

Program Code & Semester: B.Tech (IT)- 4<sup>th</sup> Semester.

Paper Title: Principles of Programming  
Tutorial and Practical - Set 1

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1. Lex/Flex [Practical] - Write the code to recognize the following tokens.
  - Constants - Integer and Float
  - Keywords - while, if, for, int, float, char, main, printf, scanf, break, do, typedef, static
  - Identifiers - It can have alpha (lowercase) numeric combination, start with alphabet or underscore and only first 20 characters to be picked and remaining to be dropped.
  - Logical operators - &&, ||, !
  - Arithmetic operators - +, -, /, \*
  - Relational operators - >, >=, <, <=, !=
  - Unary Operators - --, ++, \*
2. Grammar [Tutorial] - What is the difference between the Panini Grammar and Chomsky Grammar. In other words difference between Natural Language Grammar and Programming Language Grammar.
3. CFG [Tutorial]- What type of Grammar is used in the C++ programming Language?
4. Grammar [Tutorial] - How to define the operator precedence and the associativity in the programming language.