**Phase 1 Practice Project – Assisted Practice**

**5 . Write a program in java to delete the first occurrence of a key in a singly linked list.**

**Source Code:**

**package** slm2;

**class** Node {

**int** data;

Node next;

Node(**int** data) {

**this**.data = data;

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

}

}

**class** LinkedList {

Node head;

LinkedList() {

head = **null**;

}

// Function to insert a new node at the end of the linked list

**void** append(**int** data) {

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

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

head = newNode;

**return**;

}

Node current = head;

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

current = current.next;

}

current.next = newNode;

}

// Function to delete the first occurrence of a key in the linked list

**void** deleteKey(**int** key) {

Node current = head;

Node prev = **null**;

**if** (current != **null** && current.data == key) {

head = current.next;

**return**;

}

**while** (current != **null** && current.data != key) {

prev = current;

current = current.next;

}

**if** (current == **null**) {

**return**;

}

prev.next = current.next;

}

// Function to print the linked list

**void** printList() {

Node current = head;

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

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

current = current.next;

}

}

}

**public** **class** DeletingList {

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

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

list.append(7);

list.append(10);

list.append(14);

list.append(19);

list.append(32);

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

list.printList();

**int** key = 19;

list.deleteKey(key);

System.***out***.println("\nLinked List after deleting " + key + ":");

list.printList();

}

}

**Output:**



