

# BSc (Hons) in Information Technology Year 2

## Data Structures and Algorithms – IT2070

## Lab Exercise 3 - Link Lists I

2020

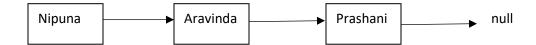
#### Question

a)

- i) Implement Link class to store the name and average of a student. Identify the data attributes required and implement displayDetails() method with the constructor.
- ii) In an application, create three links with the following details.

Name	Average
Nipuna	53.5
Aravinda	78.0
Prashani	69.5

iii) Connect the three links as follows.



b)

i) Implement a LinkList class with the following data members and method

LinkList	
-	first
-	LinkList()
-	isEmpty()
-	displayList()
-	insertFirst()
-	deleteFirst()

**ii)** In your application, create the following link using the LinkList class and display the link details.



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Hint : Use insertFirst() method

- iii) Add more links to your link list.
- c) i) Modify your linkList class to add a new method called deleteLink(). This method will find the link with the given name and delete the link.

Link deleteLink(String name)

ii) Modify your application to delete a given link and display the details of the list.