



**Innovative Teaching Approaches
in development of Software Designed
Instrumentation and its application
in real-time systems**

The Advanced Applications of LabVIEW

Lecture 3: Producer/Consumer Design Pattern

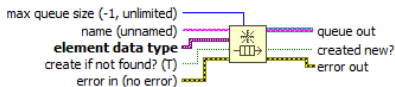
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Application of producer/consumer design pattern

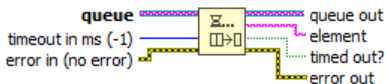
- The producer/consumer design pattern is used for parallel tasks.
- The pattern consists on one producer loop and one consumer loop. The producer loop communicates with consumer loop by queue.
- The queue is used to send data between two loops without risk of losing data. The queue has the FIFO buffer (First In, First Out).

Obtain Queue



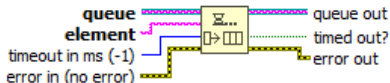
Returns a reference to a queue.

Dequeue Element



Removes an element from the front of a queue and returns the element.

Enqueue Element



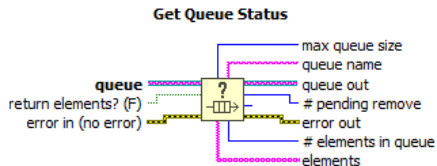
Adds an element to the back of a queue.

Release Queue



Releases a reference to a queue.

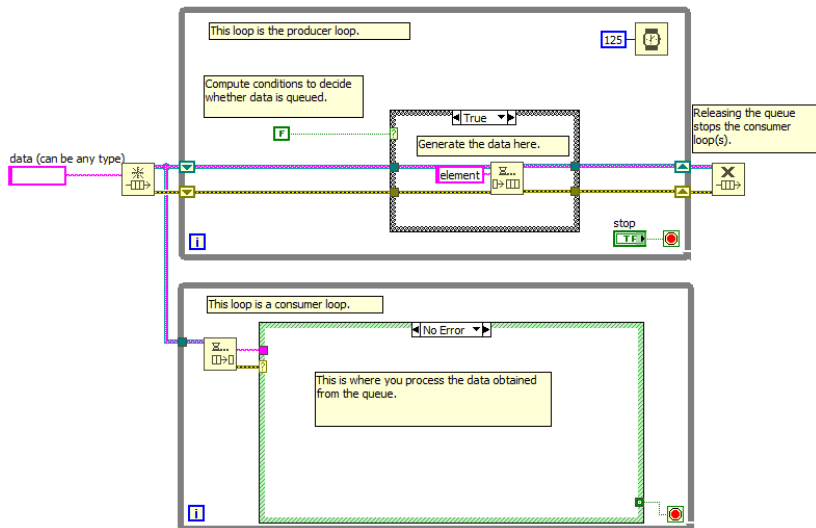
Application of producer/consumer design pattern



Returns information about the current state of a queue, such as the number of elements currently in the queue.

Structure of producer/consumer design pattern

This template is for the Producer/Consumer design pattern.





Thank you for attention!

Lecture was prepared based on materials from: "LabVIEW Core 3 Course Manual".

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