**PRACTICAL 1**

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| **Name:** | Harsh Shah | **Semester:** | VII | **Division:** | 6 |
| **Roll No.:** | 21BCP359 | **Date:** | 25-07-24 | **Batch:** | G11 |
| **Aim:** | Implement a Doubly Linked List in append mode. | | | | |

**Program**

import java.util.Scanner;

public class DLL {

static Node head;

static class Block {

int rollNo;

String name;

String branch;

Block(int roll, String nameIn, String branchIn) {

rollNo = roll;

name = nameIn;

branch = branchIn;

}

}

static class Node {

Node prev;

Block data;

Node next;

Node(Block std) {

prev = null;

data = std;

next = null;

}

}

public static DLL addBlock(DLL list, Block data) {

Node newNode = new Node(data);

if (head == null) {

head = newNode;

} else {

Node temp = head;

while (temp.next != null) {

temp = temp.next;

}

temp.next = newNode;

newNode.prev = temp;

}

return list;

}

public static void printList(DLL list) {

System.out.println("\nThe List is: ");

Node current = head;

while (current != null) {

System.out.println(current.data.rollNo + " - " + current.data.name + " - " + current.data.branch);

current = current.next;

}

}

public static void main(String[] args) {

DLL list = new DLL();

Scanner sc = new Scanner(System.in);

Block b1 = new Block(1, "Harsh", "CSE");

list = DLL.addBlock(list, b1);

for (int i = 1; i <= 3; i++) {

System.out.printf("Enter data for student %d:\n", i + 1);

int roll = sc.nextInt();

sc.nextLine();

String name = sc.nextLine();

String branch = sc.nextLine();

Block b = new Block(roll, name, branch);

list = DLL.addBlock(list, b);

}

printList(list);

sc.close();

}

}

**Output:**

