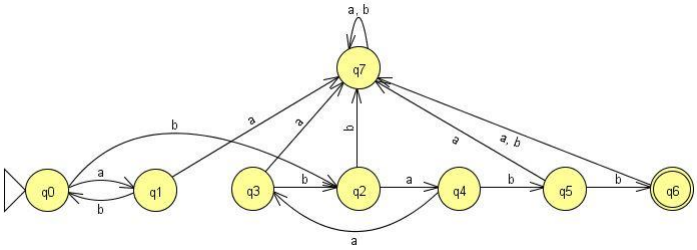
CS3110 Homework7 Total points: 10.
Section 3.3 Pg 99, #2, #3, #5, #7

Section 3.3

#2) (2pts) Construct a dfa that accepts the language generated by the grammar

S → abS | A,
A → baB,
B → aA | bb

Answer:



#3) (2pts) Find a regular grammar that generates the language L (aa*(ab + a)*).

Answer:

S → aA,
A → aA|B,
B → abB|aB|λ

#5) (3pts) Construct right and left linear grammars for L = $\{a^n b^m : n \geq 3, m \geq 2\}$.

Answer:

Left: S → Abb,
A → Ab|B
B → Ba|aaa

Right: S→ aaaA,
A → aA|B,
B → bB|bb

#7) (3pts) Find a regular grammar for ∑ = {a, b} all strings no more than 2 a's.

Answer:

S → bS | aA | λ
A → bA | aB | λ
B → bB | λ