Hands-On Activity 2

1. Using the singly-linked class definition in course slides (page 6), **write a method**

that finds the sum of all data on the linked list.

**public** **void** sum(Node head) {

**while** (head!=**null** && head.next != **null**) {

**this**.sum += head.data;

head = head.next;

}

System.***out***.println(**this**.sum);

}

1. Using the singly-linked class definition in course slides (page 6), **write a Java method** that swaps the reference to the head of the list with the second node (i.e. the node next to the header). Do not swap the nodes’ data, but the references to the nodes.

**public** **void** swap(Node head) {

Node temp = head.next;

head.next = temp.next;

temp.next = head;

}

1. Using the doubly-linked list class definition in course slides (page 15), write the following methods:

void remove( Node n); Node search( int k); Node removeLast();

**public** **void** remove(Node n) {

n.prev.next = n.next;

n.next.prev = n.prev;

}

**public** Node search(**int** k) {

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

**if** (head.data == k)

**return** head;

**else** {

head = head.next;

}

}

**return** **null**;

}

**public** Node removeLast() {

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

**return** **null**;

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

head = head.next;

}

head.prev.next = **null**;

head.prev = **null**;

**return** head;

}