UNIT - 1

CD

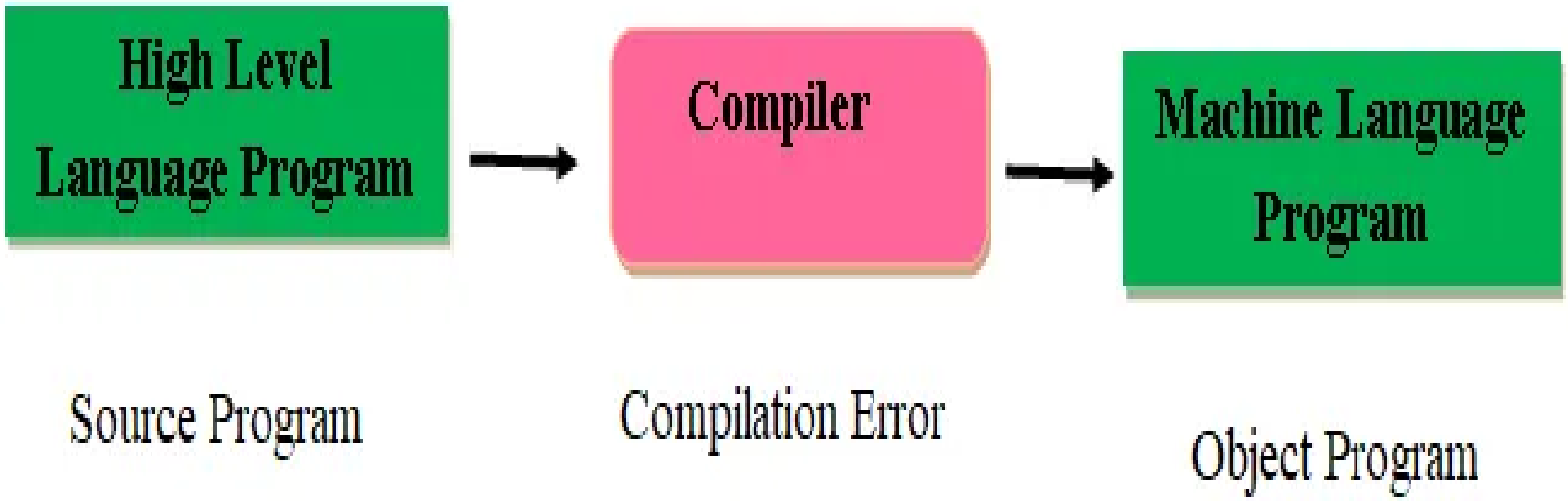
(Compiler Design)

What is Compiler?

Compiler is a software which converts a program written in high level language called Source Language to low level language (Object/Target/Machine Language).

It can be shown with the help of following diagram:

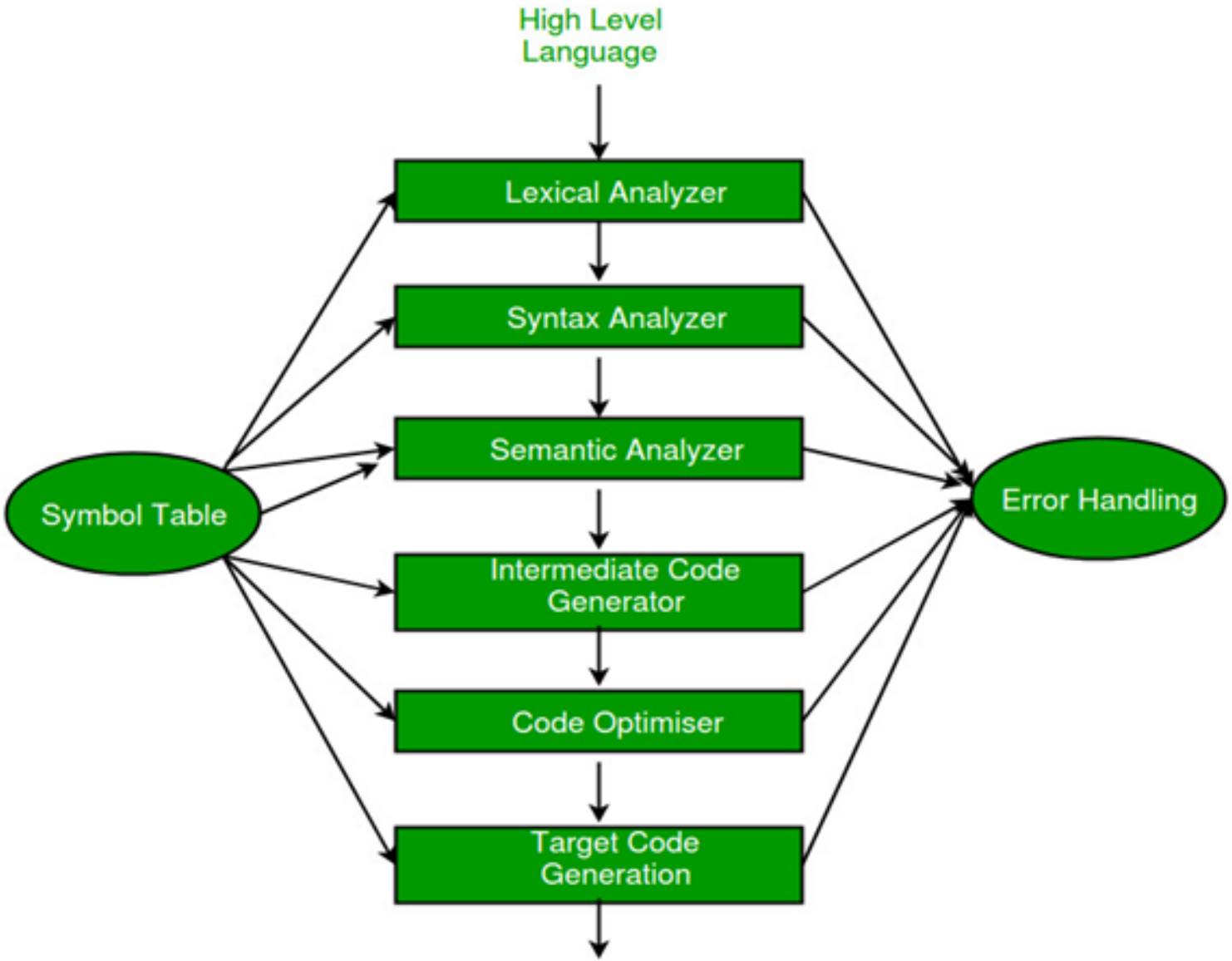
How Compiler Works



Phases of a Compiler

There are two major phases of compilation, which in turn have many parts. Each of them take input from the output of the previous level and work in a coordinated way.

- **Analysis Phase –** An intermediate representation is created from the give source code :
- **Synthesis Phase –** Equivalent target program is created from the intermediate representation.


High Level Language
Lexical Analyzer
Syntax Analyzer
Semantic Analyzer
Intermediate Code Generator
Code Optimiser
Target Code Generation
Symbol Table
Error Handling
Machine Code

Analysis Phase includes:

- Lexical Analyzer
- Syntax Analyzer
- Semantic Analyzer
- Intermediate Code Generator