import java.lang.\*;

class LinkList {

Node head;

static class Node {

int data;

Node next;

Node(int val) { // Constructor

data = val;

next = null;

}

}

public void printList() {

Node n = head;

while(n != null) {

System.out.print(n.data + "-> ");

n = n.next;

}

}

// Add new element at the begininning

public void push(int data) {

Node ad = new Node(data);

ad.next = head;

head = ad; // Insert at the beginning

}

// Add node after a specific node

public void afterNode(Node prev\_Node, int val) {

if(prev\_Node == null) { // if that node is not in list

return ;

}

Node nd = new Node(val);

nd.next = prev\_Node.next;

prev\_Node.next = nd;

}

// At the end of Linked list

public void end\_of\_List(int data) {

if(head == null) {

return; // Empty list

}

else {

Node n = head;

while(n.next != null) {

n = n.next;

}

Node nd = new Node(data);

n.next = nd;

}

}

public static void main(String[] args) {

LinkList llist = new LinkList();

llist.head = new Node(1);

Node second = new Node(2);

Node third = new Node(3);

llist.head.next = second;

second.next = third;

System.out.println(" New List");

llist.printList();

// Add new element at the begininning

llist.push(5);

System.out.println("\n New node after push");

llist.printList();

System.out.println(" \n After adding at specific node");

llist.afterNode(third, 10);

llist.printList();

// Add node at the end

llist.end\_of\_List(15);

System.out.println("\n After Adding at the end");

llist.printList();

}