

Use LEX and YACC to implement the parser and a syntax directed translator for the Context free grammar with the following production rules which generates strings of octal number:

$$S \rightarrow N.R$$
$$N \rightarrow ND \mid D$$
$$R \rightarrow DR \mid D$$
$$D \rightarrow 0 \mid 1 \mid 2 \mid 3 \mid 4 \mid 5 \mid 6 \mid 7$$

The output should generate the sequence of production rules used for a given string and also the value assigned to the non terminals after reduction.