

**Department of Computing
Hong Kong Polytechnic University**

COMP 2011 Data Structures

Assignment Two (Total Marks: 100)

Submission Deadline: 23:55, 12 November, 2014

Note: Please submit your electronic copy by the deadline via Learn@PolyU.

Discussion with classmates is encouraged. But if the plagiarism is found, both you and the person who allows you to copy will get **ZERO** point.

1. 50 marks

Revise the doubly linked list we have learned in the class to make it become a circular doubly linked list. In the list, there will be two circles – one starts from “first” and follows “next” to go back to “first”; the other starts from “last” and follows “previous” to go back to “last”. All methods are the same as these defined in Class DoublyLinkedList we have learned in the class (Attached please find the related java program – doublyLinked.java. Note that some testing code has been added in main() and at least you should make it work).

2. 50 marks

Given Class FirstLastList that we have learned in the class, add a new method as follows:

public void removeDupLink()

In the method, all duplicated links (the links have the same dData) will be removed from the list (attached please find the related java program – firstLastList.java. Note that some testing code has been added in main() and at least you should make it work).

What to submit – A zip file includes:

- (1) The source code; (2) A report (with screen snapshots) to show the execution results of each program.