Compilation Principle Homework 4

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5.8 Consider the following grammar

declaration → type var-list

type → int | float

var-list → identifier, var-list | identifier

a. Rewrite it in a form more suitable for bottom-up parsing.

b. Construct the LR(0) DFA for the rewritten grammar.

c. Construct the SLR(1) parsing table for the rewritten grammar.

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| Answer：  a.  S → declaration  declaration → type var-list  type → int | float  var-list → var-list, identifier | identifier  b.    c. |

5.12 Show the following grammar is LR(1) but not LALR(1):

s → aAd | bBd | aBe | bAe

A → c

B → c

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| Answer:    Merging states 6 and 9 creates a reduce-reduce conflict：  A → c ·, d/e  B → c ·, d/e  Hence the following grammar is LR(1) but not LALR(1). |