

形式语言与自动机 作业一

cycleke

1 第一题

$L = \{w \in \{0, 1\}^* \mid w \text{ does not end with } 10\}.$

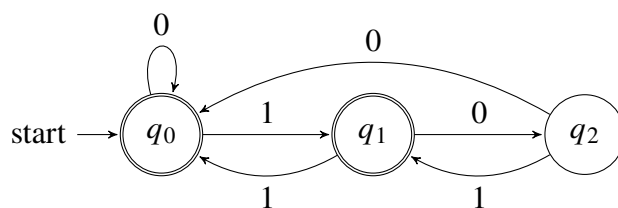


图 1: 第一题

2 第二题

$L = \{w \in \{0, 1\}^* \mid w \text{ contains both } 01 \text{ and } 10 \text{ as substrings}\}.$

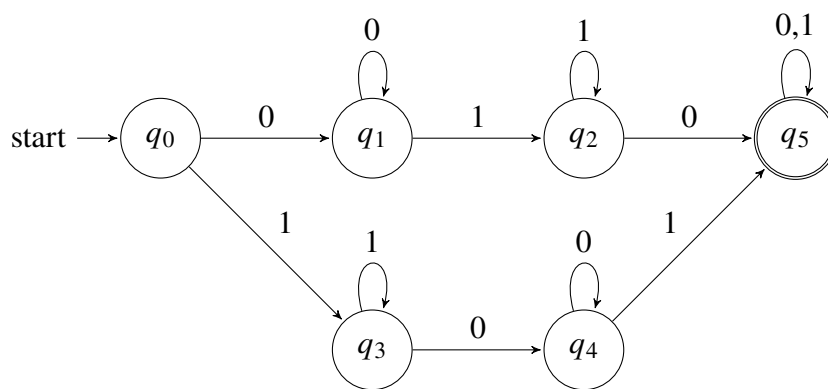


图 2: 第二题

3 第三题

The set of all strings such that each block of three consecutive symbols contains at least two 0's.

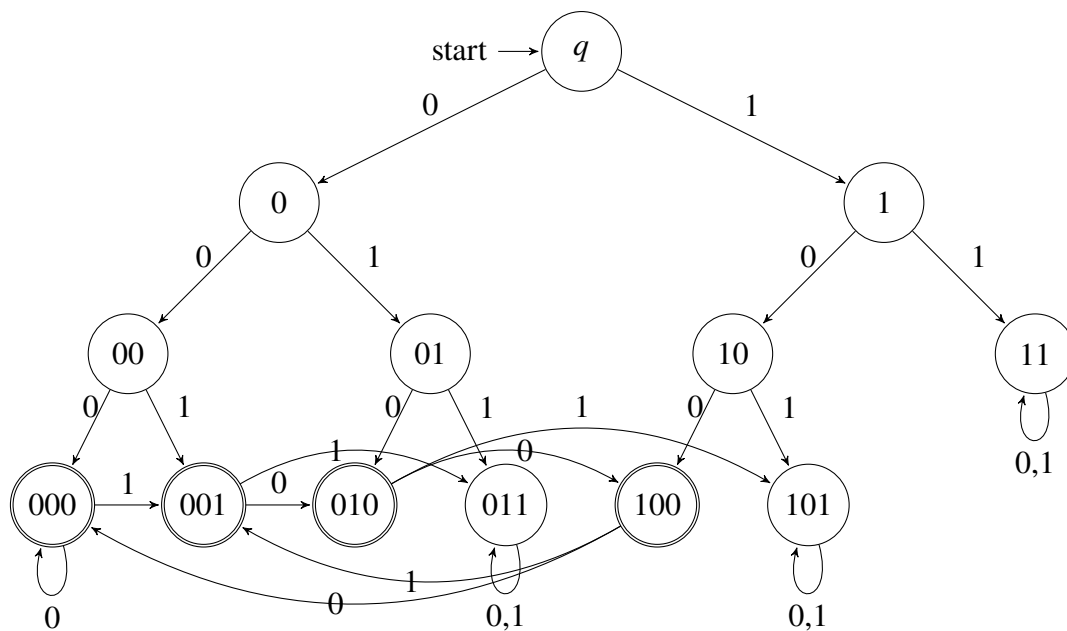


图 3: 第三题

4 第四题

The set of strings such that the number of 0's is divisible by 3, and the number of 1's is divisible by 2.

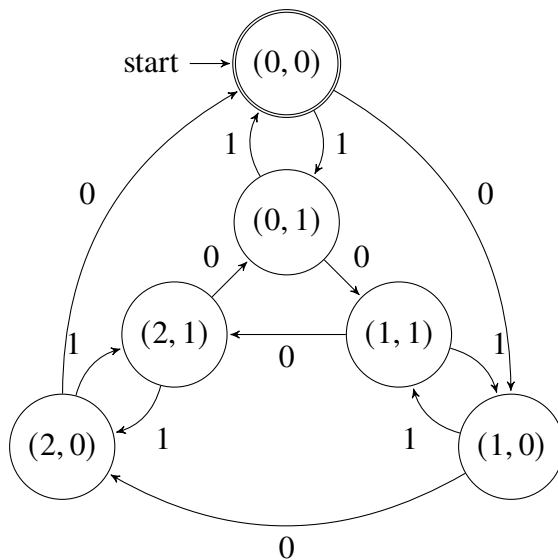


图 4: 第四题

5 第五题

Design an NFA within four states for the language $\{0\}^* \cup \{01\}^*$.

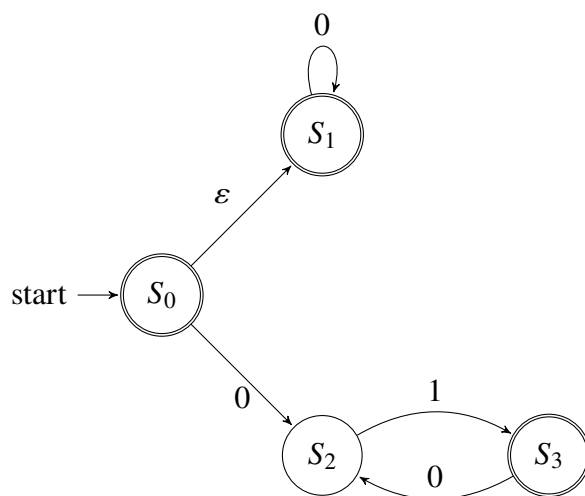


图 5: 第五题

6 第六题

Design an NFA for the following language over $\Sigma = \{0, 1\}$, $L = \{w | w \text{ contains at least two } 0\text{'s or exactly two } 1\text{'s}\}$.

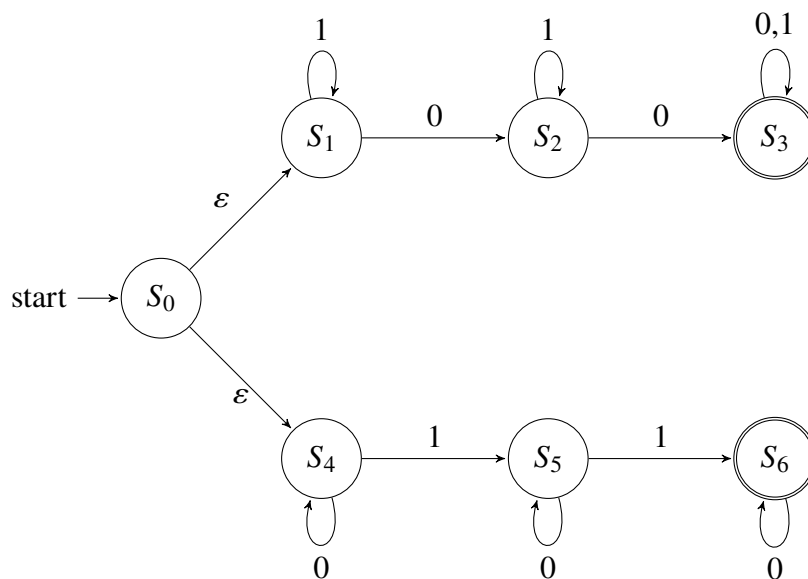


图 6: 第六题