

Practical 1:

Viva Voce Questions:

1. What Is A Compiler?

Answer : A compiler is a program that reads a program written in one language –the source language and translates it into an equivalent program in another language-the target language. The compiler reports to its user the presence of errors in the source program.

2. What Are The Two Parts Of A Compilation? Explain Briefly.

Answer :

Analysis and Synthesis are the two parts of compilation.

- o The analysis part breaks up the source program into constituent pieces and creates an intermediate representation of the source program.
- o The synthesis part constructs the desired target program from the intermediate representation.

3. Define Symbol Table.

Answer : Symbol table is a data structure used by the compiler to keep track of semantics of the variables. It stores information about scope and binding information about names.

4. List The Various Phases Of A Compiler ?

Answer : The following are the various phases of a compiler:

- o Lexical Analyzer
- o Syntax Analyzer
- o Semantic Analyzer
- o Intermediate code generator
- o Code optimizer
- o Code generator

5. List The Phases That Constitute The Front End Of A Compiler.

Answer : The front end consists of those phases or parts of phases that depend primarily on the source language and are largely independent of the target machine. These include

- Lexical and Syntactic analysis
- The creation of symbol table
- Semantic analysis
- Generation of intermediate code

A certain amount of code optimization can be done by the front end as well. Also includes error handling that goes along with each of these phases.

6. Mention The Back-end Phases Of A Compiler.

Answer : The back end of compiler includes those portions that depend on the target machine and generally those portions do not depend on the source language, just the intermediate language. These include

- Code optimization
- Code generation, along with error handling and symbol- table operations.