Critical Analysis

The positive aspects of this submission is that it has deepened my knowledge of how Binary Trees work and helped me better understand how to alter a program to make it work for a different thing, and also helped me understand how to insert an item into a tree that is a generic type from a string which I found quite difficult at first because I was trying to convert it from a string to a generic type instead, what I did was initialise a string tree in the Program.cs at the top which allowed it to work.

Some key difficulties was finding the Math.Max command to get the max height, the implementation was easy in my opinion though, finding how to do it was tricky though. I also found how to insert the word into the tree difficult to and getting it to work properly because of the type difference between a string and a generic type which the insertitem function is written in. How I overcame this was trial and error by struggling to manually convert string word to T word until I realised how to fix this was by passing in string tree as a parameter into readFile. My methodology for how this readFile function works is that it creates a string array with the maximum amount of lines that a file can have to be read in visual studio, then read all he lines from the file name and put the value of that into AllLines, and then using a foreach function to visit each line of text once at a time to read all the lines in the file we have told it to read, and then have a space inbetween the words using line.Split and pass that into a string array called words, and then another foreach statement to read every word in words and then check if there is a space or not by the word != “” to check if it is actually a word there and then insert that into the tree in lower case. The reason it is in alphabetical order from my understanding has to do with the compareto function in the insertItem function in BSTree to organise it alphabetically by telling it to do a certain thing if it is greater or less than zero and also to remove the word if has appeared again.

The code complexity could be improved as there are functions in there that do not need to be in there as they are not required to be there by the task specification such as the height and count. The console.writeline’s and some code in the binarytree.cs like the preorder and postorder which are not required to be there by the task specification. Some skills I will need to improve on which I have also practiced here is converting between types from string and generic types to allow for the file to be inserted into the tree.