COIS-2020: Data Structures and Algorithms

Practical Exercise 2 (5%)

Fill out the following table.

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| Group Number | 21 |
| Student(s) Name(s) | 1. Dev Patel (0824874) 2. Dikshith Reddy Macherla (0789055) |

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| 1. **Paste your code of the Node class here.**   public class Node  {  public Node next;  public Node prev;  public Object data;  } |
| 1. **Paste your code for Requirement 2 (the tail reference).**   private Node tail; |
| 1. **Paste your code of the *AddFirstUsingTail()* method here.**   public void AddFirstUsingTail(Object data)  {  Node toAdd = new Node { data = data };  if (tail == null)  {  head = tail = toAdd;  }  else  {  toAdd.next = tail;  while (toAdd.next.prev != null)  {  toAdd.next = toAdd.next.prev;  }  toAdd.next.prev = toAdd;  head = toAdd;  }  } |
| 1. **Paste your code of the *AddLastUsingTail()* method here.**   public void AddLastUsingTail(Object data)  {  Node toAdd = new Node { data = data };  if (tail == null)  {  head = tail = toAdd;  }  else  {  tail.next = toAdd;  toAdd.prev = tail;  tail = toAdd;  }  } |
| 1. **Paste your code of the *DeleteLastUsingTail()* method here.**   public void DeleteLastUsingTail()  {  if (tail != null)  {  if (tail.prev != null)  {  tail = tail.prev;  tail.next = null;  }  else  {  head = tail = null;  }  }  } |
| 1. **Paste your code of the *MergeUsingHeadAndTail()* method here.**   public void MergeUsingHeadAndTail(LinkedList dl2)  {  if (head == null)  {  head = dl2.head;  tail = dl2.tail;  }  else if (dl2.head != null)  {  tail.next = dl2.head;  dl2.head.prev = tail;  tail = dl2.tail;  }  } |
| 1. **After completing all methods and running the program, paste a screenshot showing the output (everything printed in the console)** |

**How to submit?**

After completing your work…

1. Save your code.
2. Save this file.
3. Upload this file, **and** your source code file (the .cs file) to the “Practical Exercise2\_Submission link” on Blackboard.