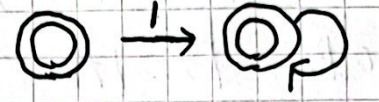
Homework 14 蒋云翔 2022102330

Section 13.4

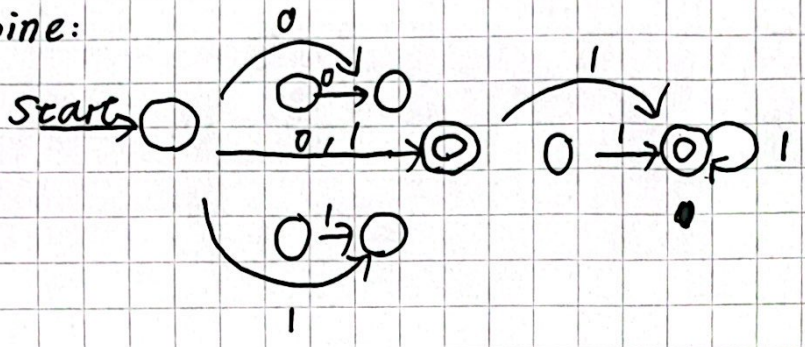
Ex.12 By kleene's theorem: we can find the NFSA step

(b) $(0 \cup 1)1^*$: by step.

Step①: find $0 \cup 1$: $\bigcirc \xrightarrow{0} \bigcirc$ $\bigcirc \xrightarrow{1} \bigcirc$

Step②: find 1^*: 

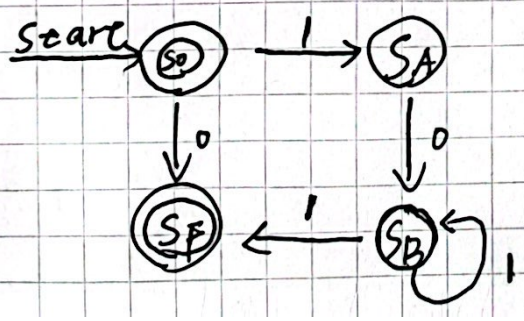
Step③: Combine:



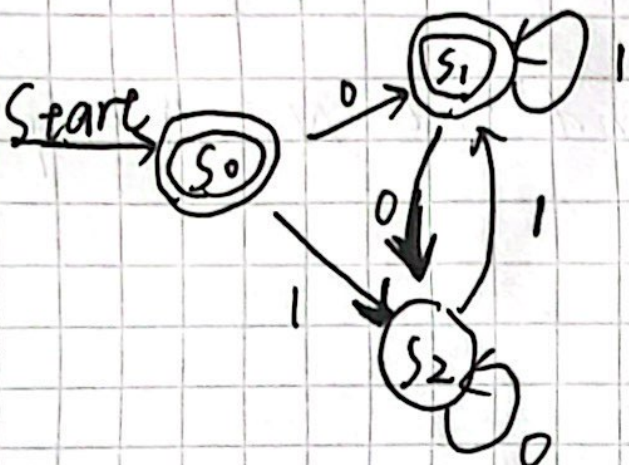
Ex.14

(b) Construct NFSA: $G=\{V,T,S,P\}$, $V=\{0,1,S,A,B\}$, $T=\{0,1\}$

$S \to 1A$, $S \to 0$, $S \to \lambda$, $A \to 0B$, $B \to 1B$, $B \to 1$



Ex-1b: Construct regular grammar $G=\{V, T, S, P\}$



∴ From the NFSA, we can know:

$V=\{0, 1, S, A, B\}$

P: $S \to 0A$, $S \to 1B$, $S \to \lambda$, $S \to 0$

$A \to 0B$, $A \to 1A$, $A \to 1$

$B \to 0B$, $B \to 1A$, $B \to 1$