0/4 Questions Answered

4 questions with unsaved changes

Quiz 3 - NFA/DFA

STUDENT NAME
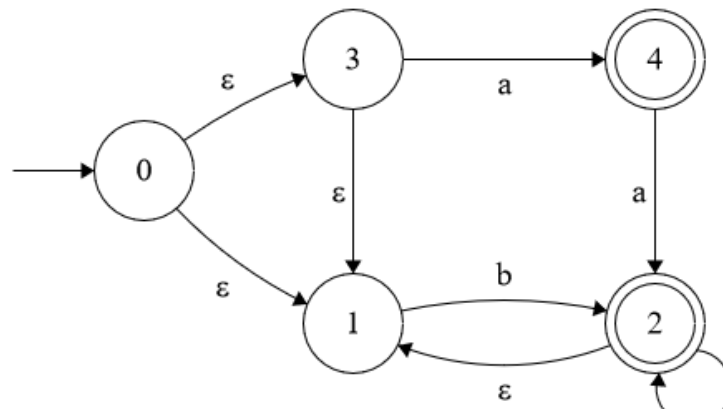
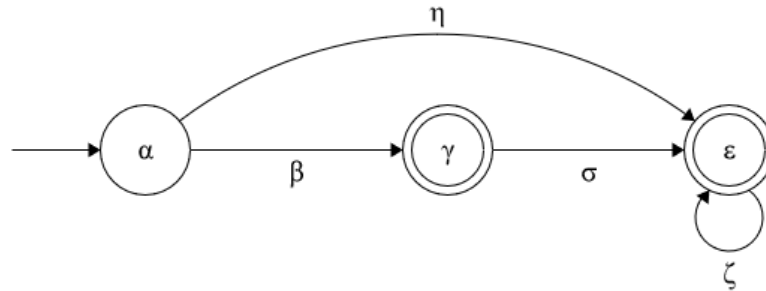Search students by name or email ▼

Q1 NFA to DFA
7 Points

Q1.1 NFA to DFA
7 Points

Fill in the values for α, β, γ, $\bar{o}$, $\mathcal{E}$, ζ, and η by converting the following NFA to DFA. If multiple symbols are on the same transition, you can separate them with a comma. For example: a,b

NFA:

c

DFA:

Blank α

[0;1;3]

Blank β

a

Blank γ

[4]

Blank ō

a

Blank Ɛ

[2;1]

Blank ζ

b,c

Blank η

b

Save Answer   ***Unsaved Changes**

Q2 Regex to NFA
7 Points

With this following regex: (ab | a | c) +
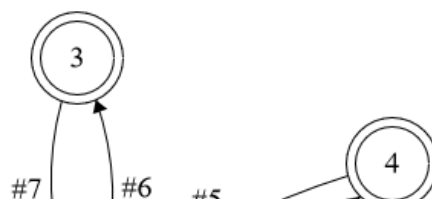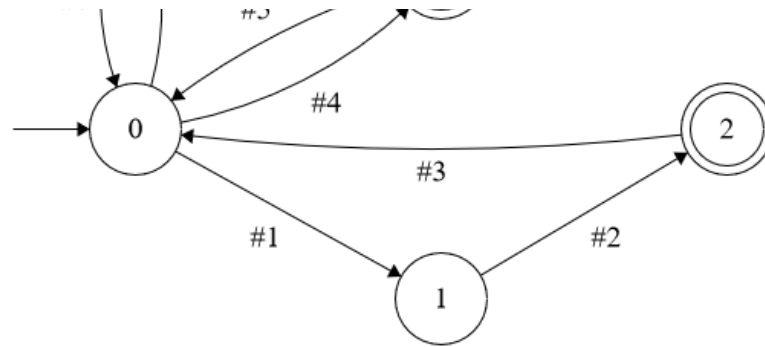
Acceptable string matches include:
aab
abaaab
acaba
aaaccc

Fill in the blanks for the following NFA so that it represents the regex given above. Valid representations of epsilon would be Ɛ, E, or epsilon.

Blank #1:

a

Blank #2:

b

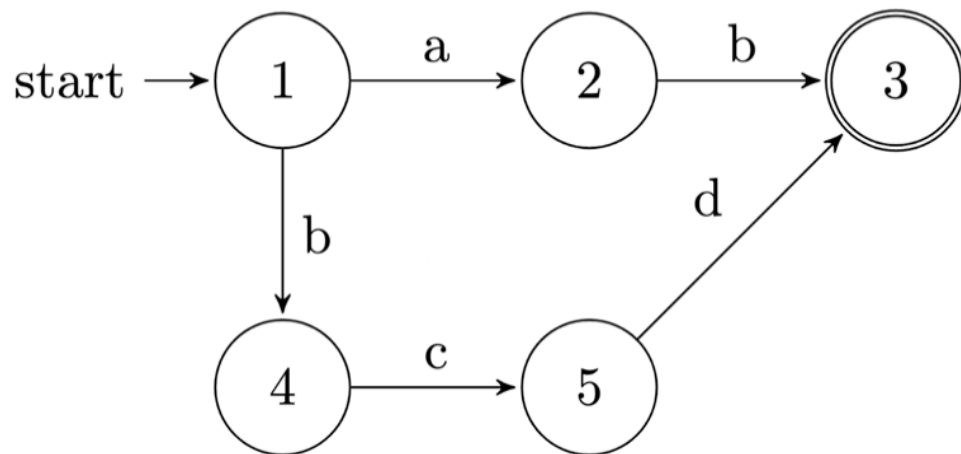### Blank #3:

ε

Blank #4:

a or c

Blank #5:

ε

Blank #6:

c or a

Blank #7:

ε

Save Answer   *Unsaved Changes*

Q3 NFA Modification
6 Points

Q3.1
3 Points

What single transition could be added to modify the NFA to accept the input `"bcdcdcdcdcd"`?

Note: Use the notation `(1, a, 2)` to denote a transition from state 1 to state 2 on input a . You can use `(1, epsilon, 2)` to denote an epsilon transition from state 1 to state 2.

(3, epsilon, 4)

Save Answer   *Unsaved Changes*

Q3.2
3 Points

Is the original NFA also a DFA? Explain why or why not.

Yes. It has no epsilon transitions and each of the transitions
from all states is on a unique symbol.

Save Answer   ***Unsaved Changes**

Save All Answers   Submit & View Submission ❯