

# VYPE - Topic 10: lex & yacc – Advanced Features

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## Abstract

At the beginning of presentation we talk about basic introduction into tools *lex* and *yacc*. Especially knowledge of structures of definition files with tokens for *lex* and definition files with grammar for *yacc* are important, because they are required for several situations which are describe during presentation.

Main focus of presentation is **Error reporting** and **Error recovering** in these tools. In default, these tools declare only that error exists without details about it (for example: *Syntax error*). We present unusual techniques for detection and show information about error during generation of scanner or parser. These methods describe how we can use some tricks for showing error line number with description or showing position of error in line from input string. During presentation we show that these methods are very simple.

Error recovering is untraditional process in generating of grammar, because major part of compilers does not allow to recover generator after error, but sometimes may be useful. This part of presentation explains, how recovery is realized in *yacc* tool and how we can write handler recovery function manually. We describe some examples and their options of these handler in different situations.

At last, all solutions are recapitulated for defining advantages of Error reporting and recovering.

## Reference

LEVINE, J. R.; MASON, T.; BROWN, D.: *Lex & yacc*. Sebastopol: O'Reilly & Associates, 1992, ISBN 1-56592-000-7, 366 s.