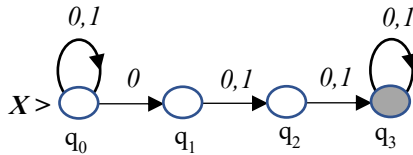


CS 302-HOMEWORK 1
(due latest March 11, 2021 before recitation)

Question 1:



Consider the NFA X given above.

- (a) Write down a regular expression E corresponding to the language L accepted by X above.
- (b) Write down a regular expression E' corresponding to the language L^c (complement of L) accepted by X and sketch an ε -NFA Y that accepts the language L^c .
- (c) After simplification sketch an NFA Z with no more than 7 states that accepts L^c .
(Hint: Use **basic logic** to characterize L and L^c)

Questions from the main text:

2.2.5, 2.2.6 (b)

2.3.3, 2.3.4 (b) and (c)

2.5.2