

## DFA examples-2

1.  $L = \{ w \mid w \text{ contains at least **two 0's** and at most **one 1** } \mid \Sigma = \{0, 1\}$
2.  $L = \{ w \mid w \text{ starts and ends with different characters and the length of } w \text{ is even} \mid \Sigma = \{0, 1\}$
3.  $L = \{ w \mid w \text{ contains even number of '**a**' and ends with '**bc**' } \mid \Sigma = \{a, b, c\}$
4.  $L = \{ w \mid w \text{ contains even number of **0's** or odd number of **2's**.} \text{ over } \Sigma = \{0, 1, 2\}$
5.  $L = \{ w \mid w \text{ starts with an even number of '**a**', contains '**ba**' and ends with '**baa**' } \mid \Sigma = \{a, b\}$
6.  $L = \{ w \mid w \text{ does not contain '**mnm**' } \mid \Sigma = \{m, n, w\}$
7.  $L = \{ w \mid w \text{ does not contain '**xyz**' and ends with '**yy**' } \mid \Sigma = \{x, y, z\}$
8.  $L = \{ w \mid w \text{ contains the set of all strings that has neither '**00**' nor '**11**' as substring} \mid \Sigma = \{0, 1, 2\}$
9.  $L = \{ w \mid w \text{ does not start with '**01**' and the 3<sup>rd</sup> last character is '**1**' } \mid \Sigma = \{0, 1\}$
10.  $L = \{ w \mid w \text{ contains the set of all strings whose length always returns **remainder 2** when divided by **4** } \mid \Sigma = \{0, 1\}$
11.  $L = \{ w \mid w \text{ is a palindrome with a max length of 3} \mid \Sigma = \{0, 1\}$
12.  $L = \{ a^i b^j \mid i \geq 0, j \geq 0, i + j \text{ is an odd number} \mid \Sigma = \{a, b\}$