**Tri Pham**

**User’s Manual**

**Setup and Compilation**

1. Download and unzip the submission from eLearning on a Linux box in the multi-platform lab.
2. The submission includes:
   1. phamtUsersManual.docx (this file)
   2. main.c
   3. parser.c
   4. parser.h
   5. lexer.c
   6. lexer.h
   7. symbol.c
   8. symbol.h
   9. a1.in, a2.in, a3.in, a4.in, a5.in, a6.in, a7.in, a8.in (test files for the program)
   10. Makefile
   11. run (script to execute all the test files)
3. **Environment:** This program has been tested in the multi-platform lab and will run there.
4. **Compiling.** The included file name Makefile. At the command line in Linux, type make main. The program will produce an executable. To use the run script, convert it to a convertible by typing chmod 700 run in the command line. This will produce the last executable to run the program perfectly.

**Running the Program.** Make sure that all the test files are in the same directory as the executable. Type in the command ./run to run the program. No command line arguments are required or checked.

User input: no user interaction is required for this program

**Output:** All output goes to the console, and output that is legal it should create a filename of the input file and extension .out of the correct registers and postfix same as console. The Output should be like the ones below:

Compiling a1.in

The program is legal output is in file "a1.out"

R0 = b

a = R0

\*\*\*\*[b]\*\*\*\*

R0 = b

R1 = 2

R0 = R0 + R1

a = R0

\*\*\*\*[b, 2, +]\*\*\*\*

Compiling a2.in

Syntax Error line 2: variable a\_ can't end with '\_'

Compiling a3.in

The program is legal output is in file "a3.out"

R0 = b

R1 = c

R0 = R0 + R1

R1 = d

R0 = R0 + R1

R1 = e

R0 = R0 + R1

R1 = f

R0 = R0 + R1

R1 = ghijk

R0 = R0 + R1

a = R0

\*\*\*\*[b, c, +, d, +, e, +, f, +, ghijk, +]\*\*\*\*

R0 = b

R1 = 2

R0 = R0 + R1

a = R0

\*\*\*\*[b, 2, +]\*\*\*\*

R0 = c

R1 = hello

R0 = R0 + R1

R1 = a

R2 = 5

R1 = R1 - R2

R0 = R0 \* R1

b = R0

\*\*\*\*[c, hello, +, a, 5, -, \*]\*\*\*\*

Compiling a4.in

Error line 3: variable b is redefined

Compiling a5.in

The program is legal output is in file "a5.out"

R0 = b

R1 = c

R0 = R0 + R1

R1 = d

R0 = R0 + R1

R1 = e

R0 = R0 + R1

R1 = f

R0 = R0 + R1

R1 = ghijk

R0 = R0 + R1

a = R0

\*\*\*\*[b, c, +, d, +, e, +, f, +, ghijk, +]\*\*\*\*

R0 = c

R1 = hello

R0 = R0 + R1

R1 = a

R2 = 5

R1 = R1 - R2

R0 = R0 \* R1

R1 = e\_tt

R2 = 45678

R1 = R1 - R2

R0 = R0 \* R1

b = R0

\*\*\*\*[c, hello, +, a, 5, -, \*, e\_tt, 45678, -, \*]\*\*\*\*

Compiling a6.in

Syntax Error line 7: variable b missing '='

Compiling a7.in

The program is legal output is in file "a7.out"

R0 = b

R1 = c

R0 = R0 + R1

R1 = d

R0 = R0 - R1

R1 = e

R2 = f

R1 = R1 \* R2

R2 = ghijk\_9876

R1 = R1 / R2

R1 = R1 + R2

a = R0

\*\*\*\*[b, c, +, d, -, e, f, \*, ghijk\_9876/, /, +]\*\*\*\*

R0 = b\_3

R1 = 2

R0 = R0 + R1

a = R0

\*\*\*\*[b\_3, 2, +]\*\*\*\*

R0 = c

R1 = hello

R0 = R0 + R1

R1 = a\_sdf

R2 = 5

R1 = R1 - R2

R0 = R0 \* R1

R1 = 98765

R0 = R0 / R1

b = R0

\*\*\*\*[c, hello, +, a\_sdf, 5, -, \*, 98765, /]\*\*\*\*

Compiling a8.in

Error line 4: missing 'BEGIN'

Note: Undefined errors not presence in a8.in because it start with began the output look way better in console than on word 😊