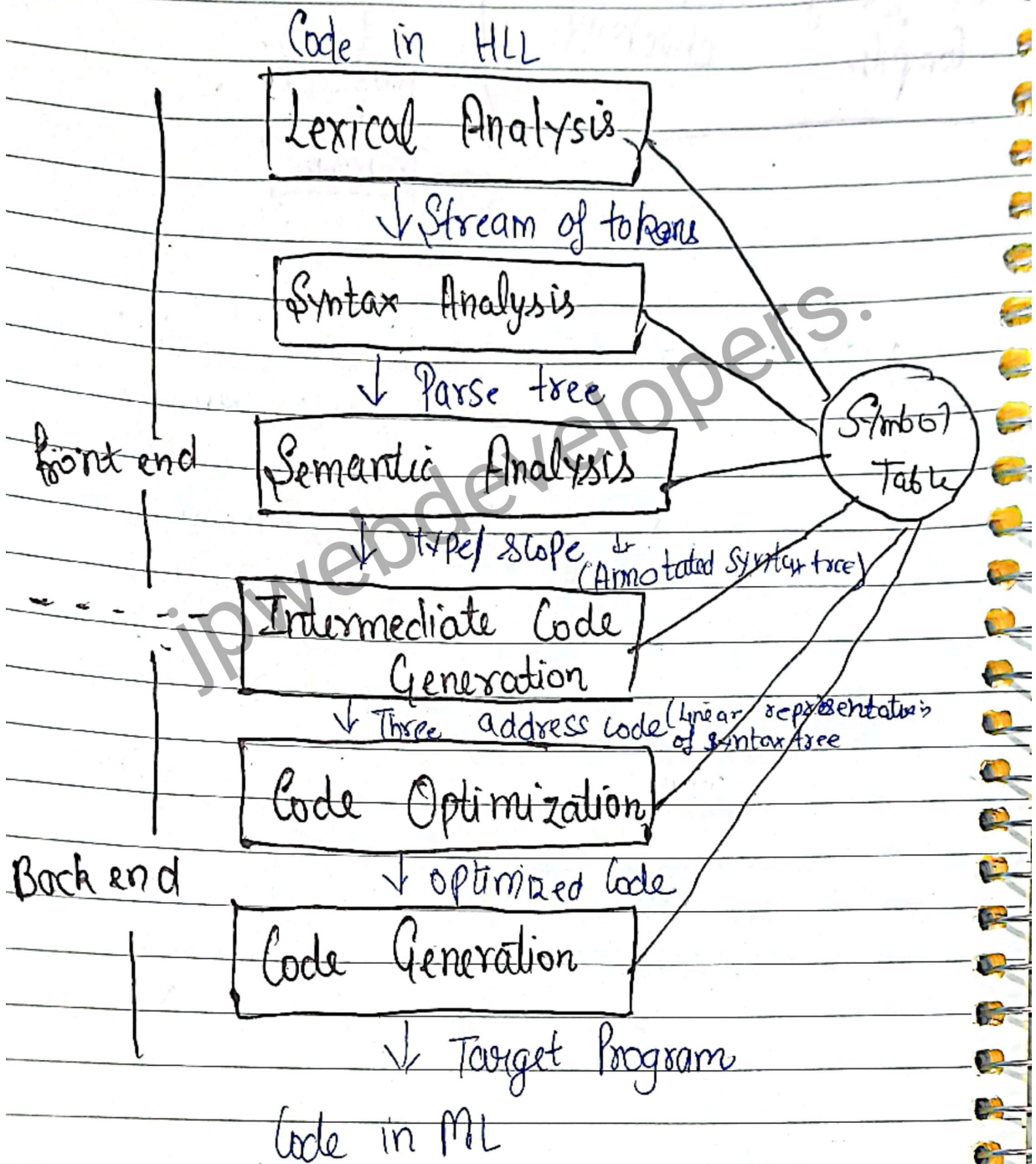


#UPNotes

No.

Date

Phases of Compiler



Ultra Short 1 - L → S → S → I → C → O

① Lexical Analysis [Scanner]

- Converts source code → tokens
- Removes white space, comments
- Uses symbol table

② Syntax Tree (Parser)

- Check grammar
- Create Parse Tree
- Finds Syntax ~~Errors~~
Errors

③ Semantic Analysis

- Checks Meaning
- Type Checking
- Variable declared or not
- Type Conversion

④ Intermediate Code Generation

- Intermediate Representation (IR)
- Three address code
- Quadruples/Triples

⑤ Code Optimization

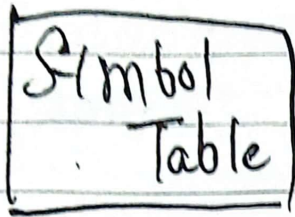
- Improve Performance
- Loop optimization
- Speed
- No change in Output

Code Generation

- Target Code
- Machine Code
- Final Code

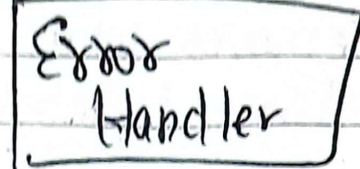
@JP Web developers #JPNotes

Supporting Components

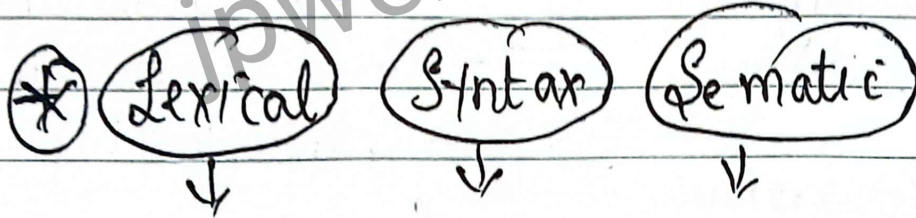


It Stores:-

Variable name,
Type, Scope,
memory location.



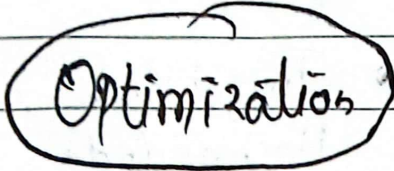
Detects and
Reports errors
at all
Phases



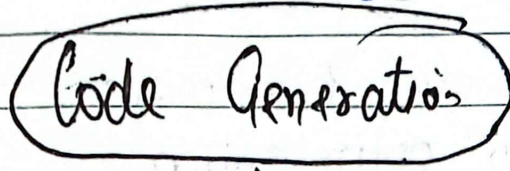
Tokens

Grammar

Meaning



Performance



Machine

Code

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