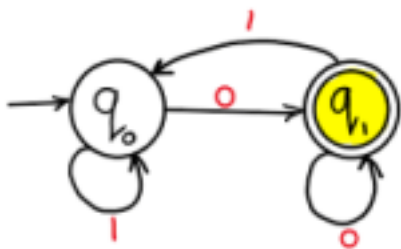


Example Question Bank of Unit 1.

Solved and Practice problems of DFA

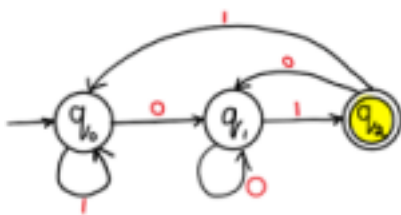
1: Draw a DFA for the language accepting strings ending with '0' over input alphabets $\Sigma=\{0, 1\}$?

Solution:



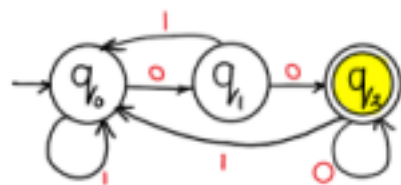
Example 2: Draw a DFA for the language accepting strings ending with '01' over input alphabets $\Sigma=\{0, 1\}$?

Solution:



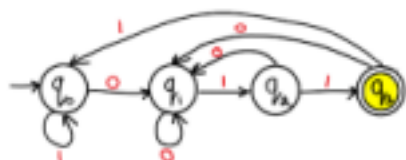
Example 3: Draw a DFA for the language accepting strings ending with '00' over input alphabets $\Sigma=\{0, 1\}$?

Solution:



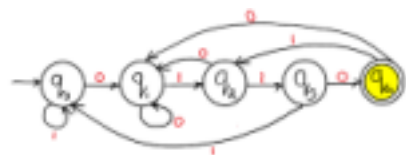
Example 4: Draw a DFA for the language accepting strings ending with '011' over input alphabets $\Sigma = \{0, 1\}$?

Solution:



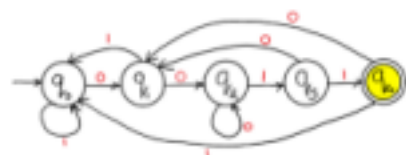
Example 5: Draw a DFA for the language accepting strings ending with '0110' over input alphabets $\Sigma = \{0, 1\}$?

Solution:



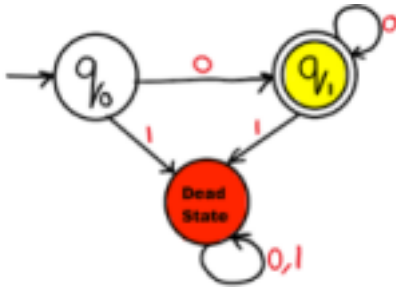
Example 6: Draw a DFA for the language accepting strings ending with '0011' over input alphabets $\Sigma = \{0, 1\}$?

Solution:



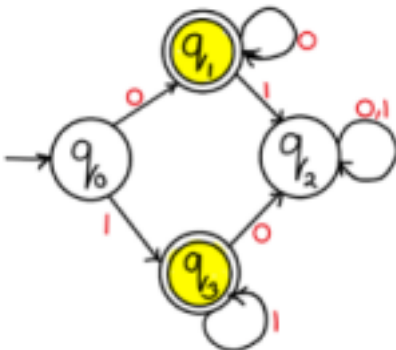
Example 7: Draw a DFA for the language accepting strings with '0' only over input alphabets $\Sigma = \{0, 1\}$?

Solution:



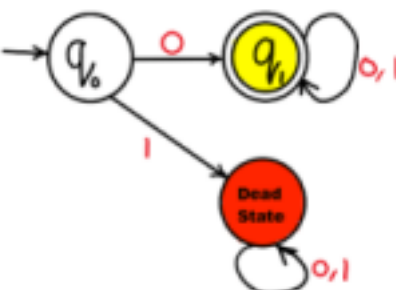
Example 8: Draw a DFA for the language accepting strings with '0' and '1' only over input alphabets $\Sigma = \{0, 1\}$?

Solution:



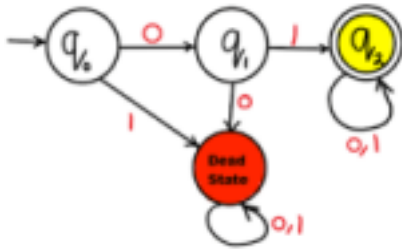
Example 9: Draw a DFA for the language accepting strings starting with '0' over input alphabets $\Sigma = \{0, 1\}$?

Solution:



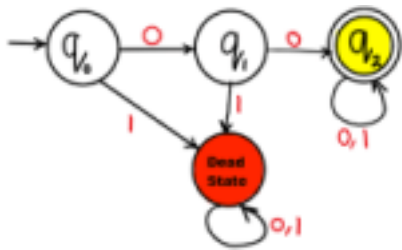
Example 10: Draw a DFA for the language accepting strings starting with '01' over input alphabets $\Sigma = \{0, 1\}$?

Solution:



Example 11: Draw a DFA for the language accepting strings starting with '00' over input alphabets $\Sigma = \{0, 1\}$?

Solution:



Practice Problem

Solve following problems.

Example 12: Draw a DFA for the language accepting strings starting with '011' over input alphabets $\Sigma = \{0, 1\}$?

Example 13: Draw a DFA for the language accepting strings starting with '0110' over input alphabets $\Sigma = \{0, 1\}$?

Example 14: Draw a DFA for the language accepting strings starting with '0011' over input alphabets $\Sigma = \{0, 1\}$?

Example 15: Draw a DFA for the language accepting strings starting with '00' or '11' over input alphabets $\Sigma = \{0, 1\}$?

Example 16: Draw a DFA for the language accepting strings without substring '00' over input alphabets $\Sigma = \{0, 1\}$?

Example 17: Draw a DFA for the language accepting even binary numbers strings over input alphabets $\Sigma = \{0, 1\}$?

Example 18: Draw a DFA for the language accepting odd binary numbers strings over input alphabets $\Sigma = \{0, 1\}$?

Example 19: Draw a DFA for the language accepting odd or even binary numbers strings over input alphabets $\Sigma = \{0, 1\}$?

Example 20: Draw a DFA for the language accepting strings containing even number of total zeros over input alphabets $\Sigma = \{0, 1\}$?

Example 21: Draw a DFA for the language accepting strings starting and ending with different characters over input alphabets $\Sigma = \{0, 1\}$?

Example 22: Draw a DFA for the language accepting strings starting and ending with same character over input alphabets $\Sigma = \{0, 1\}$?

Example 23: Draw a DFA for the language accepting strings starting and ending with '0' always over input alphabets $\Sigma = \{0, 1\}$?

Example 24: Draw a DFA for the language accepting strings containing three consecutive '0' always over input alphabets $\Sigma = \{0, 1\}$?

Solution:

Example 25: Draw a DFA for the language accepting strings such that each '0' is immediately preceded and followed by '1' over input alphabets $\Sigma = \{0, 1\}$?

Example 26: Draw a DFA for the language accepting strings containing at most two '0' over input alphabets $\Sigma = \{0, 1\}$?

Example 27: Draw a DFA for the language accepting strings containing at least two '0' over input alphabets $\Sigma = \{0, 1\}$?

Example 28: Draw a DFA for the language accepting strings containing exactly two '0' over input alphabets $\Sigma = \{0, 1\}$?

Example 29: Draw a DFA for the language accepting strings with '011' as substring over input alphabets $\Sigma = \{0, 1\}$?

Example 30: Draw a DFA for the language accepting strings ending in either '01', or '10' over input alphabets $\Sigma = \{0, 1\}$?

Example 31: Draw a DFA for the language accepting strings containing '01', or '10' as substring over input alphabets $\Sigma = \{0, 1\}$?

Example 32: Draw DFA that accepts any string which ends with 1 or it ends with an even number of 0's following the last 1. Alphabets are $\{0, 1\}$.

Example 33: Construct DFA accepting set of all strings containing even no. of a's and even no. of b's over input alphabet $\{a, b\}$.

Solution:

Example 34: Give DFA accepting the language over alphabet $\{0, 1\}$ such that all strings of 0 and 1 ending in 101.

Example 36: construct DFA for binary integer divisible by 3 ?

Example 37: Draw a DFA for the language accepting strings containing neither '00', nor '11' as substring over input alphabets $\Sigma = \{0, 1\}$?