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Date: September 11, 2019
Lab Section: Section 1.

A. Introduction

This project required the creation of four classes:

1. Cell

This is a class that represents a node in a linked list. It houses an int 'val' which contains its data and a Cell pointer next which indicates the node to which it is linked.

2. StringListADT

This is an abstract class which serves as a template for the construction of the class StringList.

3. StringList

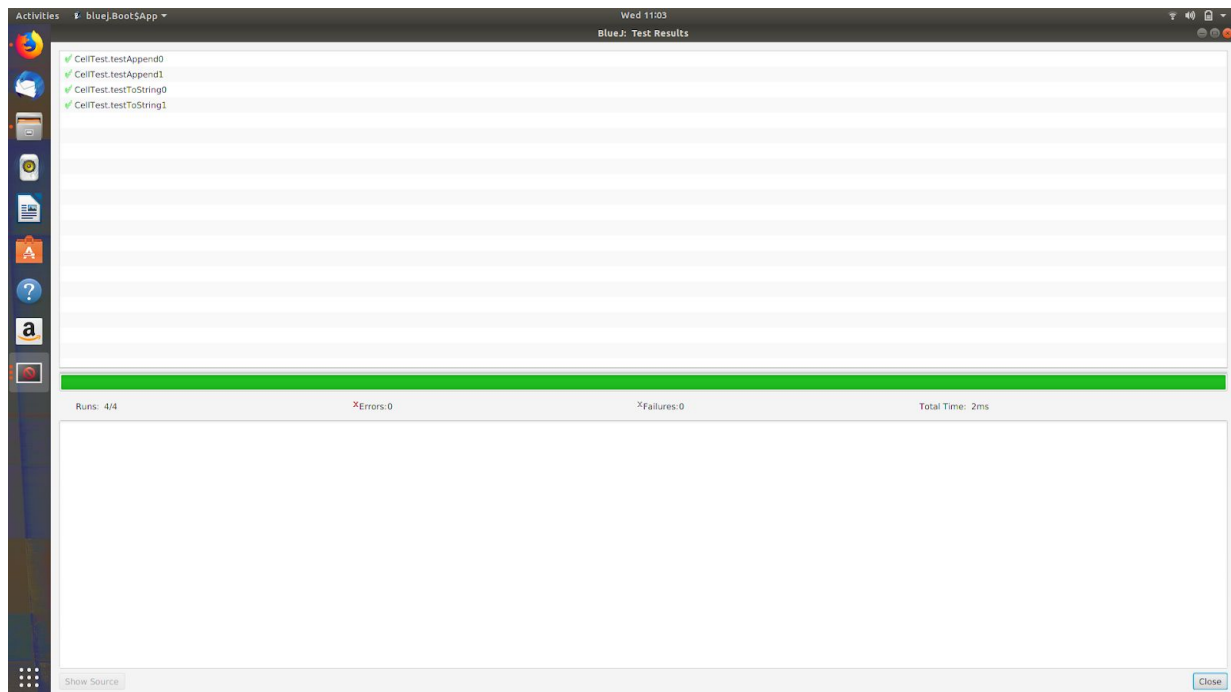
This is a class that is used to construct a linked list data type structure. Houses two Cell variables 'head' and 'tail'.

4. ExperimentController

The main program of this class returned the runtime of all the methods of StringList class.

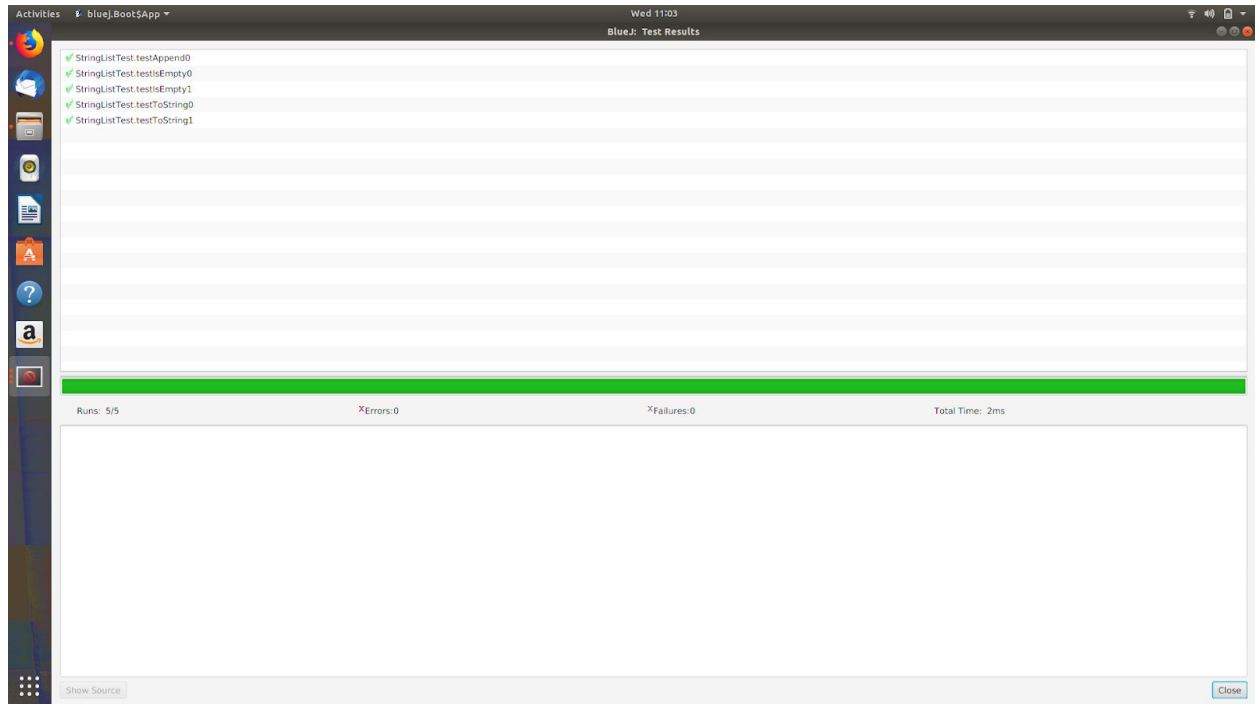
B. Unit Tests

Unit test for Cell class is shown below:



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Unit test for StringList class is shown below:

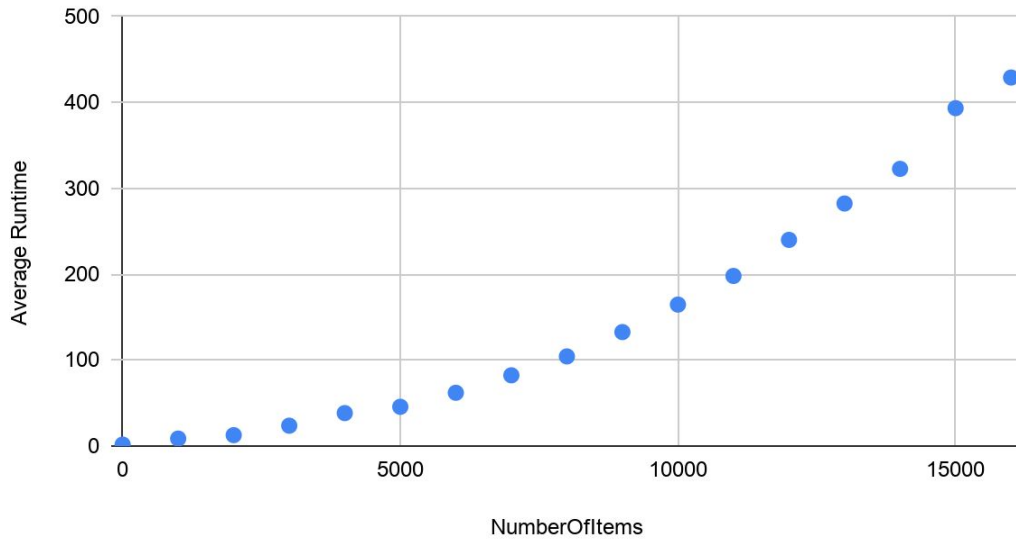


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C. Required Output

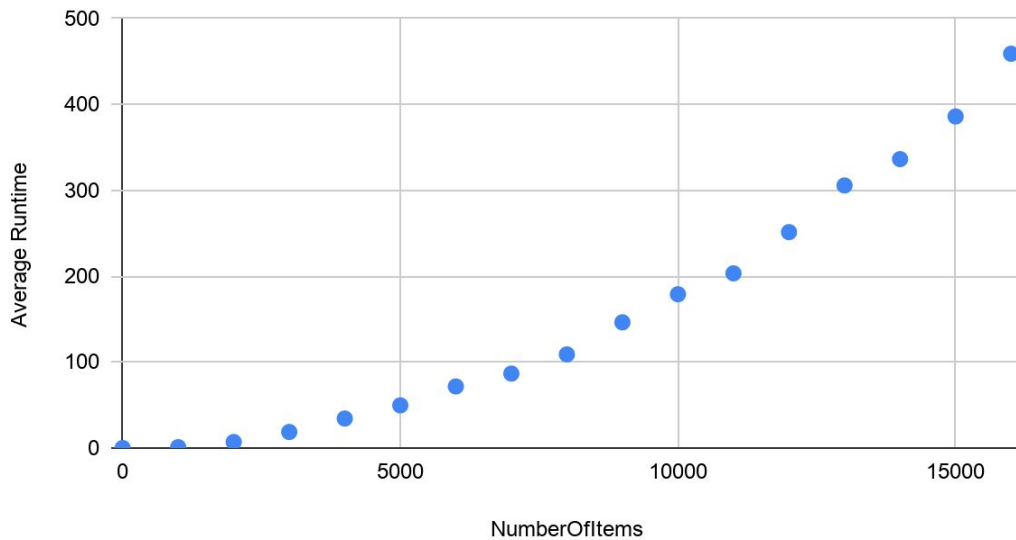
1. Runtime for addToBack():

NumberOfItems v. Average Runtime



2. Runtime for toString():

NumberOfItems vs. Avg Runtime



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Data of average time of both methods is:

1. timeAddToBack() URL:

<https://docs.google.com/spreadsheets/d/14fN4j3q0k5YRpsDCcVveOmLGS1oqE-63bbVcL5pYJF4/edit?usp=sharing>

2. timeToString() URL :

<https://docs.google.com/spreadsheets/d/1ty06WoMRG-Wli5AEJfKmDlxfuEecvw5gDG6Ctu1qGPg/edit?usp=sharing>

.csv files of both data is attached in zip folder.

E. Troubleshoot Report

No error was encountered in code.

D. References

No reference was used.