University of Central Florida

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|  | PL/0 Compiler User Guide |
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Department of Electrical Engineering & Computer Science

COP 3402 System Software

Homework 4 (PL/0 Compiler)

Makefile

The included makefile defaults to the target "all", which will compile all sections of the project. Simply running "make" in the project directory will accomplish this.

P-Machine

Compiling the make target "P-Machine" will build the PM/0 virtual machine, with executable name "P-Machine". The virtual machine takes as command line input the filename for the machine code file to run. The Virtual Machine will not print any information, but only output generated by the user's program.

Scanner

Compiling the make target "scanner" with the command "make scanner" will build the scanner, with executable name "scanner". The scanner takes as command line input the filename for the file to scan. The scanner will not print any information, but only output generated by the user's program. If any errors are encountered during scanning, the scanner will print error messages indicating the lexeme that failed and the line and character in the input file where it was found. The scanner will attempt to continue scanning the input file after recovering from an error, so erroneous files will generate output, but not necessarily what is expected.

Parser Code Generator

Compiling the make target "parser" with the command "make parser" will build the PL parser, with executable name "parser". The parser takes as command line input either nothing, with the output from the scanner piped into the parser or a single input file containing the quiet output of the scanner.

Compile Drive

The Compiler Drive is a script that runs all the necessary programs to take a PL program and check its syntax and grammar. The script takes a single command line input with the filename to be passed through the scanner and parser. The compiler will exit if the scanner produces an error. A sample input with the full output would use the command to input while in the project directory. The output will be a token representation of the input file, a symbolic representation of the input file, and the source file along with the generated code. The output will then also be passed through the virtual machine and executed and the executed virtual machine code will be displayed.