CS 3310
Dr. Gupta
Mariia Kravtsova
SLC Report
December 1, 2016

Assignment 5 implementation has the following classes:
binaryStreeImplicit - Binary Search Tree Implementation, it creates an array list tree which has a leftchild, a right child, a parent, prints it in preorder, postorder, inorder, it also has methods to insert, delete and search the tree
Main - reads the data and calls the method based upon the reading from the file hw5cs3310F16data.txt
my data - stores the object that has student name, class number and grade

This code is run on a 2.5GHx i7, with 16 GB RAM and GeFroce GT 750M 2GB MacBook Pro.

	Theoretical	**Empirical**
search	Θ(log(n))	O(n)
insert	Θ(log(n))	O(n)
delete	Θ(log(n))	O(n)
postorder	Θ(n)	O(n)
inorder	Θ(n)	O(n)
preorder	Θ(n)	O(n)

This file is not very big, and there is not enough data to show nice graphs like in the previous assignments because there is not a big jump in the time or number of records, so I did the analysis of code by counting operations and removing constants.

I think that there is probably a much better way to use binary search trees - not in an array lists. Also, I think that they could be used nicely with other data structures, but on their own the implementation of the search is quite slow.