

PRELAB 3

In this prelab you will convert c++ assignment and declaration blocks to python assignment and declaration blocks.

1. Syntax Analysis

- Declaration blocks
 - Declaration blocks start with “int”.
 - After the int or block there can be a variable with initialization or without initialization
 - For the variable with initialization, print on the screen without a int and semicolon
 - For the variable without initialization, do not print anything.

c++ input	python output
int aa=9,a,bxc=3;	aa=9 bxc=3

- Assignment blocks
 - There can be any combination of +,-,* and / operations. Also, it can contain ().

c++ input	python output
b=c+(bxc*2)/7;	b=c+(bxc*2)/7

2. Semantic Analysis

In the semantic analysis part you will check 2 errors.

- You can assume that only one of the errors will be in one input file.
- If there is an error in the input file, only the error message will print on the screen.
- You can assume that the first line is Line 0.

1. Print a warning message if a value of variable is accessed without initialization.

c++ input	output
int x,y=3,a=5; y=x+2;	Line 1: variable x is used without initialized

2. Print a warning message if a variable is used without declaration

c++ input	output
int x,y=3,a=5; t=y+2;	Line 1: variable t is not declared
int x,y=3,a=5; y=t+2;	Line 1: variable t is not declared

3. Output:

- Example input and output files are provided to you. **Be careful**, those are examples so do not forget to test your code with different inputs.
- **exampleInput.txt**: In this file, there are valid 'inputs'. Your output should be the same with **exampleOutput.txt** file.
- There are example files that contain input with errors. Your program should print the correct error message on the screen.

How to test your code:

- Your code should be compiled with the Makefile given to you.
- **Do not change** the Makefile.
- run your code redirect output to a file
 - ./prelab3 exampleInput.txt > output.txt
- check whether your output and our output file is same or not by using diff command on terminal
 - diff output.txt exampleOutput.txt -wB
 - if your output and our output is same there will be no message on the screen
 - Otherwise, the difference will be shown on the screen.

How to submit your code

- Zip and upload only your lex and yacc file which has name:
 - prelab3.l
 - prelab3.y