

**Computer Science and Engineering**  
**IIIT Kalyani, West Bengal**

**Compilers Design Laboratory (Spring: 2017 - 2018)**

*3rd Year CSE: 6th Semester*

Assignment - 4

Marks: 15

Assignment Out: 2<sup>nd</sup> February, 2018 Report on or before: 9<sup>th</sup> February, 2018

1. Consider the following set of *terminals* of a context-free grammar:

```
and (AND) := (ASSIGN) : (COLON) , (COMMA) def (DEF) / (DIV)
. (DOT) else (ELSE) end (END) = (EQ) exit (EXITLOOP) float (FLOAT)
(FLOAT\_CONST) (FORMAT) from (FROM) fun (FUN) >= (GE) global (GLOBAL)
> (GT) (ID) if (IF) int (INT) (INT\_CONST) ( (LEFT\_PAREN)
[ (LEFT\_SQ\_BKT) <= (LE) < (LT) - (MINUS) mod (MOD) * (MULT) <> (NE)
not (NOT) null (NUL) or (OR) + (PLUS) print (PRINT) product (PRODUCT)
read (READ) return (RETURN) -> (RETURNS) ) (RIGHT\_PAREN)
] (RIGHT\_SQ\_BKT) ; (SEMICOLON) skip (SKIP) step (STEP) (STRING) to (TO)
while (WHILE)
```

2. ID, INT\_CONST, FLOAT\_CONST are identifier, integer constant and floating point constant respectively. STRING is a string constant. FORMAT are %d %f %s ...
3. Comment in the language is // ..., up to the end of the line.
4. Write *flex* specification for the set of tokens.
5. Name of your specification file is <roll-no>.4.1. The name of the header file (if any) is <roll-no>.4.h
6. Prepare a tar-archive with the name <roll-no>.4.tar containing all the files.
7. Send the tar-archive as a report.