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CSCI 4202
Artificial Intelligence
Homework #8 04/04/15

1. Complete the Backus-Naur definition of Pascal Expressions (pp. 7-9 of this handout).

Answer:

2. Consider a grammar $G = (V_t, V_n, P, S)$

$$V_T = a, b$$

$$V_N = S$$

$$P :$$

$$S \rightarrow aSb,$$

$$S \rightarrow ab$$

Find the language generated by this grammar. Prove that this is the only language, which can be generated by this grammar.

- (a) First, finding the language generated by this grammar, it's the language:
- (b) next, we prove that this is the only language, using the principle of mathematical induction: