

Assignment 5

Top- Down Parsing

Due Monday, April 26, 2021

1. Consider the following context-free grammar

$$A \rightarrow B C D \mid \mathbf{f} B$$

$$B \rightarrow \mathbf{a} B \mid \epsilon$$

$$C \rightarrow \mathbf{b} C \mathbf{f} \mid \mathbf{c} \mid \epsilon$$

$$D \rightarrow \mathbf{d} D \mid \mathbf{e} \mid \epsilon$$

where A is the start symbol.

- (a) (30%) Compute First sets and Follow sets for the nonterminals in the grammar.
- (b) (40%) Construct the functions of the recursive-decent parser for the nonterminals.
- (c) (30%) Construct the parsing table of the table-driven predictive parser for the grammar.

To turn in this assignment, upload a pdf file hw5.pdf that contains the solutions for this assignment to the eCourse2 site.