D_0	$\{0,1,7,9,10\}$	D_1	D_1	yes
D_1	$\{2,4,6,8\}$	D_2	D_3	no
D_2	$\{0,1,3,7,9,10\}$	D_1	D_1	yes
D_3	$\{5\}$	D_4	D_2	no
D_4	$\varnothing$	D_4	D_4	no

The expression-fragment construction and its structural-induction proof are established in AC-077. Applied to the present block expression, they give the displayed NFA. Its subset transition is

$$\delta_D(S,c) = \varepsilon\text{-closure}\{t : \exists s \in S,\ s \xrightarrow{c} t\}.$$

The reachable-subset induction in AC-077 proves the language equivalence of this table, including its empty dead state. The table here specifies the states of the present expression.

Structural or analytic derivation

The accepted blocks are aa, ba, abb, bbb. In the subset table, D_0 and D_2 have the same acceptance and outgoing transitions, so they merge. A four-state minimal DFA has boundary state R (initial and accepting), state S after the first symbol of a block, state T after the first b in the second component, and dead state X:

	a	b
R	S	S
S	R	T
T	X	R
X	X	X

.