Error Detection and Recovery in Compiler

- An important role of the compiler is to report any errors in the source program that it detects during the entire translation process.
- Each phases of compiler can encounter errors, after detecting errors, must be corrected to precede compilation process.
- The syntax and semantic phases handle large number of errors in compilation process.
- Error handler handles all types of errors like lexical errors, syntax errors, semantic errors and logical errors.

Lexical phase errors

- These errors are detected during the lexical analysis phase.
- Exceeding length of identifier or numeric constants.

1xab is neither a number nor an identifier. So this code will show the lexical error
• Appearance of illegal characters `printf Wikitechy("\n");$` 
This is a lexical error since an illegal character $ appears at the end of statement. 

Example: `switch` is written as `swich`.

**Panic mode Error Recovery**

• In this Method, Successive characters from the input are removed one at a time until a designated set of synchronizing tokens is found.
• Synchronizing tokens are delimiters such as `;` or `}`

**Advantage**

• It is easy to implement and guarantees not to go to infinite loop.

**Disadvantage**

• Some inputs are skipped without checking it for additional errors.

For More Details Click Here: