Project 2

DeAngelo Bowen

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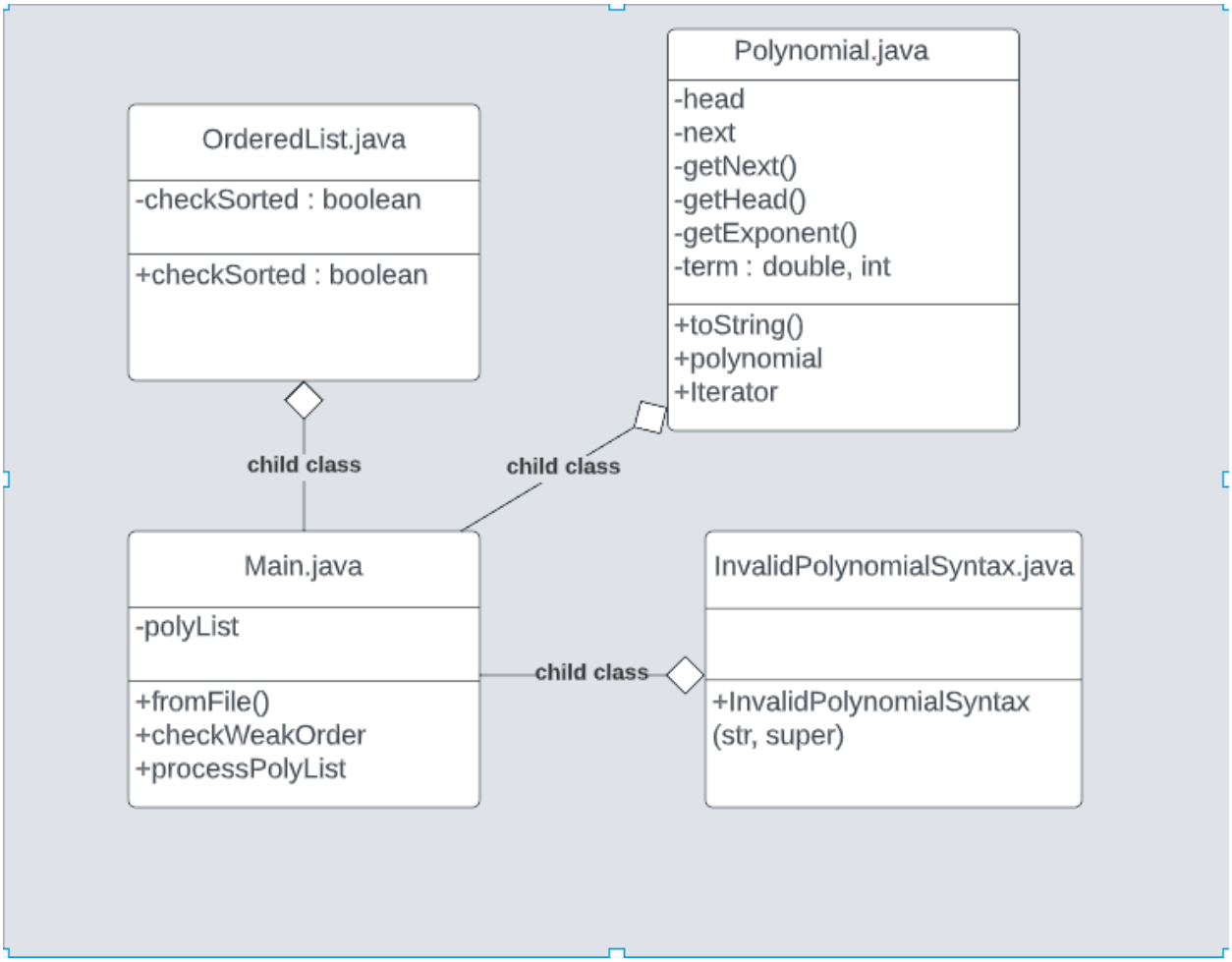
Polynomials

Contents

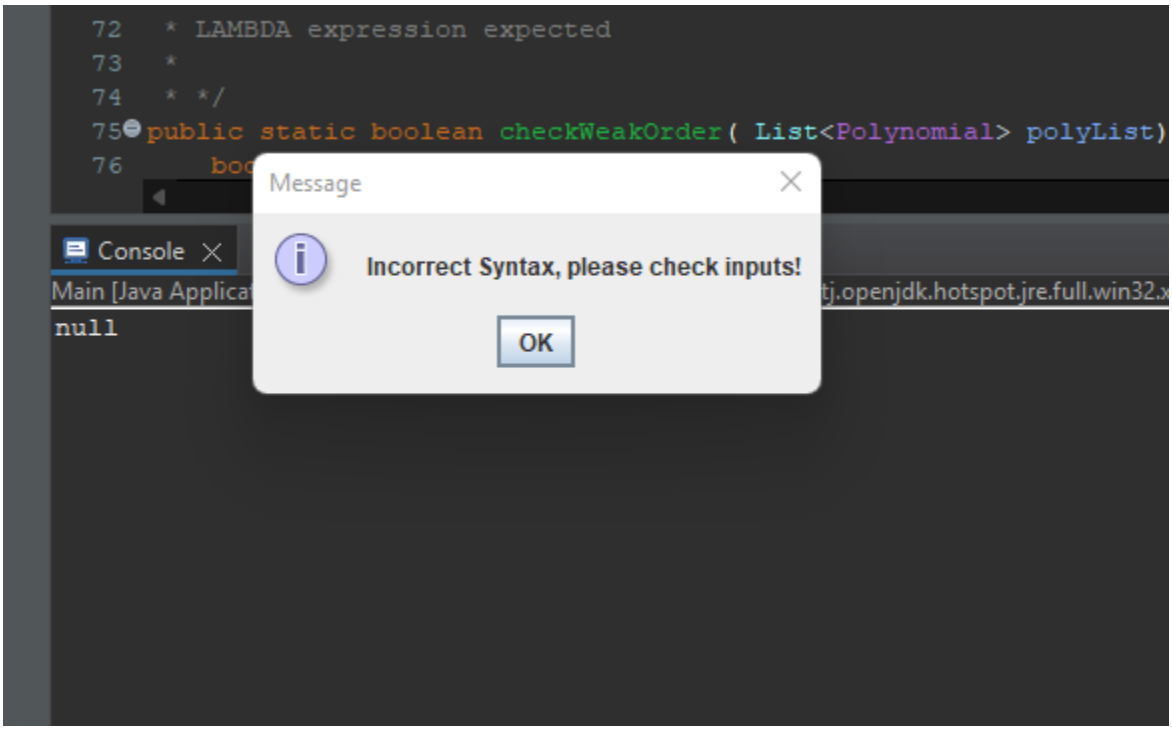
Assumptions

The assumptions I've made for this script are very straight-forward. I assumed that when using a .txt-based file for formatting the polynomials, the output would match the required format for the project outline. In trial there were minute changes that needed to be made for increase in accuracy, but I believe that all issues have been resolved, and the script works as described in the guidelines.

UML Diagram

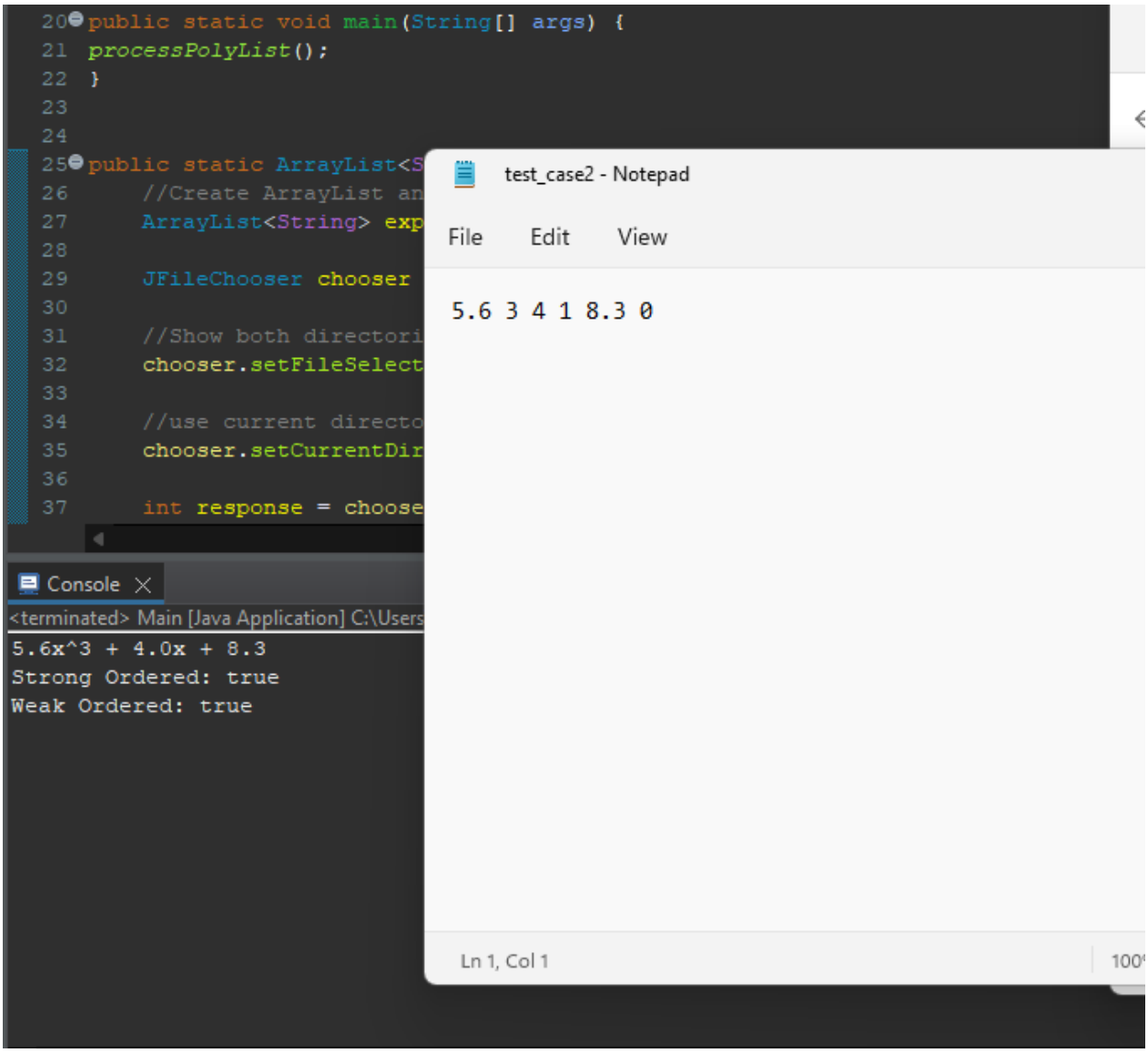

Polynomial.java
-head
-next
-getNext()
-getHead()
-getExponent()
-term : double, int
+toString()
+polynomial
+Iterator
OrderedList.java
-checkSorted : boolean
+checkSorted : boolean
child class
child class
Main.java
-polyList
+fromFile()
+checkWeakOrder
+processPolyList
child class
InvalidPolynomialSyntax.java
+InvalidPolynomialSyntax
(str, super)

Test Cases



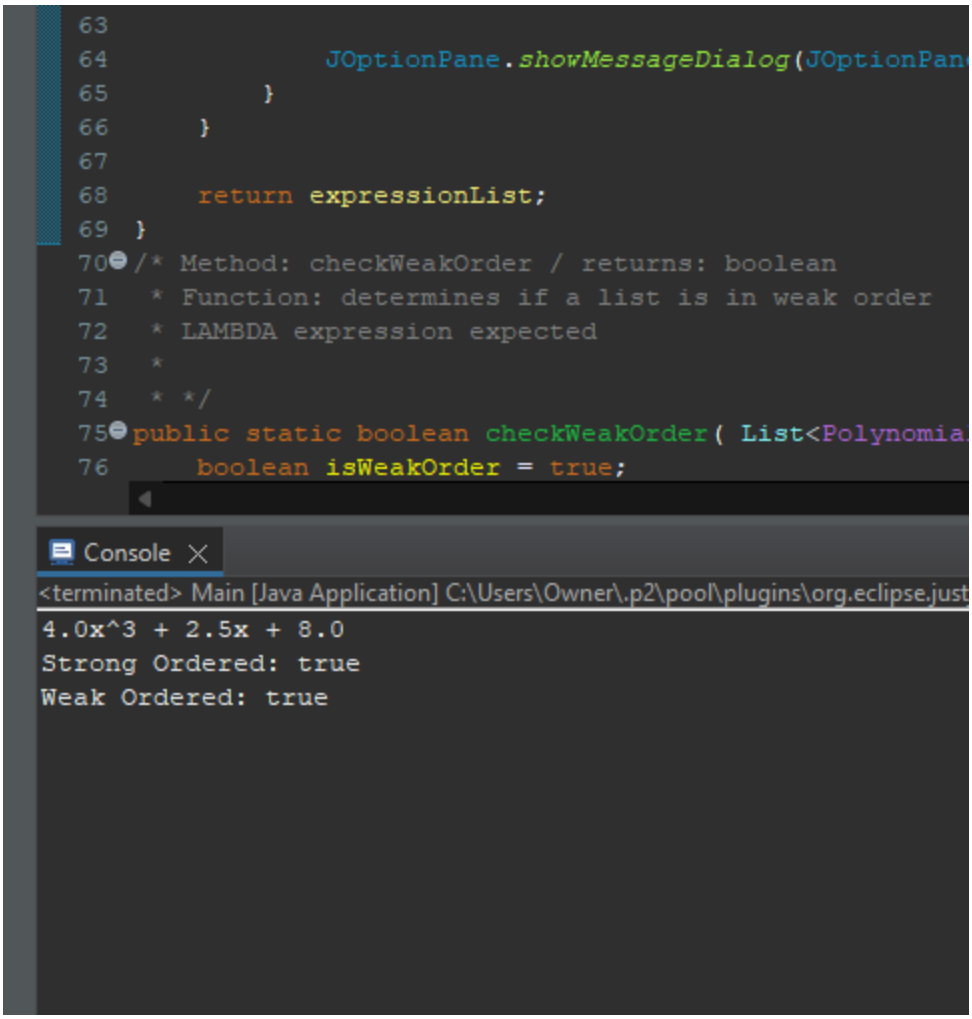
Error in polynomial. Input expression was 4x^4+ 8x^2 + ….

Throws error message in the event of an improper input expression.



Slight errors in returning values for weak and strong order.

Both will be printed in certain cases.



Polynomials are displayed in the format they are read.

Lessons Learned

I've learned a lot working with polynomials, and in general writing files to a .java script. In short, I found it slightly easier than say reading a .csv in a .py file. The biggest issue I still face with the child class OrderList while checking for strong or weak order is the separation of either or. Currently, the display together and I am finding difficulty producing otherwise. I will be uploading this to GitHub in hopes to come back to it when I am more equipped to handle the errors I currently face.