Solution and Rubric for Quiz 4 Mon - 2 PM

Set A

| Python | Java |
| --- | --- |
| def sum\_positive\_contributions(head):  if head is None:  return 0  if head.elem > 0:  return head.elem + sum\_positive\_contributions(head.next)  return sum\_positive\_contributions(head.next) | public static int sum\_positive\_contributions(Node head) {  if (head == null) {  return 0;  }  if (head.elem > 0) {  return head.elem + sum\_positive\_contributions(head.next);  }  return sum\_positive\_contributions(head.next);  } |

Set B

| Python | Java |
| --- | --- |
| def sum\_negative\_contributions(head):  if head is None:  return 0  if head.elem < 0:  return head.elem + sum\_negative\_contributions(head.next)  return sum\_negative\_contributions(head.next) | public int sum\_negative\_contributions(Node head) {  if (head == null) {  return 0;  }  if (head.elem < 0) {  return head.elem + sum\_negative\_contributions(head.next);  }  return sum\_negative\_contributions(head.next);  } |

Marking Rubric:

1. Appropriate base case (null identification) - 3 marks
2. Returns 0 from base case - 1 mark
3. Adding Positive (set A) / Negative (set B) number - 3 marks
4. Not adding Positive (set A) / Negative (set B) number - 3 marks
5. Recursive call with appropriate parameters - 3 marks
6. Syntax - 2 marks

Total - 15 marks

Other points:

1. Student not using recursion - Deduct 15 marks
2. Student not introducing extra parameters in the function - Deduct 10 marks