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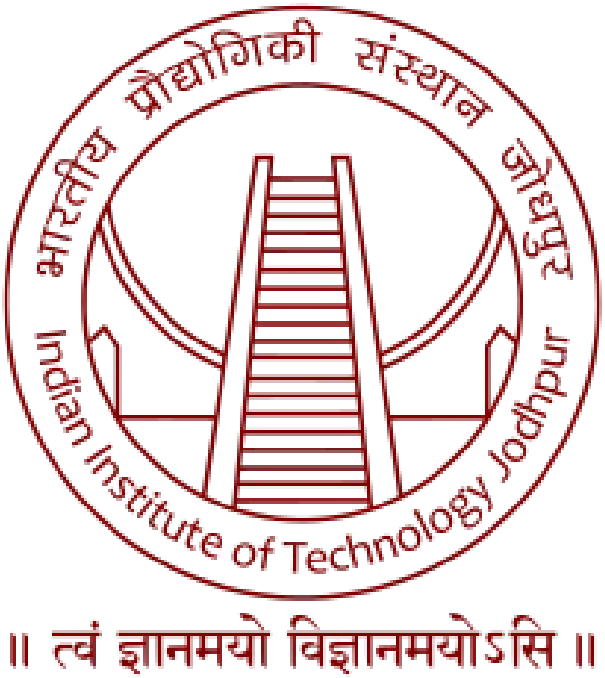

PRINCIPLES OF PROGRAMMING LANGUAGES
CSL3040

Assignment 1

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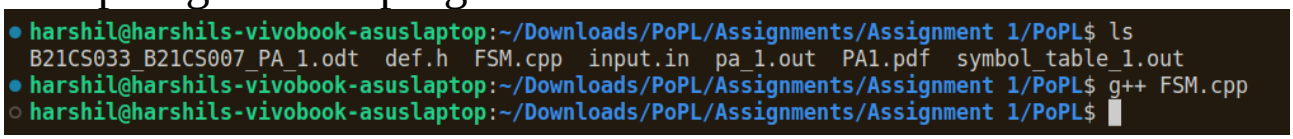
I will walk you through steps how to run the lexical analyzer we coded. First let us go through the constraints it supports.

- **Identifier:** A string starting with an underscore or a letter and followed by any number
  of underscores, letters and digits. Identifiers with two leading underscores (__) are
  disallowed
- **Keywords:** short int float double bool char signed unsigned for while do return void switch break case continue goto long static union default if else
- **Signed and unsigned Integer constants** such as 45, 10, -1234, +5432, 0, -32, etc.
- **Signed and unsigned Floating-point constants** such as 1.4, -3.57, 0.72, etc.
- **Arithmetic operators:** +, -, *, /, %, ++, --
- **Assignment operators:** =, +=, -=, *=, /=
- **Relational operators:** <, >, <=, >=, ==
- **Special symbols:** ( ) ,(comma) [ ] { } ;
- Ignore the text within comments (anything enclosed within /*---*/).

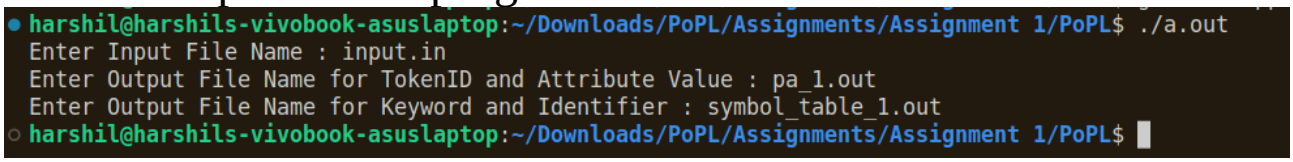
Download the zip file and extract or clone the repository.

Compiling the c++ program:



go to the folder in which we have FSM.cpp file.
Run ‘g++ FSM.cpp’ command in this directory.

Get the output of c++ program:



run command ‘./a.out’ in same directory.
Enter input file name , ex: ‘input.in’
Enter output file name for TokenID and Atribute Value , ex : ‘pa_1.out’
Enter output file name for Keyword and Identifier , ex: ‘symbol_table_1.out’

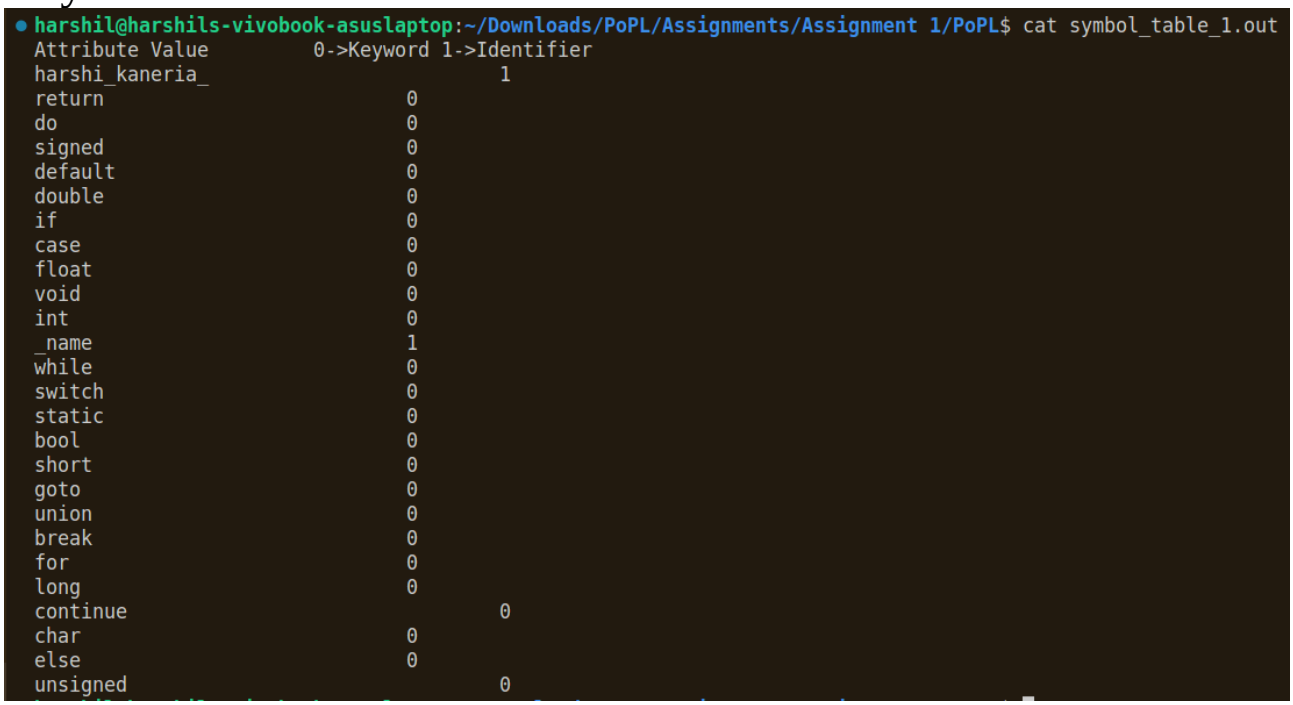
Note: If you have not created the input and output file , first create the files in same directory.

View the output:
TokenID and corresponding values:

```
harshil@harshils-vivobook-asuslaptop:~/Downloads/PoPL/Assignments/Assignment 1/PoPL$ cat pa_1.out
TokenID         Value
300                     harshi_kaneria_
301                     50
420                     ,
415                     ]
419                     }
417                     )
416                     (
319                     /=
311                     =
305                     --
414                     [
304                     ++
306                     ==
315                     /
310                     >=
314                     *
433                     return
432                     do
318                     *=
428                     signed
445                     default
302                     -65.45
425                     double
421                     ;
475                     if
308                     <=
439                     case
424                     float
436                     void
423                     int
300                     _name
431                     while
437                     switch
443                     static
426                     bool
301                     +456
422                     short
301                     10
441                     goto
444                     union
438                     break
```

Run the command ‘cat pa_1.out’ i.e cat “output file name” , in the same directory.

Keyword and Indentifier :



Run the command ‘cat symbol_table_1.out’ i.e cat “output file name” , in the same directory.