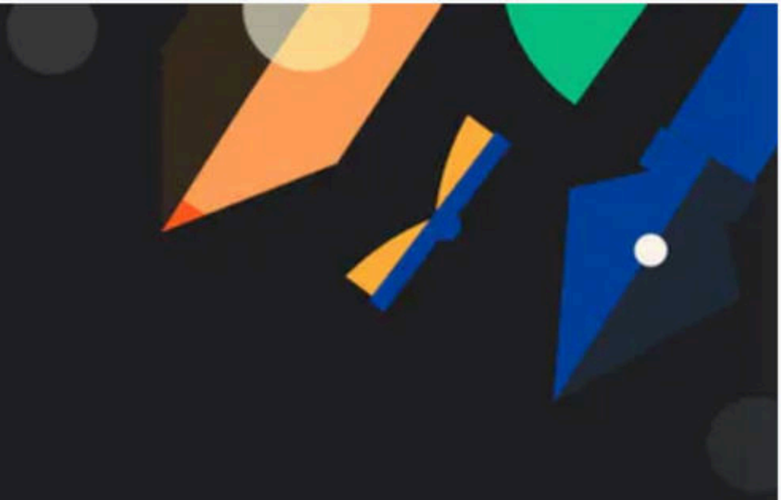
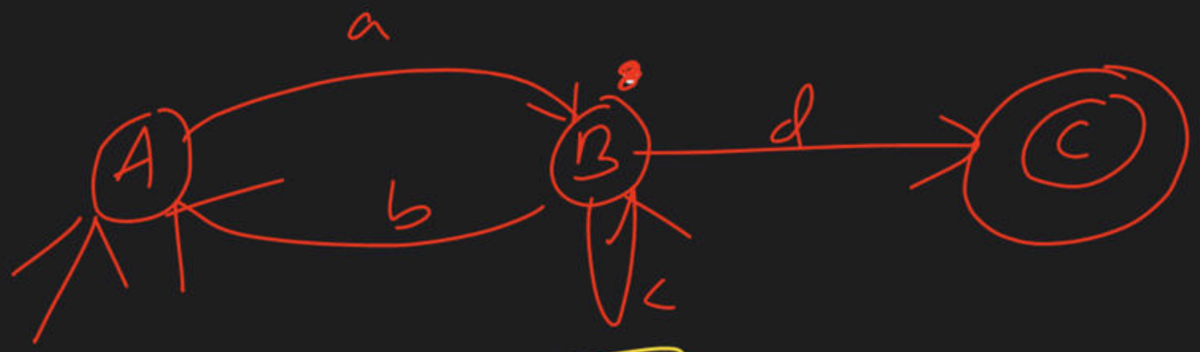


Closure Properties - II

Complete Course on Theory of Computation

Subbarao Lingamgunta • Lesson 22 • Mar 3, 2022



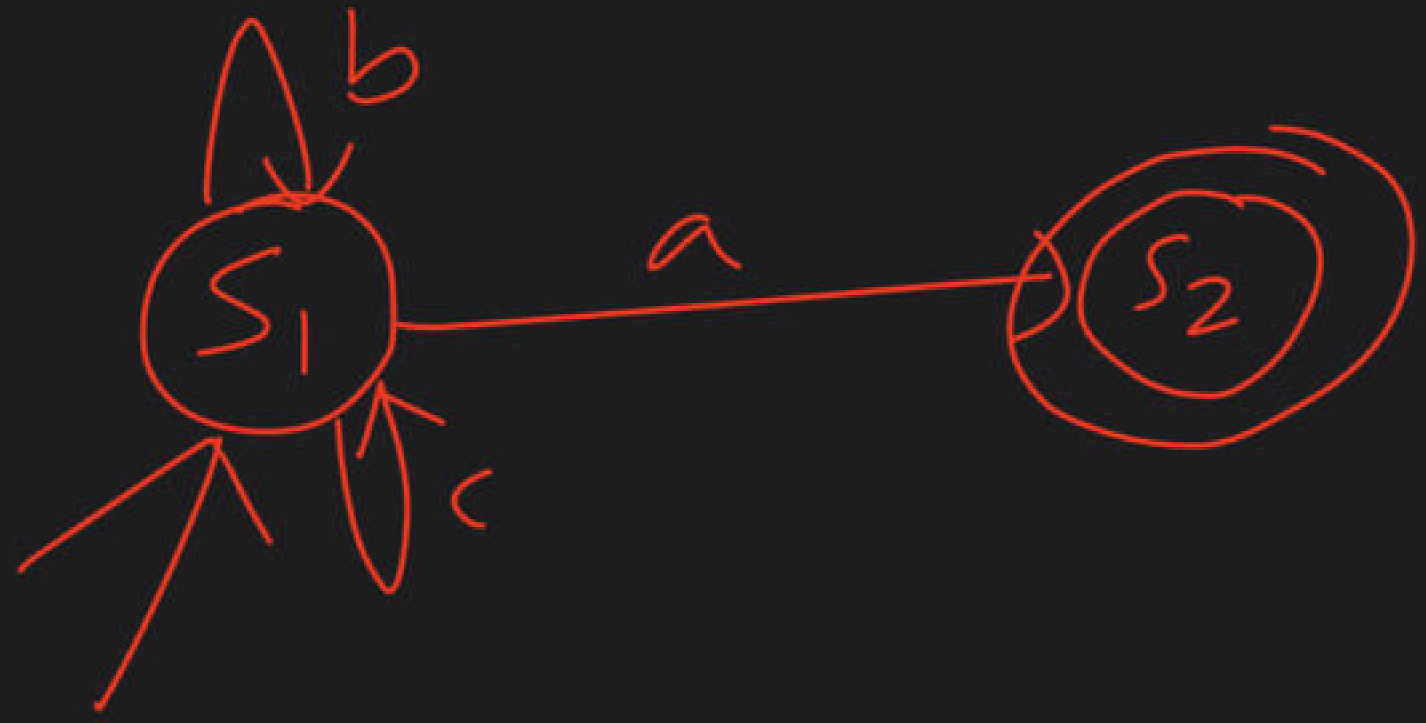
$a(ba+c)^* d \Longrightarrow$ ad, acd, abad, abacd, ababad

$((ba)^* c^*)^*$ (or)

$c^*(bac^*)^*$ (or)

$(ac^*b)^* ac^*d \Longrightarrow$ ad, acd, abad, abacd

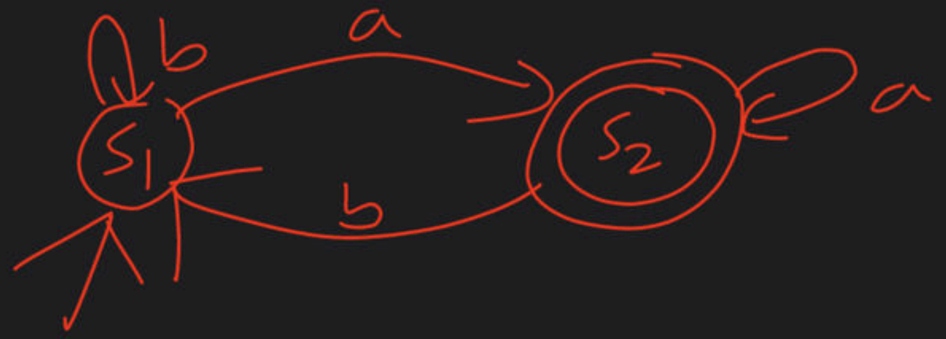
$\Rightarrow (ba)^* (c(ba)^*)^*$

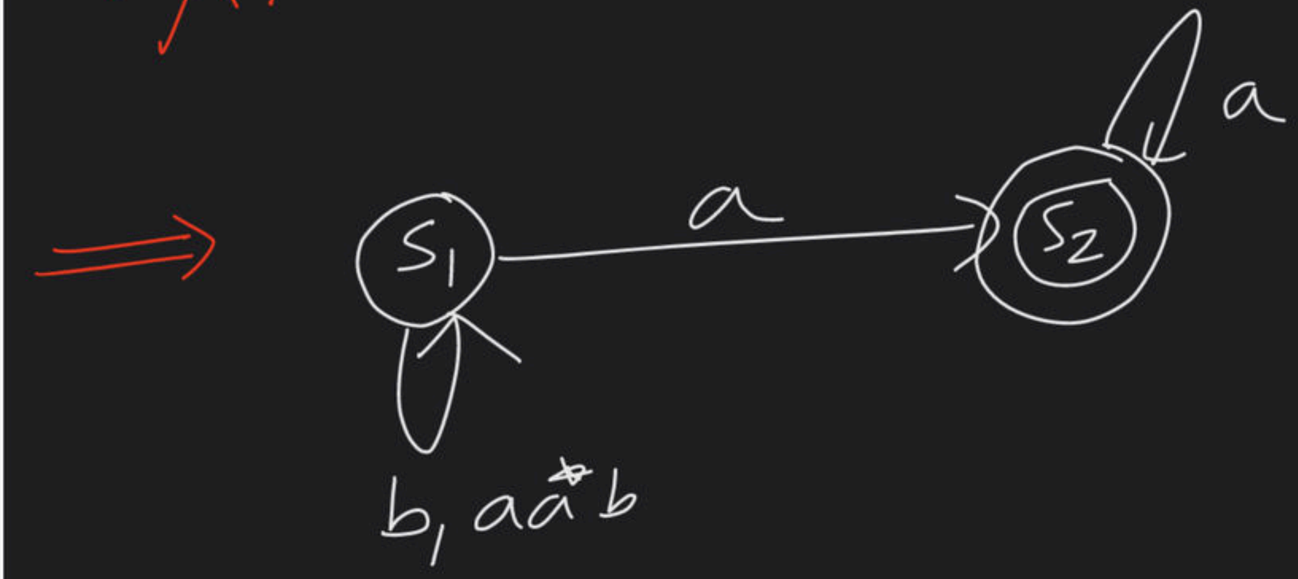


$\Rightarrow (c+b)^* a$ (or) ~~$b^* c^* a$~~

$\Downarrow$

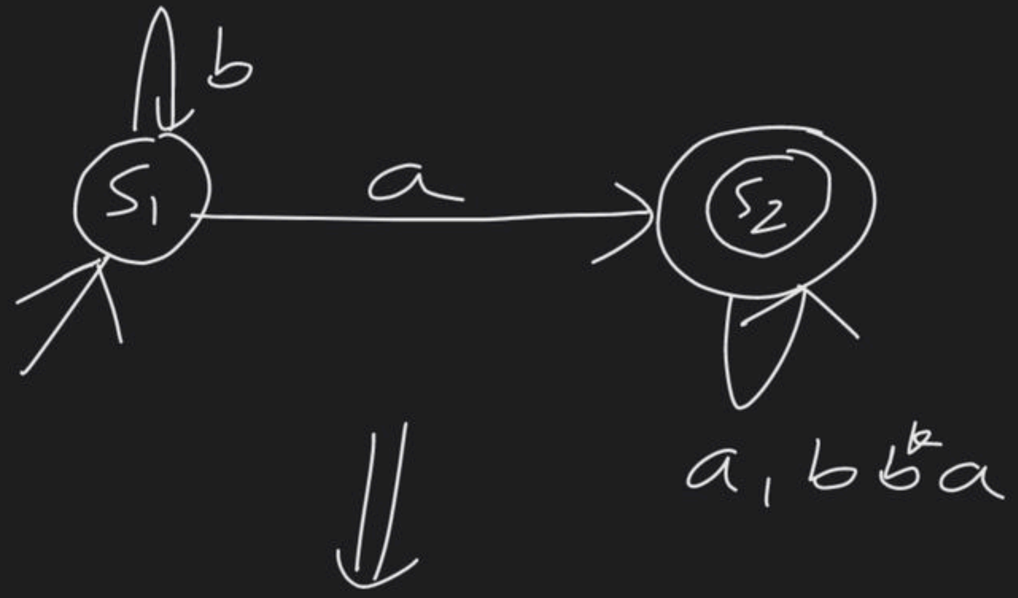
$(b^* c^*)^* a$



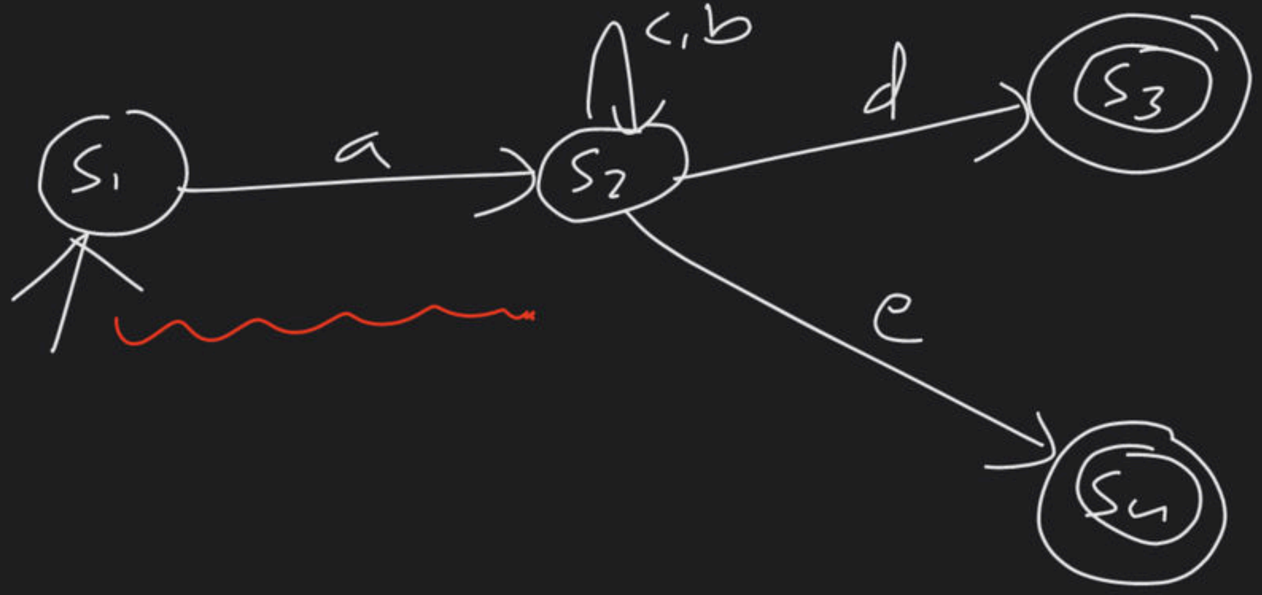


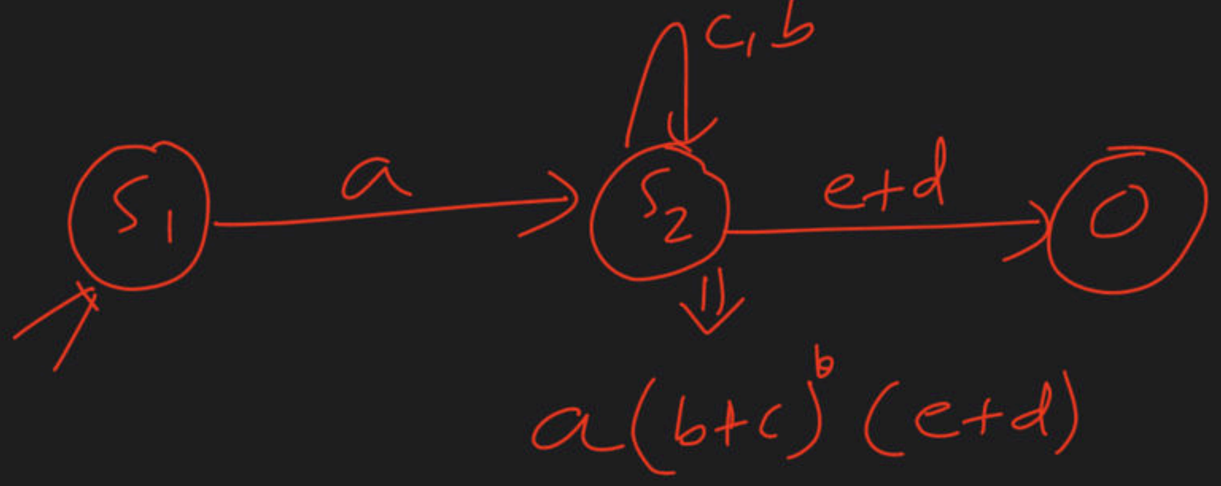
$$\Rightarrow (b + aa^*b)^* a a^*$$

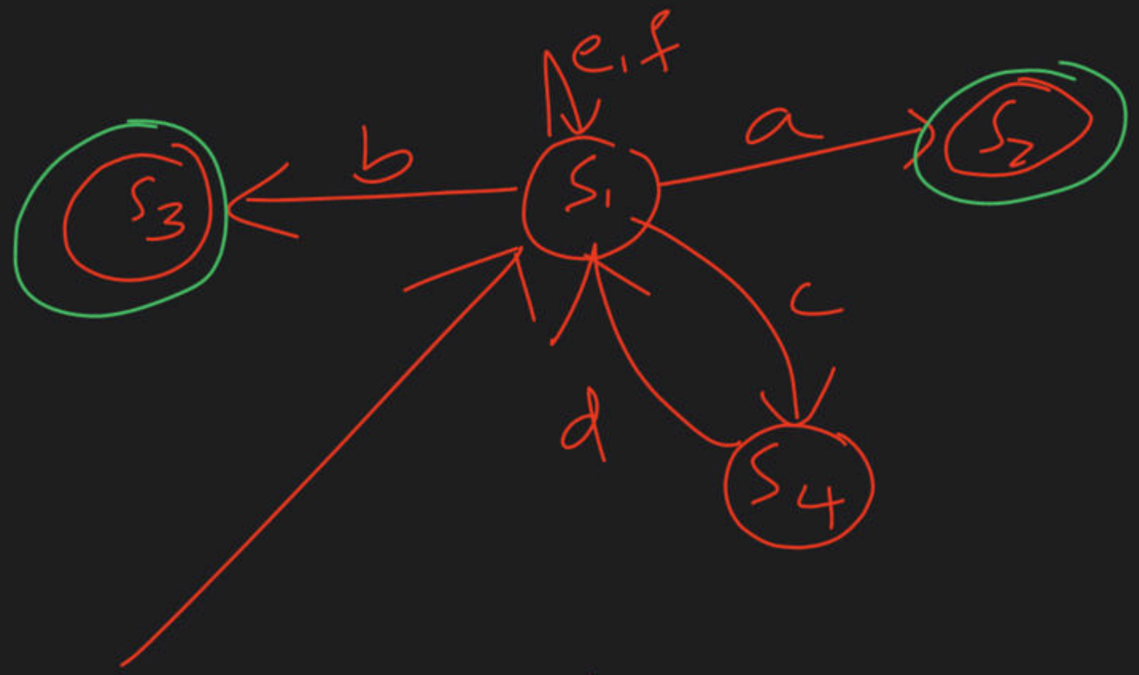
$$(a+b)^* \Rightarrow a^* b^*$$

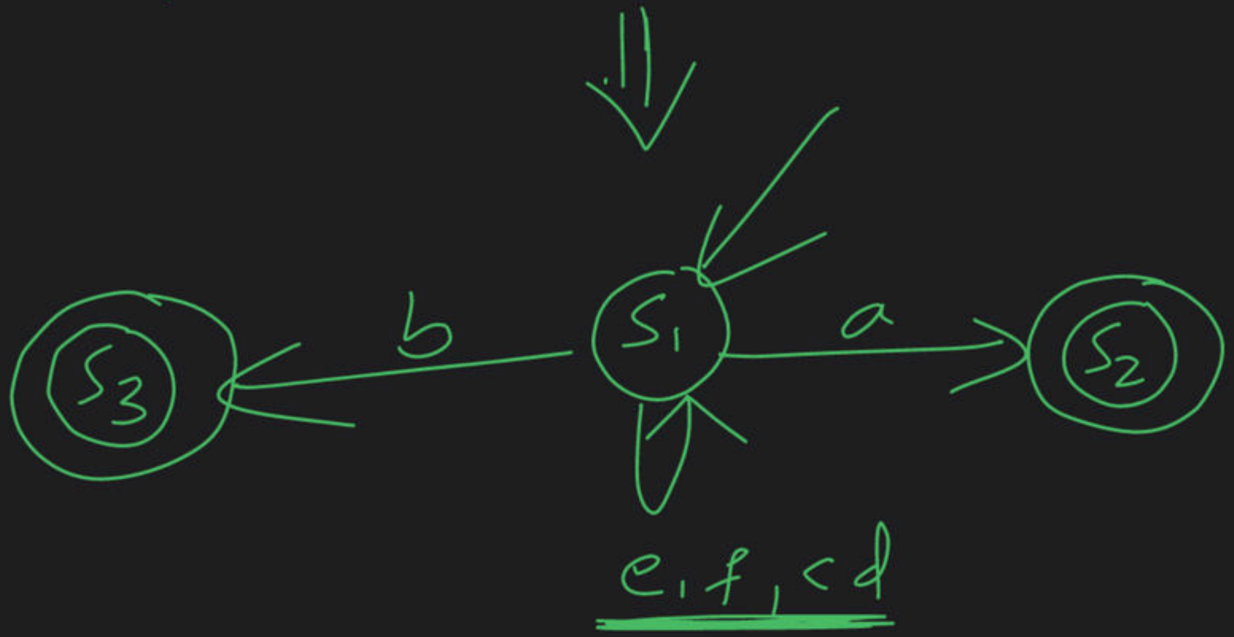


$$b^* a (a + bb^* a)^*$$

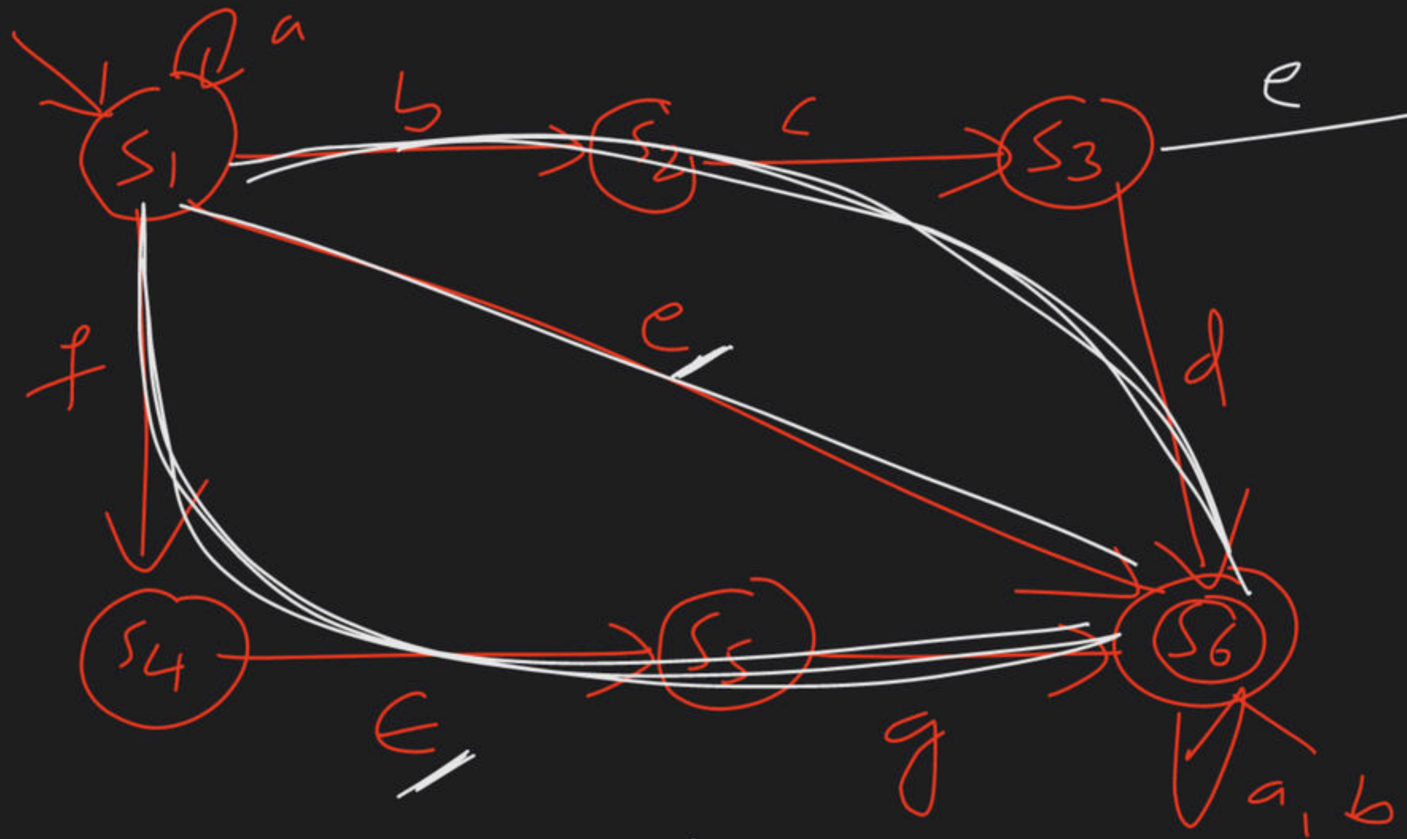

c, b
a
d
e
S_1
S_2
S_3
S_4

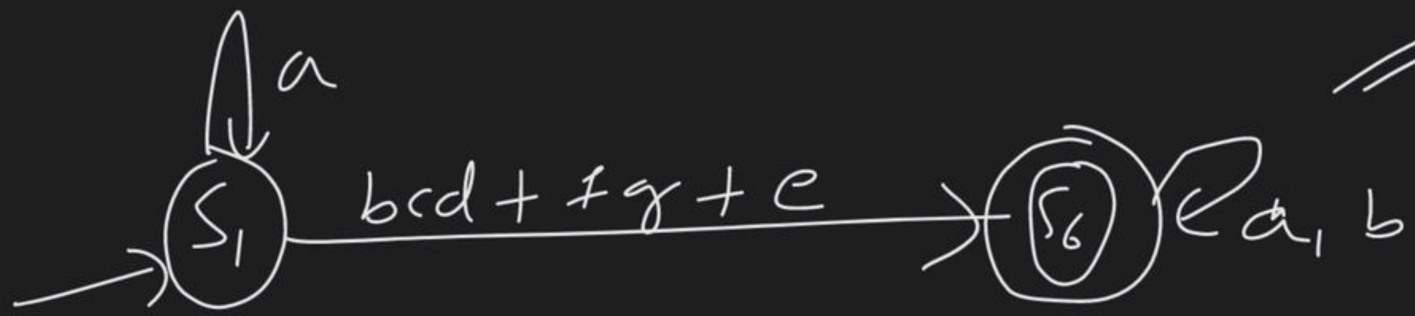

c, b
a
e+d
S_1
S_2
0
$a(b+c)^b(e+d)$



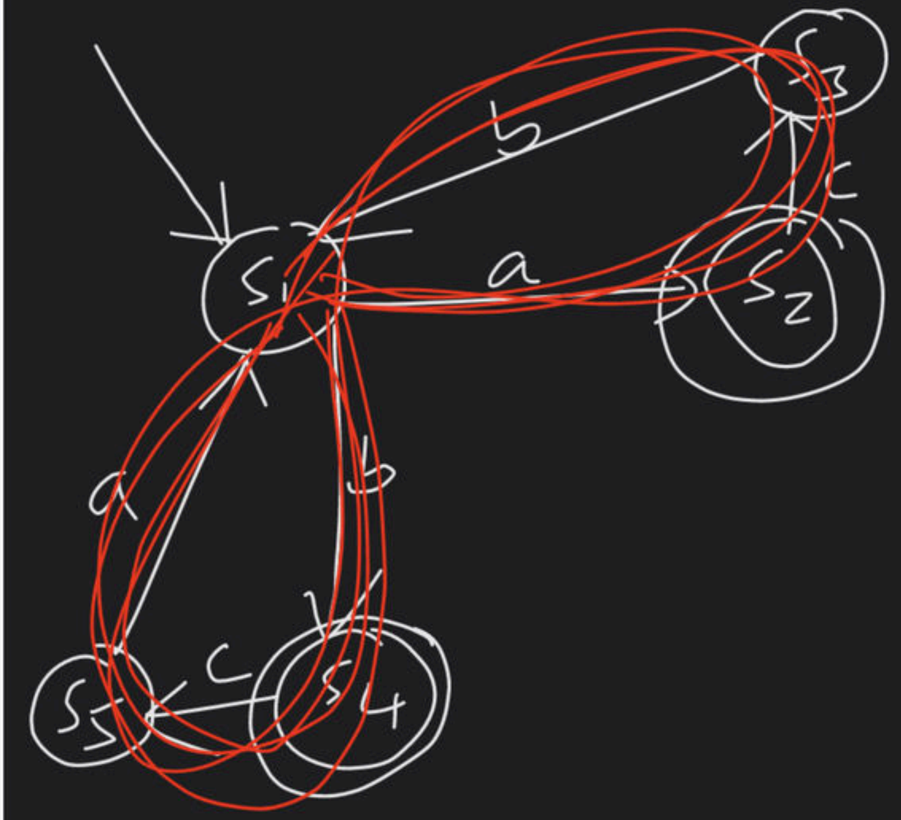


$$\Longrightarrow (e+f+\underline{cd})^{*}(a+b)$$

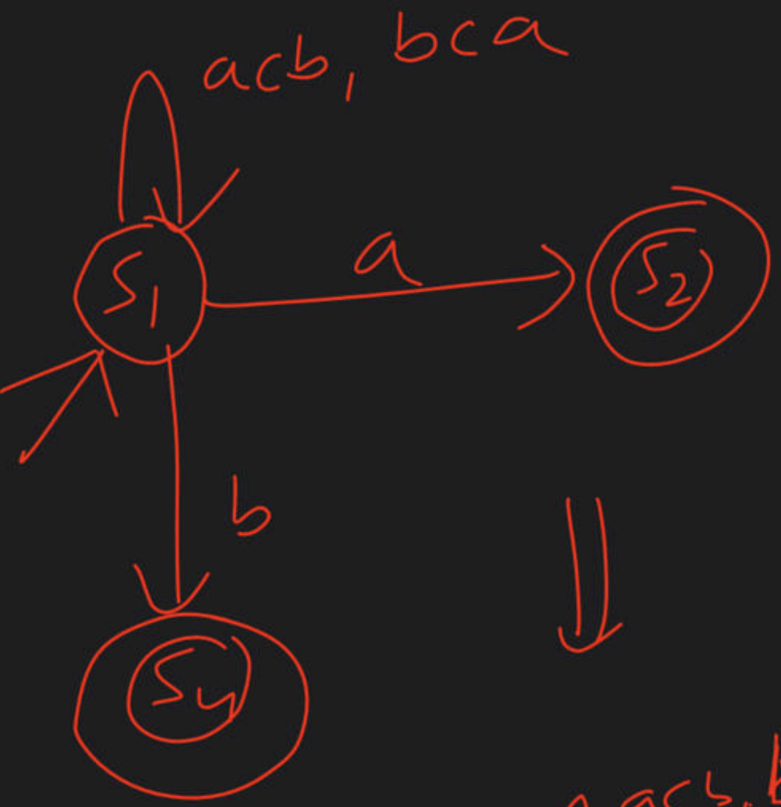




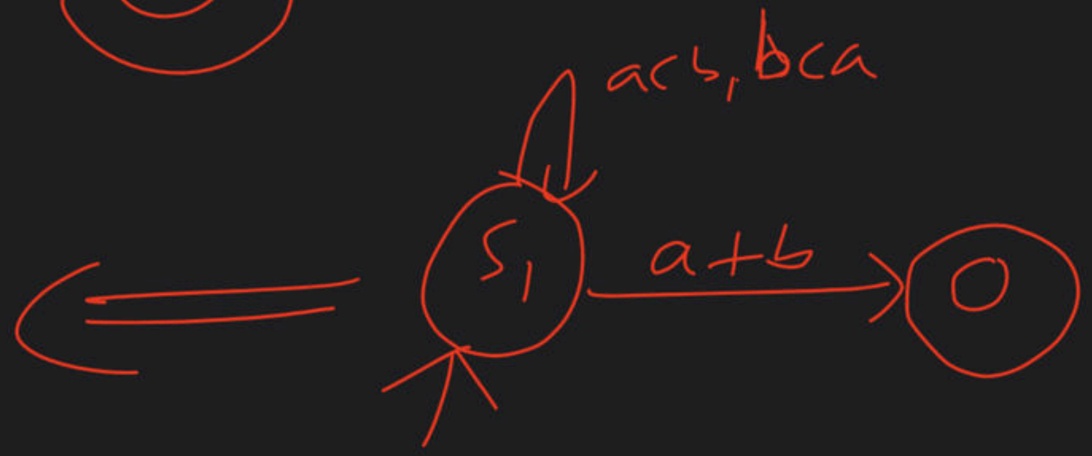
$$a^{*}(bcd+fg+e)(a+b)^{b}$$



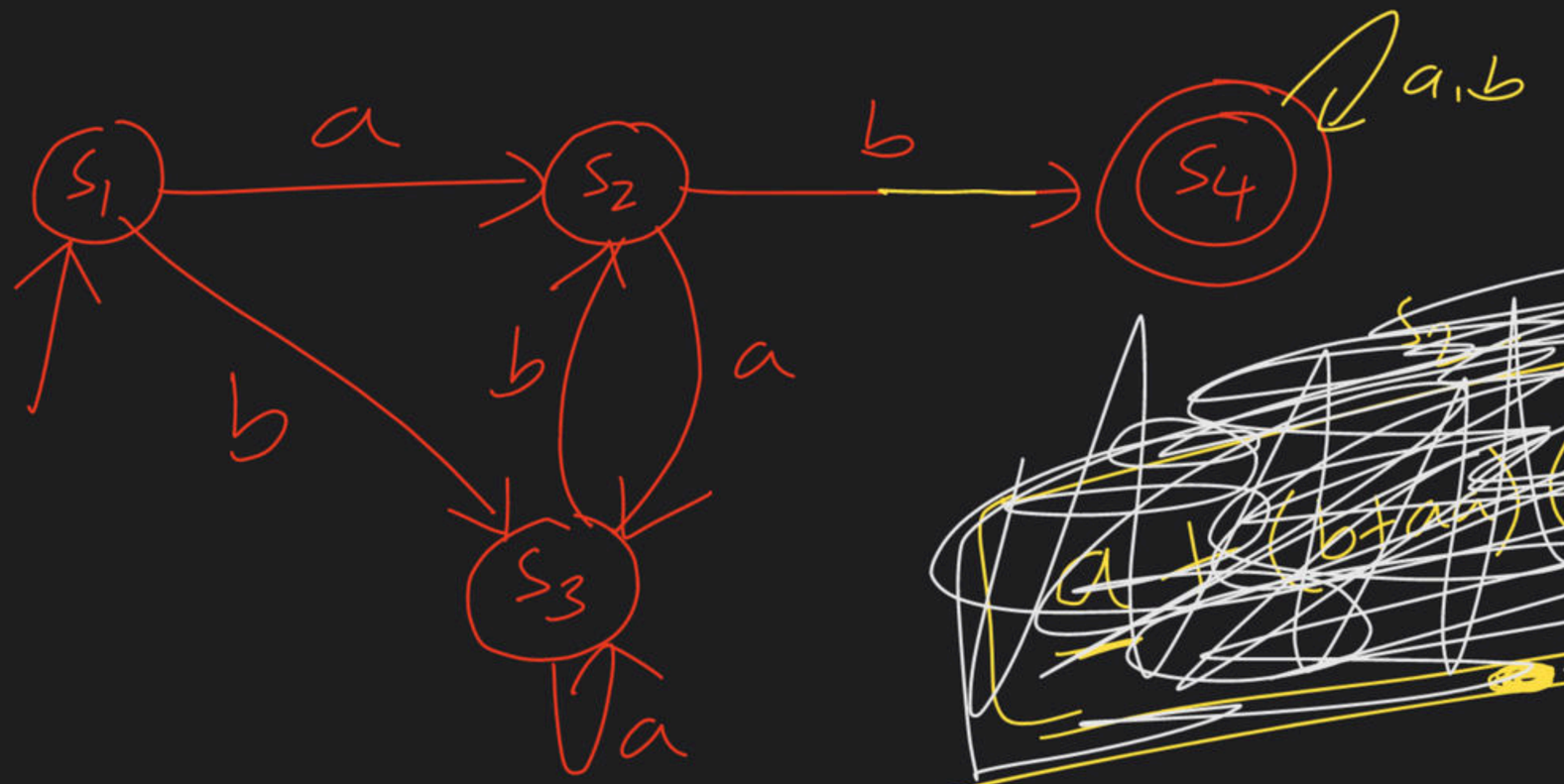
$\Rightarrow$



$\Downarrow$



$$(acb + bca)^{*}(a+b)$$



$$(a+ba^*b)(aa^*b)^*b\,(a+b)^b$$