

<pre>public class LinkedList {</pre>	=>40
<pre> public class Node {</pre>	=>30
<pre> int data;</pre>	=>20
<pre> Node next;</pre>	=>10
<pre> Node(int data) {</pre>	null
<pre> this.data = data;</pre>	=>30
<pre> this.next = null;</pre>	=>20
<pre> }</pre>	=>10
<pre> private Node head;</pre>	null
<pre> LinkedList() {</pre>	=>30
<pre> this.head = null;</pre>	=>20
<pre> }</pre>	=>10
<pre> public void insertAtStart(int data) {</pre>	null
<pre> Node newNode = new Node(data);</pre>	=>30
<pre> newNode.next = head;</pre>	=>20
<pre> head = newNode;</pre>	=>10
<pre> }</pre>	null
<pre> public void display() {</pre>	=>30
<pre> if (head == null) {</pre>	=>20
<pre> System.out.println("List is empty:");</pre>	=>10
<pre> }</pre>	null
<pre> Node current = head;</pre>	=>30
<pre> while (current != null) {</pre>	=>20
<pre> System.out.println("=>" + current.data);</pre>	=>10
<pre> current = current.next;</pre>	null
<pre> }</pre>	=>30
<pre> System.out.println("null");</pre>	=>20
<pre> }</pre>	=>10
<pre> public void deleteAtStart() {</pre>	=>50
<pre> if (head == null) {</pre>	null
<pre> System.out.println("List is empty:");</pre>	Size: 4
<pre> return;</pre>	=>30
<pre> }</pre>	=>20
<pre> head = head.next;</pre>	=>10
<pre> }</pre>	null
<pre> public void insertAtEnd(int data) {</pre>	=>30
<pre> Node newNode = new Node(data);</pre>	=>20
<pre> if (head == null) {</pre>	=>10
<pre> head = newNode;</pre>	null
<pre> } else {</pre>	Size: 4
<pre> Node current = head;</pre>	=>30
<pre> while (current.next != null) {</pre>	=>20
<pre> current = current.next;</pre>	=>10
<pre> }</pre>	null
<pre> current.next = newNode;</pre>	Size: 4
<pre> }</pre>	=>30
<pre> }</pre>	=>20
<pre> public void deleteAtEnd() {</pre>	=>10
<pre> if (head == null) {</pre>	null
<pre> return;</pre>	
<pre> }</pre>	
<pre> Node current = head;</pre>	
<pre> while (current.next != null) {</pre>	
<pre> current = current.next;</pre>	
<pre> }</pre>	
<pre> current.next = null;</pre>	
<pre> }</pre>	
<pre> public int size() {</pre>	
<pre> int count = 0;</pre>	
<pre> Node current = head;</pre>	
<pre> while (current != null) {</pre>	
<pre> count++;</pre>	
<pre> current = current.next;</pre>	
<pre> }</pre>	
<pre> return count;</pre>	
<pre> }</pre>	
<pre> public static void main(String[] args) {</pre>	
<pre> LinkedList list = new LinkedList();</pre>	
<pre> list.insertAtStart(10);</pre>	
<pre> list.insertAtStart(20);</pre>	
<pre> list.insertAtStart(30);</pre>	
<pre> list.insertAtStart(40);</pre>	
<pre> list.display();</pre>	
<pre> list.deleteAtStart();</pre>	
<pre> list.display();</pre>	
<pre> list.insertAtEnd(50);</pre>	
<pre> list.display();</pre>	
<pre> System.out.println("Size: " + list.size());</pre>	
<pre> list.deleteAtEnd();</pre>	
<pre> list.display();</pre>	
<pre> }</pre>	

NAME: Muhammad Saeed Shaikh

Roll No:0069