

## Semester Project - Part 2 (aka Project 2)

For this part of the project you are to write a recursive descent parser that performs syntactical analysis on the source code using the grammar distributed in class. Unless otherwise approved by your instructor, your program should be written in C or C++.

### Specifications

The grammar can be found at: <http://watts.cs.sonoma.edu/cs460f19/ProjectGrammar.pdf>

Starter files for the assignment can be found in the folder Project2Framework in the course pickup directory.

The functions developed for this parser should be in a separate .cpp or .c file. Necessary classes, types and prototypes should be in an associated .h file. The files SyntacticalAnalyzer.cpp and SyntacticalAnalyzer.h in the Project2Framework can be used as a starting point for this project.

Input: A source code file. The file name should be accepted as a command line argument. The file name extension must be '.ss'.

Output: A listing of the original source code with lexical and syntactical error messages (written to a listing file (filename - .ss + .lst)). A Project 2 file (filename - .ss + .p2) containing a list of the rules applied and the functions visited. Each time a rule is used, a line of the form “Using Rule #” should be written line the .p2 file. Sample files are in the P2Tests folder in the course pickup folder. Possibly, a debugging file (filename - .ss + .dbg) containing a list of terminal and non-terminal symbols encountered while parsing the program (and other useful debugging information).

Your makefile should create an executable called “P2.out”.

Your main function must be in a file called Project2.cpp. Your main function must call SetLimits and SetLimits must be compiled and linked within your makefile.

**Date Due:** 2 December 2019; 11:59 pm.

**To turn in:** A tarred and zipped directory containing source files (headers and implementations) and a makefile. Your directory should be called *colorP2* and your tarred and zipped file should be called *colorP2.tgz*. Note that *color* is your team’s color name Submit your .tgz file by copying it to ~tiawatts/cs460drop