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| --- |
| package vandana.projects.com; |
|  |  |
|  | public class DoubleLinkedList { |
|  | Node head; |
|  | class Node |
|  | { |
|  | int data; |
|  | Node prev; |
|  | Node next; |
|  | Node(int d) |
|  | { |
|  | data = d; |
|  | } |
|  | } |
|  | public void push(int new\_data) |
|  | { |
|  | Node new\_Node = new Node(new\_data); |
|  | new\_Node.next = head; |
|  | new\_Node.prev = null; |
|  | if (head != null) |
|  | head.prev = new\_Node; |
|  | head = new\_Node; |
|  | } |
|  | public void InsertAfter(Node prev\_Node, int new\_data) |
|  | { |
|  | if (prev\_Node == null) |
|  | { |
|  | System.out.println("The given previous node cannot be NULL "); |
|  | return; |
|  | } |
|  | Node new\_node = new Node(new\_data); |
|  | new\_node.next = prev\_Node.next; |
|  | prev\_Node.next = new\_node; |
|  | new\_node.prev = prev\_Node; |
|  | if (new\_node.next != null) |
|  | new\_node.next.prev = new\_node; |
|  | } |
|  | void append(int new\_data) |
|  | { |
|  | Node new\_node = new Node(new\_data); |
|  | Node last = head; |
|  | new\_node.next = null; |
|  | if (head == null) |
|  | { |
|  | new\_node.prev = null; |
|  | head = new\_node; |
|  | return; |
|  | } |
|  | while (last.next != null) |
|  | last = last.next; |
|  | last.next = new\_node; |
|  | new\_node.prev = last; |
|  | } |
|  | public void printlist(Node node) |
|  | { |
|  | Node last = null; |
|  | System.out.println("Traversal in forward Direction"); |
|  | while (node != null) |
|  | { |
|  | System.out.print(node.data + " "); |
|  | last = node; |
|  | node = node.next; |
|  | } |
|  | System.out.println(); |
|  | System.out.println("Traversal in reverse direction"); |
|  | while (last != null) |
|  | { |
|  | System.out.print(last.data + " "); |
|  | last = last.prev; |
|  | } |
|  | } |
|  |  |
|  |  |
|  | public static void main(String[] args) { |
|  | DoubleLinkedList dll = new DoubleLinkedList(); |
|  | dll.append(6); |
|  | dll.push(7); |
|  | dll.push(1); |
|  | dll.append(4); |
|  | dll.InsertAfter(dll.head.next, 8); |
|  | System.out.println("Created DLL is: "); |
|  | dll.printlist(dll.head); |
|  |  |
|  |  |
|  | } |
|  |  |
|  | } |