1 Theory

1.1

An SDD that involves only synthesized attributes is called S-attributed. A synthesized attribute is an attribute that gets its value from itself or its children. In an L-attributed SDD, every attribute must be either synthesized, or inherited with the rules as follows: suppose there is a production $A \to X_1 X_2 \cdots X_n$, and that there is an inhertied attribute $X_i a$ computed by a rule associated with this production. Then the rule may use only:

1. Inhertied attributes associated with the head A.
2. Either inherited or synthesized attributed associtated with the occurences of symbols $X_1, X_2, \ldots, X_{i-1}$ located to the left of X_i.
3. Inherited or synthesized attributes associated with this occurrence of X_i itself, but only in such a way that there are no cycles in a dependency graph formed by the attributes of this X_i.

1.2

1.3 SLR

The grammar is not SLR(1). It is ambigious in state I_{10} and I_{12}. Because it has a shift/reduce conflict.

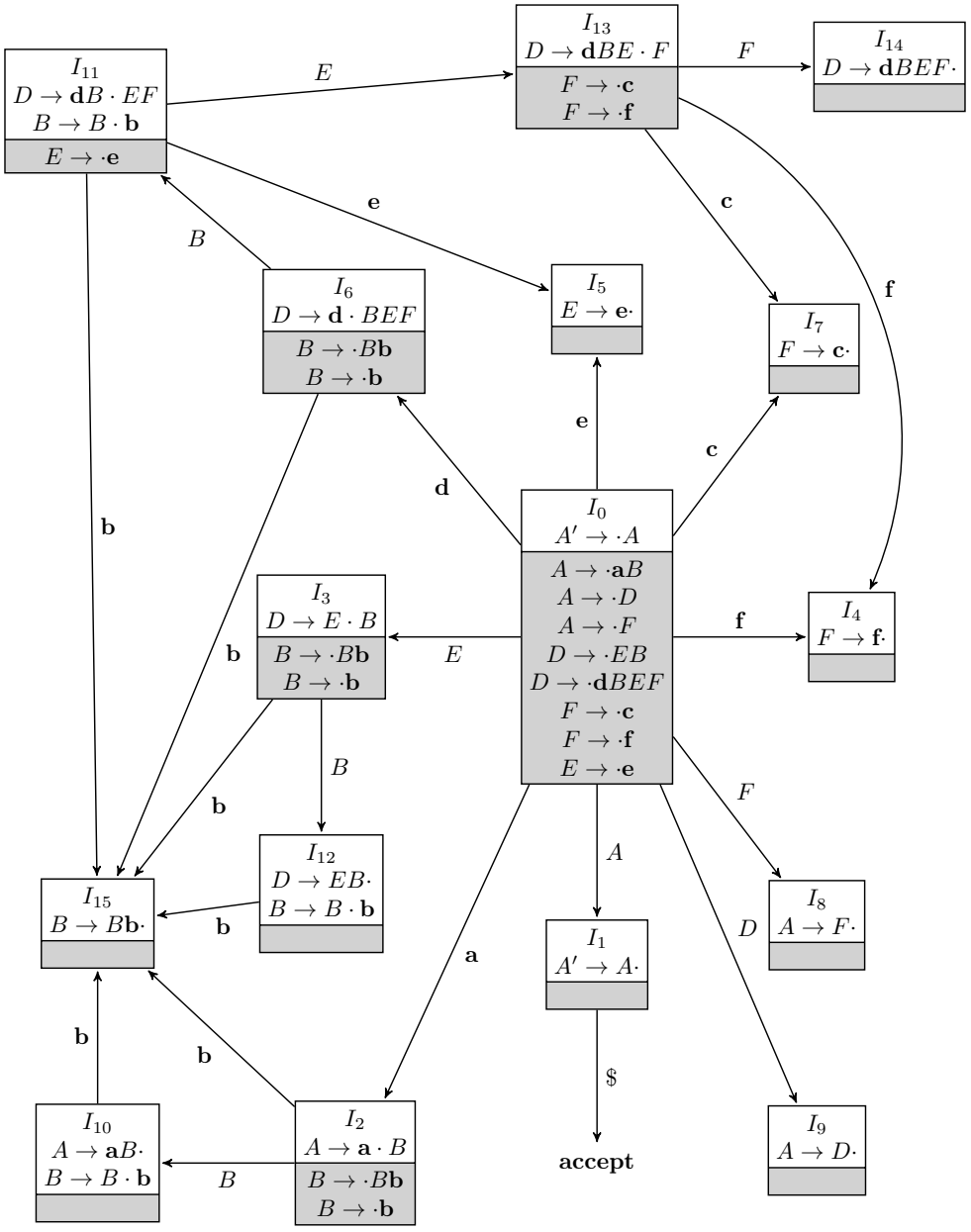

Figure 1: The LR(0) automaton