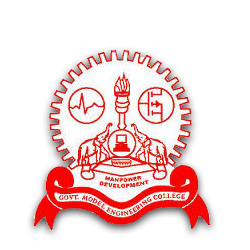
MODEL ENGINEERING COLLEGE, THRIKKAKARA

DEPARTMENT OF COMPUTER ENGINEERING



RECORD OF PRACTICAL WORKS

OOP CST205

CLASS: CS 3 B (2019 Ad.)

Name of Student: ADITHYA A

Roll No: 03

EXP No.: 01

Exceptions

AIM

Write a Java program for the following:

I. Create a doubly linked list of elements.

II. Delete a given element from the above list.

III. Display the contents of the list after deletion

PROGRAM

import java.io.\*;

public class Main {

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;

}

System.out.println("\n");

}

public void delete(int data)

{

Node current = head;

if(head == null) {

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

return;

}

while(current != null)

{

if(current.data==data)

break;

current=current.next;

}

if(current==head)

{

head=current.next;

current.next.previous=null;

}

else

{ if(current.next==null)

{

tail=current.previous;

current.previous.next=null;

}

else

{

current.next.previous=current.previous;

current.previous.next=current.next;

}

}

}

public static void main(String[] args) throws NumberFormatException, IOException {

int num,cho;

doublink dList = new doublink();

BufferedReader br=new BufferedReader (new InputStreamReader(System.in));

do {

System.out.println(" OPTIONS: 1. insert\t2. Delete \t3.display\t4.exit\nenter the choice: ");

cho=Integer.parseInt(br.readLine()) ;

switch (cho) {

case 1:

{

System.out.println("Enter the integerto be inserted: ");

num=Integer.parseInt(br.readLine()) ;

dList.addNode(num);

break;

}

case 2:

{

System.out.println("Enter the integer to be deleted: ");

num=Integer.parseInt(br.readLine()) ;

dList.delete(num);

break;

}

case 3:

{

dList.display();

break;

}

case 4:

{

System.out.println("exit...");

System.exit(0);

}

default:

{ System.out.println("wrong choice");

break;

}

}

} while (true);

}

}

OUTPUT

