

~~$0 \rightarrow 1 = 01$~~   
 ~~$1 \rightarrow 0 = 10$~~   
 ~~$0 \rightarrow 2 = 02$~~   
 ~~$2 \rightarrow 0 = 20$~~   
 ~~$1 \rightarrow 2 = 12$~~   
 ~~$2 \rightarrow 1 = 21$~~ 