# Homework #8: CMPT-755

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(1) **Compiler Contest**:

This special homework is specially created to allow you to package your entire compiler project that was built over the course of the semester. It will also provide an extra chance to complete your compiler and provide some extra credit for completing the compiler.

Submit your compiler as a self-contained package that can be used to compile **Decaf** programs into MIPS assembly and subsequently execute them using the `spim` simulator for the MIPS processor. Make sure that your compiler can be compiled by running `make` or a script called `compileit`. Create a script called `decafcc` (or `decafcc.sh`) that is used to run the entire compiler chain from lexical analysis to code generation to running the MIPS simulator (assume `spim` is in the PATH).

In your submission, provide in a subdirectory called `positives` any number of **Decaf** programs that work with your compiler (the programs should be valid **Decaf** based on the language definition and execute using `spim`) along with the legitimate output for that **Decaf** program, e.g. for a program called `exprTest.decaf` also include the legitimate output in a file called `exprTest.decaf.output`. Also provide a subdirectory called `negatives` with **Decaf** programs that should exit with an error.

We will test each compiler with all the programs submitted and some of our own **Decaf** programs. The compilers will be ranked informally, and the ranking of your compiler will depend on several factors. One will be how many of the positives successfully produce legitimate output how many of the negatives exit with an error. In addition, a compiler with an elegant implementation will be ranked higher, as will those who do not use code that was released as solutions to previous homeworks.