Sonoma State University
Computer Science Department
CS460 – Fall 2017 – Watts

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/cs460f17/ProjectGrammar.pdf

The functions developed for this parser should be in a separate .cpp or .c file. Necessary types and prototypes should be in an associated .h file. The files SyntacticalAnalyzer.cpp and SyntacticalAnalyzer.h in the ProjectFramework 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 file that indicates which functions were used by the parser and which Rules were used to create the program (written to a file (filename - .ss + .p2)). A listing of the original source code with lexical and syntactical error messages (written to a listing file (filename - .ss+ .lst)). 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.c or Project2.cpp. Your main function must call SetLimits and SetLimits must be compiled and linked within your makefile.

Testing: There are a few input files in the Project2Framework directory; these are related to Homework 4 Part 1. You will be expected to create test cases for all of the rules in the grammar.

Documentation: You will need to supply documentation for all of the functions implemented for this project (including those in supplied as part of the framework). Your documentation should indicate a clear understanding of the code in the function.

Date Due: Sunday, 27 November 2017; 11:59 pm. No submissions will be accepted after Friday 1 December 2017; 11:59 pm.

To turn in: A tarred and zipped directory containing source files (headers and implementations), a makefile and your .ss test cases. Your directory should be called yourlastnameP2 and your tarred and zipped file should be called yourlastnameP2.tgz. Submit your .tgz file by copying it to ~tiawatts/cs460drop