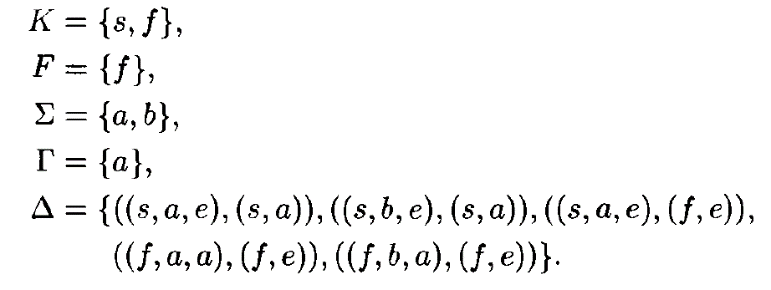
Homework – 6

1. Consider the pushdown automata , where



a). Trace all possible sequence of transitions of on input

1. ((s,a,e),(s,a))->((s,b,e),(s,a))-> ((s,a,e),(s,a))

2. ((s,a,e),(f,e))->((f,b,a),(f,e))->((f,a,a),(f,e))

3. ((s,a,e),(s,a))->((s,b,e),(s,a))->((s,a,e),(f,e))

b). Show that , but

1. based on question a, aba is not in L

2. same as the aba, aa is not in L

3. same as the aba, abb is not in L

4. baa can be accepted by ((s,b,e),(s,a))-> ((f,a,a),(f,e))-> ((f,a,a),(f,e))

5. bab can be accepted by ((s,b,e),(s,a))-> ((f,a,a),(f,e))-> ((f,b,a),(f,e))

6. baaaa can be accepted since 4

c). Describe in English

in the middle there is a ‘a’and there are equal number of a or b for it’s both side

1. Construct a Pushdown automata that accept each of the followings:

a). The language

Diagram

Description automatically generated

b). The language

Diagram

Description automatically generated