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CPSC 323

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**Assignment 3 (Intermediate Code Generator) Documentation**

Operating System: Windows 10

Language: C++ (Visual Studio 2017)

Description: This program reads a source code file and generate assembly code (using predictive RDP and Syntax Directed Translation). The result is printed to the screen and "assembly\_code.txt" file.

**1. Problem Statement:**

Build an intermediate code generator using predictive RDP and Syntax Directed Translation.

**2. How to use the program:**

- User enters a source code file.

- The program generates a stream of tokens and analyze the syntax.

- If the code is correct:

- The program will print “Finished” to the screen, then print the assembly code and the symbol table to the screen and “assembly\_code.txt” file.

- Otherwise, it will print an error message.

Note:

- The program also prints the token stream from Lexical Analysis phase to “analysis.txt” file, and the parsing process from Syntax Analysis phase to “parse\_result.txt” file.

**3. Design of the program**:

- This program use a predictive Recursive Descent Parser and Syntax Directed Translation to compile the code.

- For this assignment, I assume that PUSHI also works with real numbers, “true” is 1, and “false” is 0.

**4. Any Limitation:**

The program exits if it finds an error in the source code.

**5. Any Shortcomings:**

None

**6. Test cases:**