String Matching Automaton of $abaababa$

$\Sigma \setminus \{a\}$

0 -> 1
1 -> 2
2 -> 3
3 -> 4
4 -> 5
5 -> 6
6 -> 7
7 -> 8

Arrows indicate transitions based on the input symbols $a$ and $b$. The automaton starts at state 0 and follows a specific path through the states based on the input string.
Algorithms on strings
M. Crochemore, C. Hancart and T. Lecroq
Cambridge University Press, 2007