

Assignment -1
Sub:Compiler design
Name:Md.soykot
Id:181-041-042

Question: Why lexical analyzer and syntax analyzer these two phases are different:

Answer: The reason why lexical analyzer and syntax analyzer is a separate phase:

1. Simplicity of design: It's is one of the most important consideration. The separation of lexical analysis from syntax often allows us to simply one or the other of these phases. For example, a parser embodying the conventions for comments and white space is significantly more complex then one that can assume comments and white space have already been removed by a lexical analyzer.
2. Compiler efficiency: A separate lexical analyzer allows us to construct a specialized and potentially more efficient processor for the task. A large amount of time is spent reading the source program and partitioning it into tokens, Specialized buffering techniques for reading input characters and processing tokens can significantly speed up the performance of a compiler.
3. Compiler portability: Input alphabet peculiarities and other device-specific anomalies can be restricted to the lexical analyzer. The representation of special or non-standard symbols can be isolated in the lexical analyzer.

4. Specialization: Specialized techniques can be applied to improves the lexical analysis process

Those are the main reason that why lexical analyzer and syntax analyzer is separate phase.