

Homework 4

(10 points)

Error detection and recovery

Extend your recursive descent parser with error detection and recovery functionality as follows:

1. Calculate by hand for each nonterminal of the EBNF grammar the First and the Follow sets using the algorithms presented at the lecture; **(4 points)**
2. Display a meaningful error message if the next lookahead token is not in the First set of the expected nonterminal; **(2 points)**
3. In case of syntactic errors, implement a panic-mode error recovery that scans ahead until:
 - a. it reaches a token in the First set of the current nonterminal or **(2 points)**
 - b. it reaches a token in the Follow set of the current nonterminal, **(2 points)**and then continues parsing.