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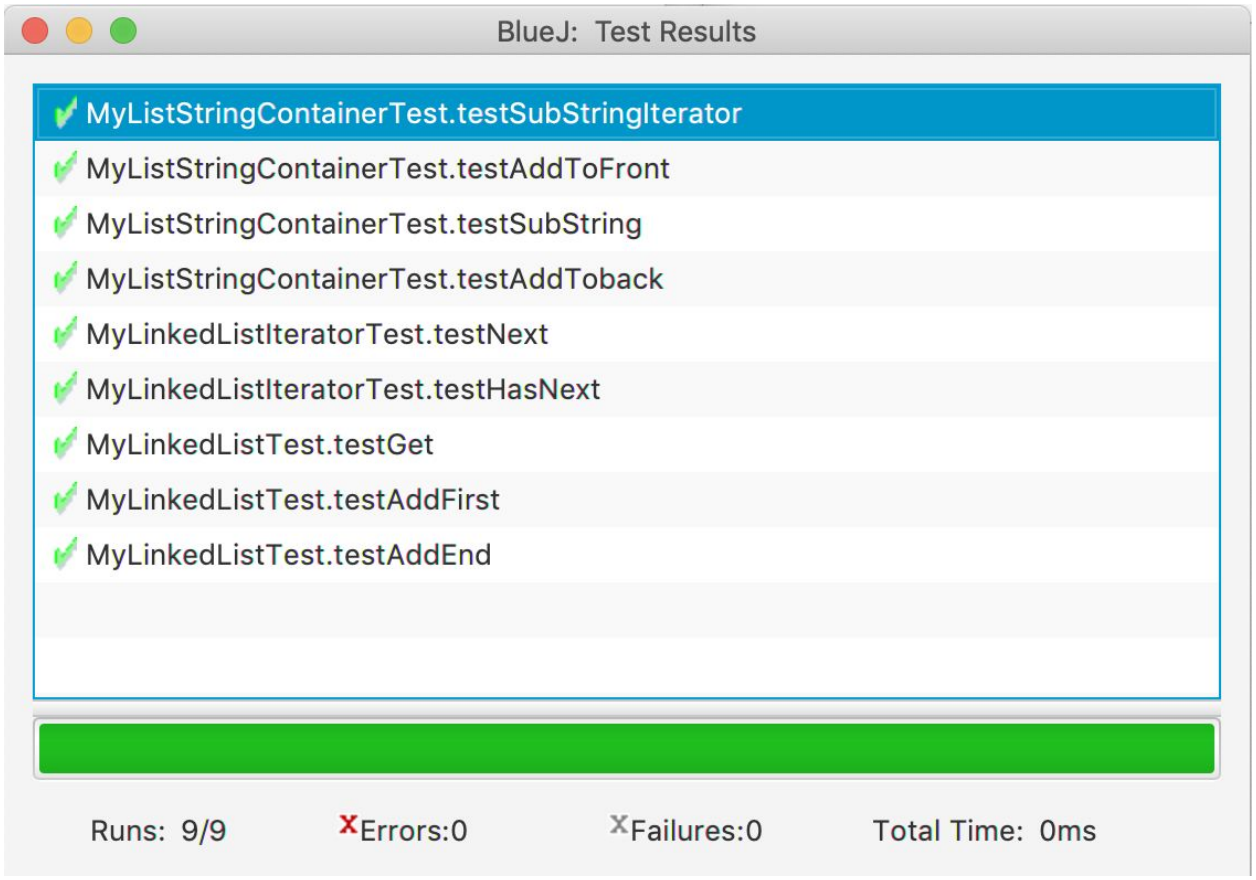
CS150 Lab 5
Lab #5 write-up
09/26/19

Introduction:
The goal of this lab was to become familiar with generic classes and iterators. The program is comprised of an **ExperimentController** class which controls the function of the **MyListStringContainer**. Its basic purpose is to control the functions of the generic linked-list and iterator using strings. More importantly, the **MyLIstStringContainer** contained two methods to fetch an index with a value that had a given subString. This would allow to test the efficiency of searching via the iterator vs. searching the list without it.

Unit Tests:



- Unit testing for all classes

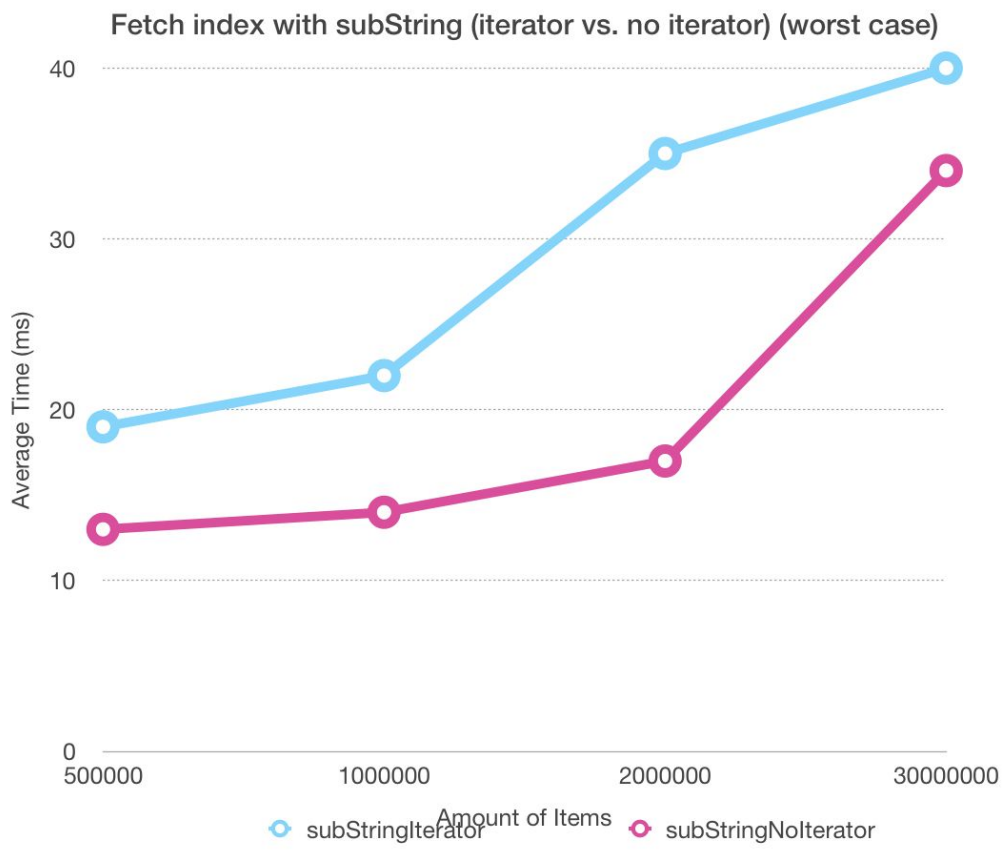
Required Output:

```
timeSubStringIterator: 26ms : substring 9902 found at index 2000000
timeSubString: 20ms : substring 9902 found at index 2000000

Process finished with exit code 0
```

- Output received after searching 2000000 strings (found substring at last index)

```
timeSubStringIterator: 23ms : substring 9902 not found
timeSubString: 18ms : substring 9902 not found

Process finished with exit code 0
```

- Output received after searching 2000000 strings (substring not found)



- Graph of both subString methods (one with iterator & one without) over time

Trouble Report:
This section is not applicable because all of my methods work as intended.

References:
Java Iterator Interface:
- https://docs.oracle.com/javase/8/docs/api/java/util/Iterator.html

Java Generics Example:
- https://docs.oracle.com/javase/tutorial/java/generics/index.html