CMPT 432 - Spring 2022 - Compilers

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Objective: This Lab we have a few tasks to accomplish. We must Read chapters 8.1-8.3 in the Crafting a Compiler book as well as Read chapters 2.7 and 6.3.1 in the Dragon book. We then must complete exercise 8.1 (binary search trees and hash tables) from the Crafting a Compiler book.

1 Crafting a Compiler

This section contains the assignments from the Crafting a Compiler book

1.1 8.1

When implementing data structures, the most commonly used for symbol tables are binary search trees and hash tables. The advantages of using a binary search tree is that it makes a significant difference in regards to complexity of the algorithm. The disadvantage of using a binary search tree for a symbol table is that every part of the symbol table is held in a separate node of the tree making it more difficult to retrieve the entire table at once. In terms of using a hash table for a symbol table, the advantage is that all entries (at least at the current scope) are held in the same hash table. The disadvantage of using a hash table is how each time we look at a key from the hash table, we are using a lot of unnecessary algorithm complexity.

2 Dragon

This section contains the assignments from the Dragon book

2.1 Chapters

For this lab we just had to read the chapters:
8.1 - 8.3