3. Write a Java program to create a doubly linked list of n nodes and display it in reverse order

public class ReverseList {

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 reverse() {

Node current = head, temp = null;

while(current != null) {

temp = current.next;

current.next = current.previous;

current.previous = temp;

current = current.previous;

}

temp = head;

head = tail;

tail = temp;

}

public void display() {

Node current = head;

if(head == null) {

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

return;

}

while(current != null) {

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

current = current.next;

}

}

public static void main(String[] args) {

ReverseList dList = new ReverseList();

//Add nodes to the list

dList.addNode(1);

dList.addNode(2);

dList.addNode(3);

dList.addNode(4);

dList.addNode(5);

System.out.println("Original List: ");

dList.display();

//Reverse the given list

dList.reverse();

//Displays the reversed list

System.out.println("\nReversed List: ");

dList.display();

}

}

**Output:**

