UNIVERSITI TEKNOLOGI MARA

ASSIGNMENT #1

COURSE	**:**	**DATA STRUCTURES**
COURSE CODE	**:**	**CSC508**
SEMESTER	**:**	**OKTOBER 2024 – FEBRUARY 2024**
TIME GIVEN	**:**	**2 WEEKS**
LECTURER	**:**	**DR. NUR FARRALIZA BINTI MANSOR**

INSTRUCTIONS TO CANDIDATES

1. This assignment consists of **one (1)** question only.
2. Please complete according to the following items.
3. Due Date : **11th November 2024 11:59pm**
4. Please zip ALL files, and name it according to **ID, yourname and group**.

GOOD LUCK AND BEST WISHES

QUESTION

Implement your own Linked List data structures. Do not use the built in Linked List from Java Collection Framework. You can name your linked list as **`MyLinkedList`**.

```
public class MyLinkedList{

    private Node head;
    private Node tail;
    private Node newNode;

    //Constructor
    public MyLinkedList ()
    {
       head = tail = newNode = null;
    }

    // Method isEmpty()
    public boolean isEmpty()
    { return head == null; }

    // definition of other methods
    …
}
```

Write the application class `AppLinkedList` which contain `main()` to declare object linked list from class `MyLinkedList`. Your linked list will hold object `Book` declared from previous exercise.

a. Declare a linked list of books object named **`BookLL`**
b. ask user to enter 10 Book objects which will be inserted into linked list **`BookLL`**
c. Display all books details from linked list **`BookLL`**
d. Display all books which were published before the year 2020.
e. Search and display the books with the **highest** and **lowest** prices.
f. Declare another linked list of book objects named **`Book_LL_Old`**, ALL books published before year 2000 should be removed from **`BookLL`** and copied into linked list **`Book_LL_Old`**.
g. Display all books in **`BookLL and Book_LL_Old.`**

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