Philadelphia University
Faculty of Engineering

Marking Scheme

Quiz Paper

BSc CE

Algorithms and Data Structures (630231)

Second Quiz   First semester   Date: 19/12/2010

Section 1

Weighting 5% of the module total

Lecturer: Dr. Qadri Hamarsheh

Coordinator: Dr. Qadri Hamarsheh

Internal Examiner: Dr. Ali Al-Khawaldeh

Algorithms and Data Structures (630231)

Marking Assignments

Question 1 This question is attributed with 5 marks if answered properly; the answers are as following:

Solution

```
void divideMid(linkedListType<Type> &sublist);

template<class Type>
void linkedListType<Type>::divideMid(linkedListType<Type> &sublist)
{
        nodeType<Type> *current;
        nodeType<Type> *mid;
        if (first == NULL)
        {
                sublist.first = NULL;
                sublist.last = NULL;
          sublist.count = 0;
        }
        else
                if (first->link == NULL)
                {
                        sublist.first = NULL;
                        sublist.last = NULL;
                sublist.count = 0;
                }
                else
                {
                        mid = first;
                        current = first->link;

                        if (current != NULL)
                                current = current->link;
                int i = 1;
                        while (current != NULL)
                        {
                                mid = mid->link;
                                current = current->link;
                        i++;
                                if (current != NULL)
                                        current = current->link;
                        }
                        sublist.first = mid->link;
                        sublist.last = last;
                        last = mid;
                        last->link = NULL;
                sublist.count = count - i;
                count = i;
                }
}
```