**COMP 3002 Winter 2020 Assignment #3**

**Building a Compiler**

**Due: Tuesday Midnight Feb 2.**

**Basic goals**: To implement a compiler with for loops, if statements, and simple expressions.

**Where to start…**

Build a class called StudentCompiler using SampleTranslator from the previous assignment as a model. Note: that we explicitly designed these tables so that NO MAP IS NEEDED. After you find where the scanner and parser tables are in SampleTranslator, place the new tables in the corresponding place in your StudentCompiler.

Note that instead of calling your walk routine “compileExpressionFor: tree” which is what it was called in the SampleTranslator, yours should be called “walkTree: tree”. Output your code in an ordered collection called code.

After that, build yourself a few example methods containing code you want to compile such as

example1

“StudentCompiler example1”

StudentCompiler compile: 'if (a > b) {a = b; c = d} else {e = f;}'

and you are ready to start. Note: We don’t deal with variable declarations in this assignment. Nor do we store variable values. So don’t include variables from SampleTranslator that you don’t need.

Hint: It is possible to copy code that is in Powerpoint provide you delete funny characters that you don’t want. Some example funny characters are slanted single or double quotes and sometimes the character “-“ turns out to be something other than a minus sign.

If any of my code has a bug, fix it and let me know.