1. Node.h

Defines the Node class with:

elem: Stores node value.

prev, next: Pointers to the previous and next nodes.

Two constructors:

Default: Initializes node value to 0 and pointers to NULL.

Parameterized: Initializes node value to the provided integer.

2. Node.cpp

Implements the Node constructors:

Default: Initializes node with 0 and pointers to NULL.

Parameterized: Initializes node with a provided value.

3. IQueue.h

Defines the IQueue class with:

head and tail pointers to track the start and end of the queue.

Key methods:

enqueue(int): Adds an element to the queue.

dequeue(): Removes the front element.

isEmpty(): Checks if the queue is empty.

getSize(): Counts elements in the queue.

printHeadToTail(): Prints the queue contents.

4. IQueue.cpp

Implements IQueue methods:

Constructor: Initializes an empty queue.

enqueue: Adds a new node at the end.

dequeue: Removes the node at the front.

isEmpty: Checks for emptiness.

getSize: Counts nodes.

printHeadToTail: Prints the queue elements.

5. IQueueMain.cpp

Demonstrates the queue:

Initialization: Sets random seed, determines trial count, and initializes the queue.

Trials:

- Enqueues a random number of elements.
- Prints queue size and contents.
- Dequeues a valid random number of elements.
- Prints updated queue size and contents.

Each trial shows enqueue and dequeue operations on the queue.