

## DFA related problems:

Please try to solve these problems before the next class. In the class, I will discuss about these problems.

- Give a DFA for  $\Sigma = \{ 0, 1 \}$  that accepts only those strings (including empty string) whose length is a multiple of 3.
- Give a DFA for  $\Sigma = \{ a, b \}$  and strings that have length at least 3.
- Give a DFA for  $\Sigma = \{ a, b \}$  and strings that have length at most 2.
- Give a DFA for  $\Sigma = \{ 0, 1 \}$  and strings that contain any number of 0's and the total number of 1's is a multiple of 3.
- Give a DFA for  $\Sigma = \{ a, b \}$  and strings that have exactly 2 a's.
- Draw a DFA for the language accepting strings starting with 'a' over input alphabets  $\Sigma = \{ a, b \}$ .
- Draw a DFA for the language accepting strings starting with 'ab' over input alphabets  $\Sigma = \{ a, b \}$ .
- Draw a DFA for the language accepting strings starting with '101' over input alphabets  $\Sigma = \{ 0, 1 \}$ .