PRACTICE-PROJECT5

TO DELETE THE FIRST OCCURRENCE OF A KEY IN A SINGLY LINKED LIST –

**package** practice;

**import** java.util.Scanner;

**public** **class** LinkedList {

**static** **class** Node {

**int** data;

Node next;

Node(**int** data) {

**this**.data = data;

**this**.next = **null**;

}

}

Node head;

**public** **static** **void** add(LinkedList list, **int** data) {

Node newNode = **new** Node(data);

**if**(list.head == **null**) {

list.head = newNode;

}

**else** {

Node last = list.head;

**while**(last.next != **null**) {

last = last.next;

}

last.next = newNode;

}

}

**public** **static** **void** print(LinkedList list) {

Node currentNode = list.head;

System.***out***.print("[");

**while**(currentNode != **null**) {

**if**(currentNode.next == **null**) {

System.***out***.print(currentNode.data);

}

**else** {

System.***out***.print(currentNode.data+ ",");

}

currentNode = currentNode.next;

}

System.***out***.print("]");

}

**public** **static** **void** deleteFirstOccurence(LinkedList list,**int** data) {

Node tempNode = list.head, prevNode = **null**;

**if**(tempNode != **null** && tempNode.data == data) {

list.head = tempNode.next;

System.***out***.println("\nAfter deleting: ");

*print*(list);

**return**;

}

**while**(tempNode != **null** && tempNode.data != data) {

prevNode = tempNode;

tempNode = tempNode.next;

}

**if**(tempNode == **null**) {

System.***out***.println("Key not found in the linkedlist.");

**return**;

}

prevNode.next = tempNode.next;

System.***out***.println("\nAfter deleting: ");

*print*(list);

}

**public** **static** **void** main(String[] args) {

Scanner sc = **new** Scanner(System.***in***);

LinkedList list = **new** LinkedList();

**try** {

*add*(list, 1);

*add*(list, 5);

*add*(list, 3);

*add*(list, 4);

*add*(list, 5);

System.***out***.println("Elements in the linked list: ");

*print*(list);

System.***out***.println("\nEnter the value to be deleted: ");

**int** data = sc.nextInt();

*deleteFirstOccurence*(list,data);

} **catch** (Exception e) {

System.***out***.println(e.getMessage());

}

sc.close();

}

}