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**Enrollment No. : 2020CSB010**

**Subject: Compiler Design Lab (CS 4171)**

**Assignment No. : 3**

**Question:**

Assignment on Syntax Analyzer:--


Write YACC specification to design a parser for a subset of the C language. Consider the following programming language constructs:


- a) Main function
- b) Statements
  - i) Statements like local/global declarations.
  - ii) Assignment Statements.
  - iii) Conditional Statements.
  - iv) Iterative Statements
  - v) Function Call
- c) User defined functions

Consider the assumptions for the language previously considered in the last lab sessions. Variables of data types allowed in the subset can be defined at the very beginning

of any function / block. A variable must be declared before it is used.

## Answer:

```
gourav LAPTOP-868QQ3N0 ../Assignment_3 master  ./a.out < source.c
[line: 1] => assignment statement syntax is OK
[line: 5] => return statement syntax is OK
[line: 6] => function syntax is OK
[line: 10] => function call syntax is OK
[line: 11] => return statement syntax is OK
[line: 12] => function syntax is OK
[line: 18] => assignment statement syntax is OK
[line: 19] => assignment statement syntax is OK
[line: 20] => assignment statement syntax is OK
[line: 21] => assignment statement syntax is OK
[line: 24] => function call syntax is OK
[line: 28] => function call syntax is OK
[line: 32] => function call syntax is OK
[line: 33] => if-else statement syntax is OK
[line: 33] => else-if statement syntax is OK
[line: 35] => assignment statement syntax is OK
[line: 37] => function call syntax is OK
[line: 38] => assignment statement syntax is OK
[line: 40] => function call syntax is OK
[line: 41] => for statement syntax is OK
[line: 42] => for statement syntax is OK
[line: 44] => assignment statement syntax is OK
[line: 47] => function call syntax is OK
[line: 48] => assignment statement syntax is OK
[line: 49] => while statement syntax is OK
[line: 51] => function call syntax is OK
[line: 52] => function call syntax is OK
[line: 52] => assignment statement syntax is OK
[line: 53] => return statement syntax is OK
[line: 54] => main function syntax is OK

PARSING COMPLETED SUCCESSFULLY 
```