Lab 2

1) Stacks. Array and linked list implementation of stacks.

- Download the archive `Lab2.zip` and extract subdirectory stack with the stack implementation contained in the following files
  - `Stack.java`
  - `Node.java`
  - `NodeStack.java`
  - `ArrayStack.java`
  - `StackEmptyException.java`
  - `FullStackException.java`
- The archive also contains the files `tryStack1.java` and `tryStack2.java`
  - Compile `tryStack1` and run it
  - Compile `tryStack2` and run it

2) Doubly Linked Lists in Java

- Extract the subdirectory `dLinkList` from the archive `Lab2.zip` with the implementation of the doubly-linked list contained in the following files.
  - `ListNode.java`
  - `DLinkedList.java`

- In `DLinkedList.java` implement the following methods:
  - `InsertNode(ListNode nNode, ListNode pAfter)`
    - inserts the node `nNode` after node `pAfter` in the current list
  - `RemoveNode(ListNode nNode)`
    - removes node `nNode` from current list
- Compile `TestDLinkedList.java` and run it

3) Checking Balanced Brackets in Expressions with Stacks

- Extract the subdirectory `balance` from the archive `Lab2.zip` with the implementation of the stack ADT with an array list contained in the following files:
  - `Stack.java`
  - `ArrayStack.java`
  - `StackEmptyException.java`
  - `StackFullException.java`

- The archive also contains the file `bracketsBalance.java` in which you should implement the following method:
  - `boolean bBalance (String exp)`
    - that evaluates `exp` for balanced brackets and returns `true` (if balanced) and `false` otherwise
    - use the stack implementation in ArrayStack.java.
- Compile `bracketsBalance.java` and run it with different expressions