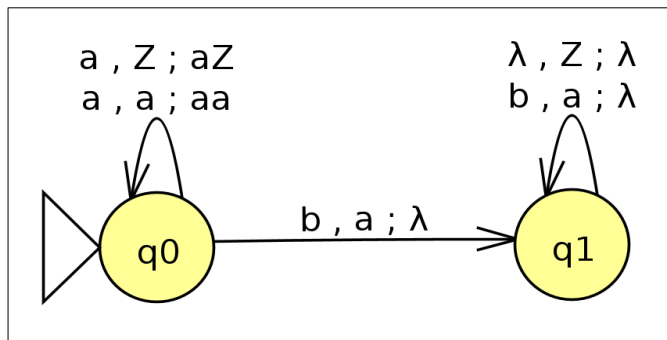


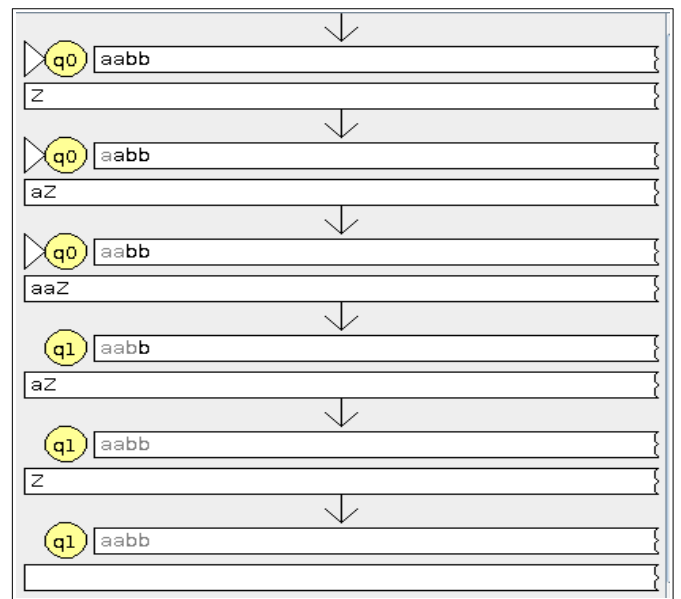
## Pushdown Automata

**Question 1: Design a pushdown automata for language  $a^n b^n \mid n > 0$**

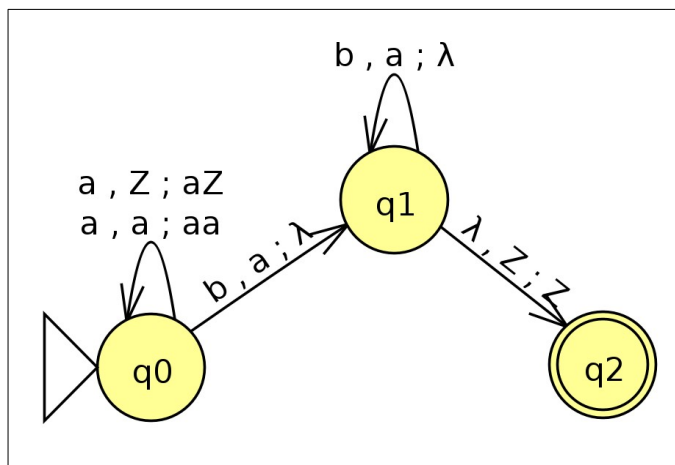
Accept by empty stack:



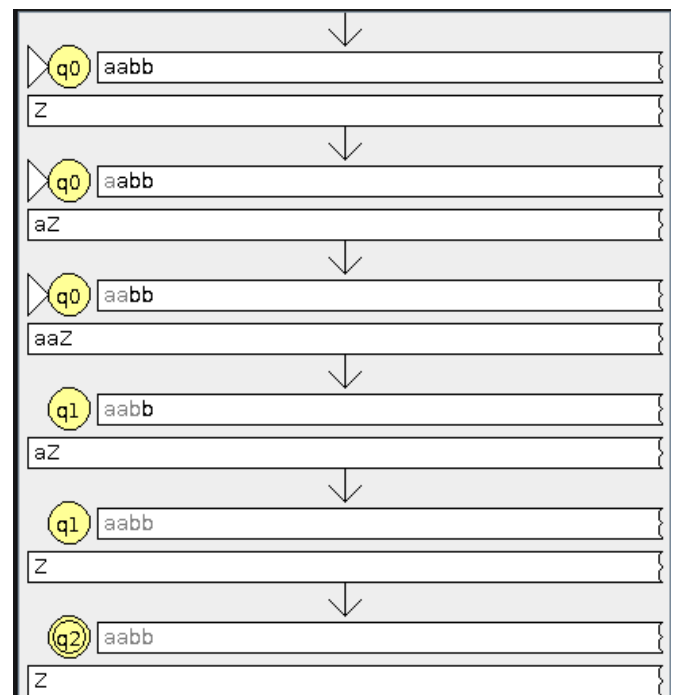
Input	Result
ab	Accept
aab	Reject
aabb	Accept
ababab	Reject
bbaa	Reject



Accept by final state:

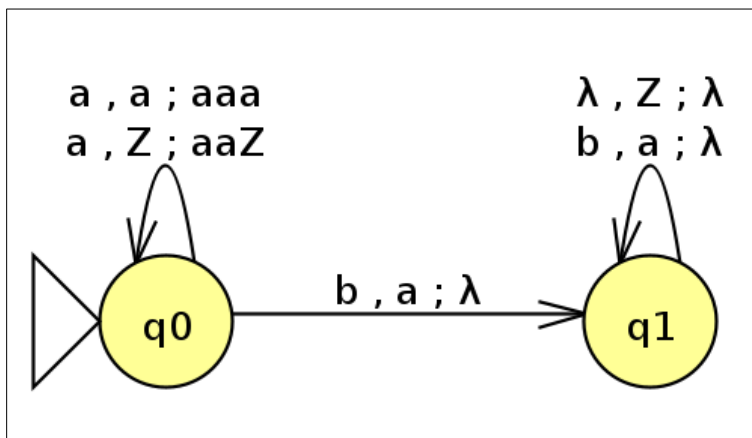


Input	Result
ab	Accept
aab	Reject
aabb	Accept
ababab	Reject
bbaa	Reject

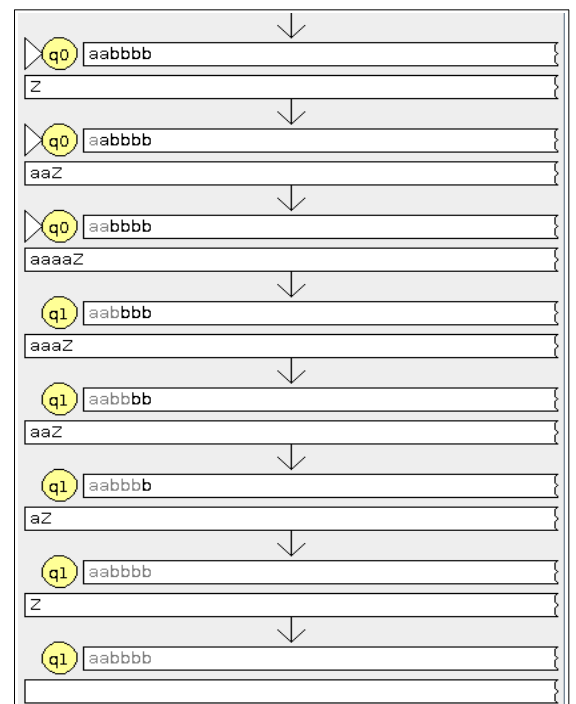


## Question 2: Design a pushdown automata for language $a^n b^{2n} \mid n > 0$

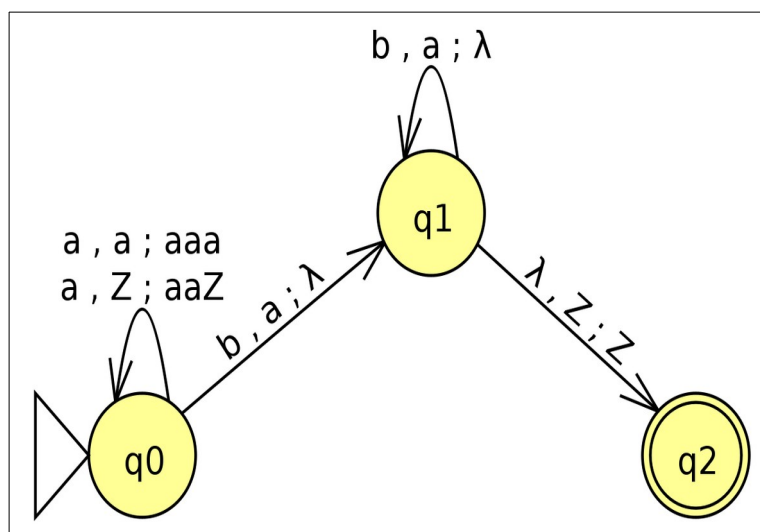
Accept by empty stack:



Input	Result
abb	Accept
aabbbb	Accept
aaabbb	Reject
aabb	Reject
abab	Reject



Accept by final state:



Input	Result
abb	Accept
aabbbb	Accept
abab	Reject
aabb	Reject

