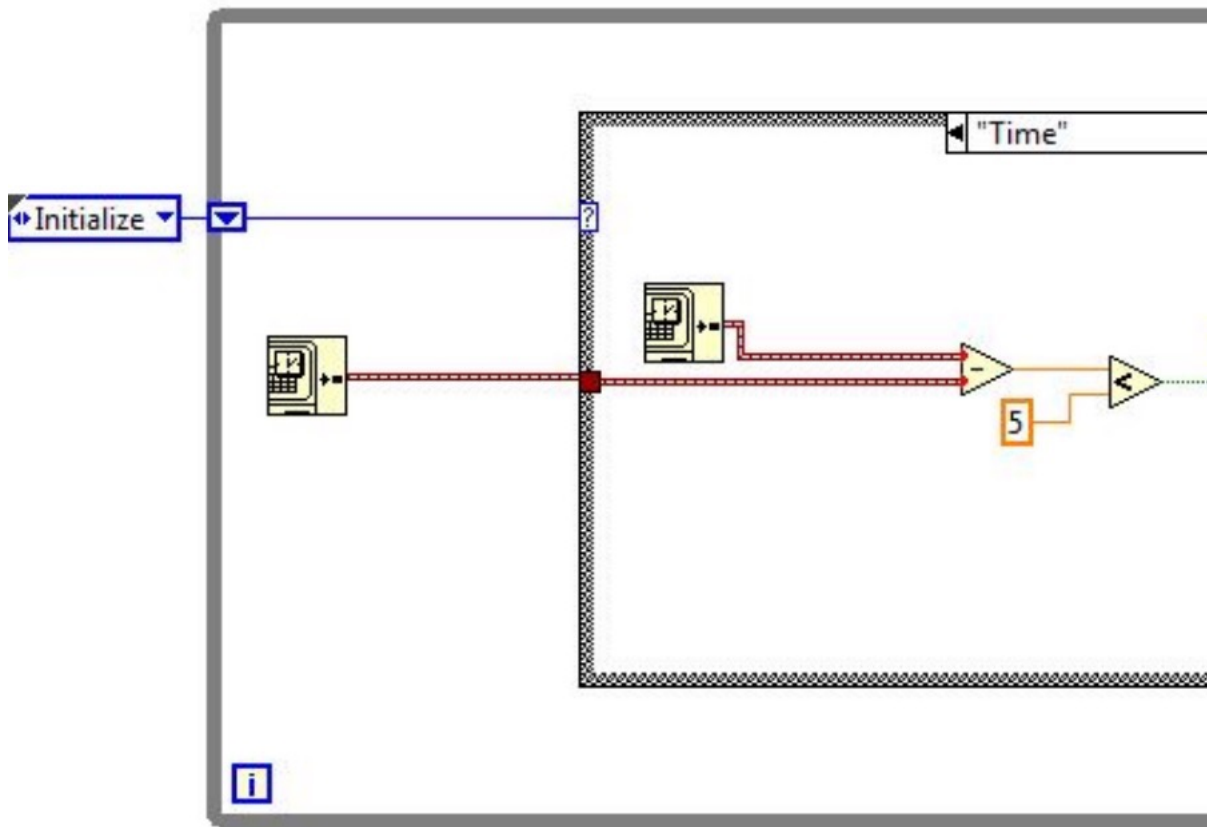
A.



B.

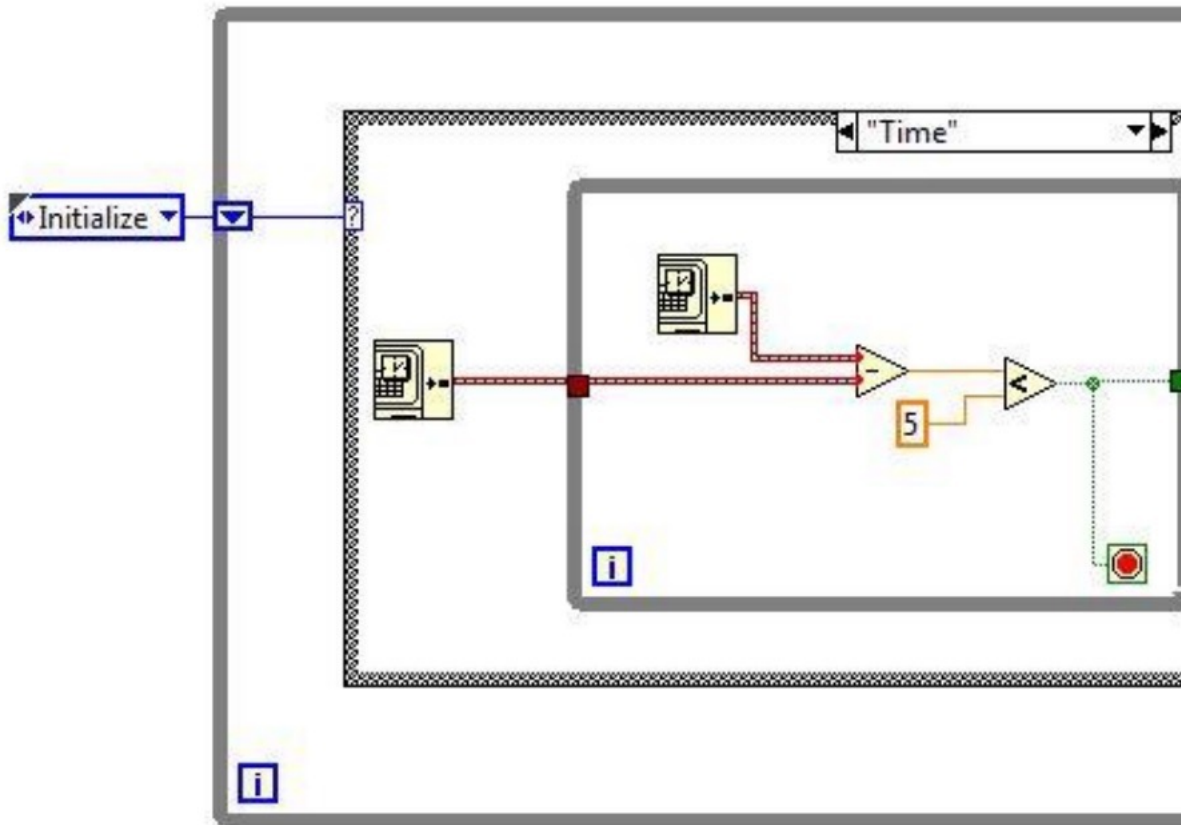


c.



D.





38. Which of the following apply to Property Nodes?

Property Nodes:

- A. allow attributes of files on disk to be programmatically manipulated
- B. can be used to update the value of a front panel control or indicator
- C. return an error if you attempt to read a property before it has been written
- D. can be used to invoke methods on a control

39. You have a front panel control on a top-level VI that you must manipulate from within a SubVI. Which of the following could you pass to the SubVI to accomplish this?

- A. The control's properties
- B. The control's methods
- C. The control's reference
- D. The control's data type

40. Which Property Node changes the text color attributes of any digital numeric control from a subVI

- A.

