Assignment 4 report

In the Node class, I defines the structure of a node in a doubly linked list. It contains a data element ‘elem’ and pointers ‘prev’ and ‘next’ pointing to the previous and next nodes in the list, respectively.

In the IQueue class, I implements an integer queue using a doubly linked list. It includes various member functions to implement basic queue operations such as enqueue, dequeue, getting the head element, checking if the queue is empty, getting the size of the queue, and printing the queue contents.

In the main code,I simulates multiple trials of enqueueing and dequeueing operations on a queue. Each trial involves a random number of elements being enqueued and dequeued from the queue. After each operation, the current size of the queue and its contents from head to tail are printed. This allows testing the functionality of the queue under various scenarios. The randomization ensures diverse test cases, contributing to the robustness of the evaluation process.