

Lab 10

This lab is to be completed individually

This lab is for you to implement Doubly LinkedList.

Part 1:

Implement the code for Doubly LinkedList. Specifically, implement the code for the following methods -

```
public boolean add(E e);
public E remove(int i);
public boolean contains (E e);
public boolean add(Where where, E e);
public boolean add(Where where, int index, E e);
```

Part2:

Understand the **Iterable** interface for Doubly LinkedList for traversing list. One way to do this is to have the double linked list iterator implement interface *ListIterator* (see <https://docs.oracle.com/javase/7/docs/api/java/util/ListIterator.html>). *ListIterator* extends *Iterator* and provides methods called *hasPrevious()* and *previous()* in addition to *hasNext()* and *next()*. Implementing *hasPrevious()* and *previous()* methods will allow you to traverse the list from tail to the head.

Add below methods in above LinkedList implementation with Iterable interface:

```
public void print_from_beginning();
public void print_from_end();
```