



CSE & IT Departments

Compiler Design

Hand Notes For GATE, PSUs, Collage, University Exam etc...

Hand Notes

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Syllabus:

1. Lexical Analysis
2. Parsing
3. Syntax Directed Translation (SDT)
4. Intermediate code generation
5. Basics of code optimization.

Translator:

A software system which convert the source code from one form of language to another form of language is called Translator.

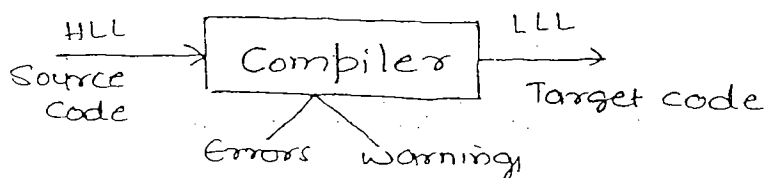
Types of Translators.

There are two type of Translators

1. Compiler
2. Assembler.

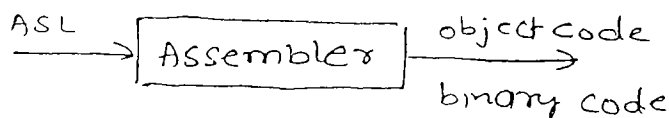
⇒ Compiler:

A translator which convert the source code from high level language to low level language is called compiler.

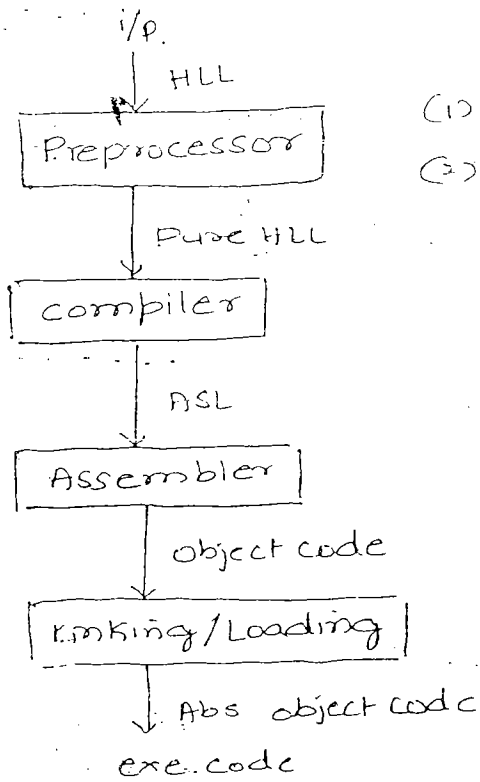


⇒ Assembler:

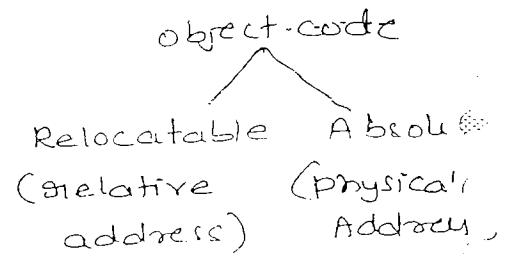
A software s/m which converts assembly code into object code or Binary code is called Assembler



Functions of language processing system (LPS):



- (1) File Inclusion
- (2) MACRO Evaluation



- 1) Preprocessor includes all the header files and also evaluates if any macro is included. The preprocessor is also called a MACRO Evaluator. Preprocessing is optional i.e. if any language which does not support #include and MACRO's preprocessing is not required.
- 2) Compiler take the preprocessor as input and convert into assembly code.
- 3) Assembler convert the assembly language into object code or (binary code) or (machine code)
- 4) Linking and Loading provides four functions.
 - a. Allocation
 - b. Relocation
 - c. Linker
 - d. Loader.

Allocation : Getting the memory portions from operating system and storing the object data or object code.