**Problem 05:**

**Implementation of doubly linked list:**

package leet;

public class DoublyLinkedList {

class Node{

int data;

Node previous;

Node next;

public Node(int data) {

this.data = data;

}

}

Node head, tail = null;

public void addNode(int data) {

Node newNode = new Node(data);

if(head == null) {

head = tail = newNode;

head.previous = null;

tail.next = null;

}

else {

tail.next = newNode;

newNode.previous = tail;

tail = newNode;

tail.next = null;

}

}

public void display() {

Node current = head;

if(head == null) {

System.out.println("List is empty");

return;

}

System.out.println("Nodes of doubly linked list: ");

while(current != null) {

System.out.print(current.data + " ");

current = current.next;

}

}

public static void main(String[] args) {

DoublyLinkedList dList = new DoublyLinkedList();

dList.addNode(1);

dList.addNode(2);

dList.addNode(3);

dList.addNode(4);

dList.addNode(5);

dList.display();

}

}