

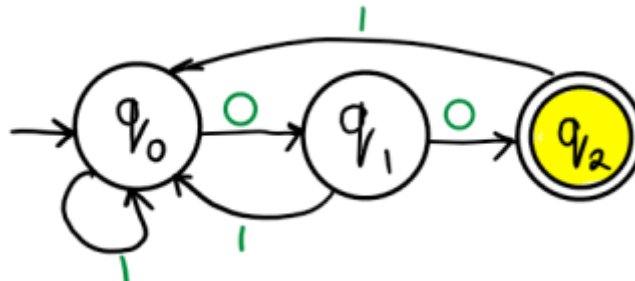
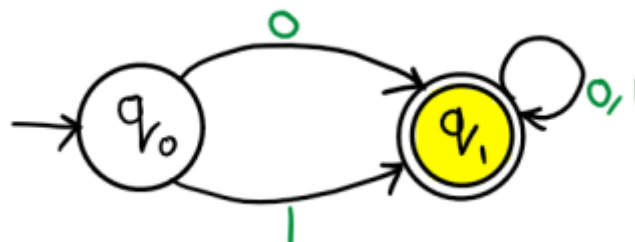
RGPV 2015

Q. Design DFA accepting the following languages over the alphabet  $\{0, 1\}$ 

1. The set of all words ending in 00.
1. The set of all words except  $\epsilon$ .
1. The set of all words that begin with 0.

Ans.

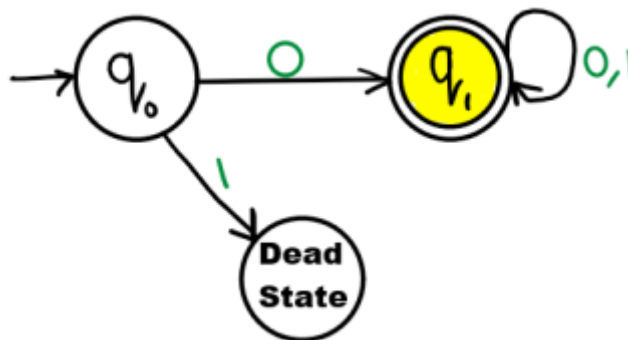
1. The set of all words ending with 00:

Some example strings =  $\{00, 100, 000, 1000, 0100, 11100\}$ Regular expression =  $(0+1)^*00$ 2. The set of all words except  $\epsilon$ :Some example strings =  $\{0, 1, 00, 10, 01, 11, 000000, 11111\}$ Regular expression =  $(0+1)(0+1)^*$ 

### 3. The set of all words that begin with 0:

Some example strings = {0, 01, 00000, 0101010101}

Regular expression =  $0(0+1)^*$



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