Exercise 1: Hello with Date Time

A screen shot of a computer

Description automatically generated

I expect that the values would be:

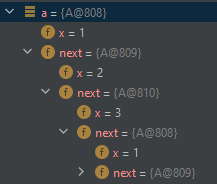
* 1
* 2
* 3
* 1

Result:

A screen shot of a computer

Description automatically generated

In debugger, when expanding the variable a, it will loop values in variable a,b,c as they reference each other.



Exercise 2: Sketching Object Graphs

A diagram of a graph

Description automatically generated

Exercise 3: Complete the Inefficient Implementations of LinkedList and ArrayList.

Contains method for LinkedList

A computer code with text

Description automatically generated

Contains method for ArrayList

A screen shot of a computer code

Description automatically generated

Exercise 4: Minimal rewrite of LinkedList and ArrayList to improve efficiency

Append function for EfficientLinkedList

A computer screen shot of code

Description automatically generatedA computer screen with text

Description automatically generated

Append function for EfficientArrayList

A computer screen shot of a code

Description automatically generated

Code extension of ListExample

A screen shot of a computer program

Description automatically generated

Output using an extension of ListExample

|  |  |  |  |
| --- | --- | --- | --- |
| LinkedList | EfficientLinkedList | ArrayList | EfficientArrayList |
|  |  |  |  |

Exercise 5: Performance Tests

Code used to test (slightly modified so I don’t have to change the code multiple times for a new number of elements)

A computer screen shot of a program code

Description automatically generated

A graph with numbers and lines

Description automatically generated

The average of EfficienctArrayList is constant while EfficientLinkedList for any case of append is constant