VYPa Lecture notes - abstract
Topic 02: Tabular Parsing

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1 Abstract

At the beginning of presentation, we will talk generally about the parser, give a brief introduction to parsing and discuss advantages of parsing. Then we briefly cover two basic parts of parsing algorithms – top-down parsing and bottom-up parsing.

The first part will be about top-down parsing algorithms. We would like to start with recursive descent algorithm, provide algorithm example, tell something about implementation details and discuss advantages/disadvantages of this algorithm. Another part of top- down parsing will be about non-recursive lookahead algorithms especially about `LL(k)` parsers. We will cover the idea behind `LL(k)` parsers, what do these few symbols mean. Then we compare advantages and disadvantages between both top-down parsing algorithm families.

The second part of the presentation will consist of bottom-up parsing algorithms. First, we would like to briefly introduce the concept of bottom-up approach to parsing. Then we will describe the main bottom-up algorithms that are `Shift-Reduce` and `LR` parsing which we will deal with in bigger detail (we will comment on their operations, mention their advantages and disadvantages) and then we will shortly mention other parsing methods that are being used (`LARL, CYK Method`).