Quiz 3 - NFA/DFA

STUDENT NAME

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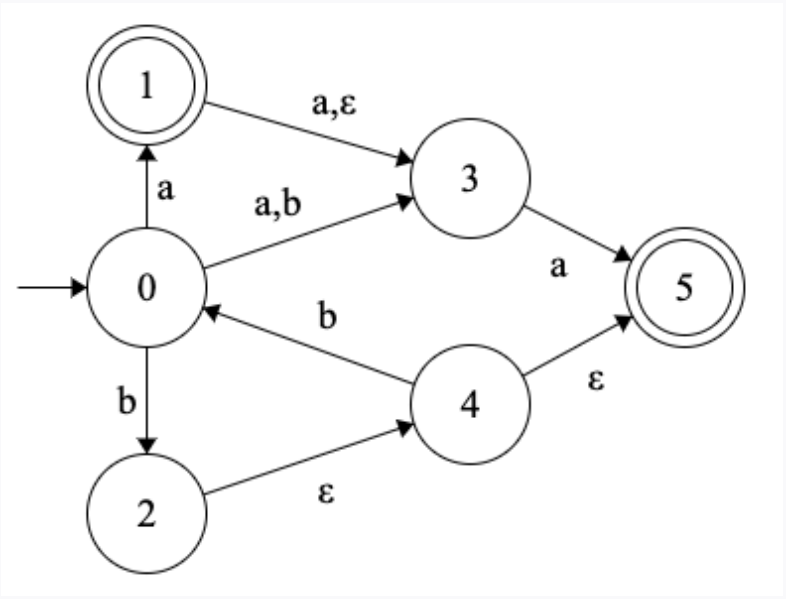
Q1

12 Points

Consider the following NFA:



Note: You can open this image in a new tab to make it easier to reference.

Q1.1

4 Points

Which of the following strings are accepted by the NFA?

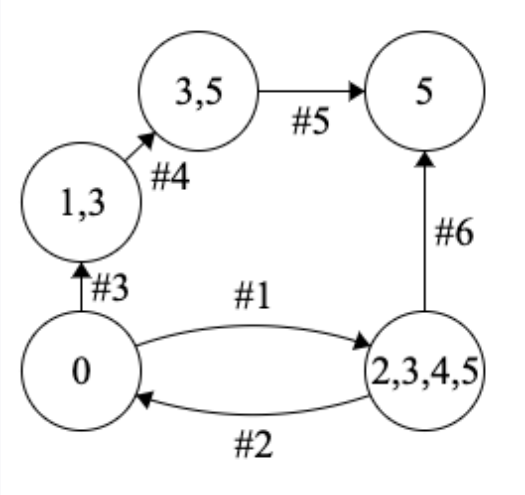
- [ ] Empty String
- [ ] bbbaa
- [x] ba
- [x] aa
- [x] b

Save Answer *Unsaved Changes

Q1.2

6 Points

Use subset construction - the NFA to DFA algorithm covered in class - to fill in the blanks on the DFA so that the given NFA and DFA are equivalent.



Note: You can put more than one symbol in each blank to create multiple transitions following the same trajectory. If you do this, separate the symbols in each blank with commas.

Blank #1:

b

Blank #2:

b

Blank #3:

a

Blank #4:

a

Blank #5:

a

Blank #6:

a

Save Answer ***Unsaved Changes**

Q1.3

2 Points

What states from the DFA from 1.2 are final states?

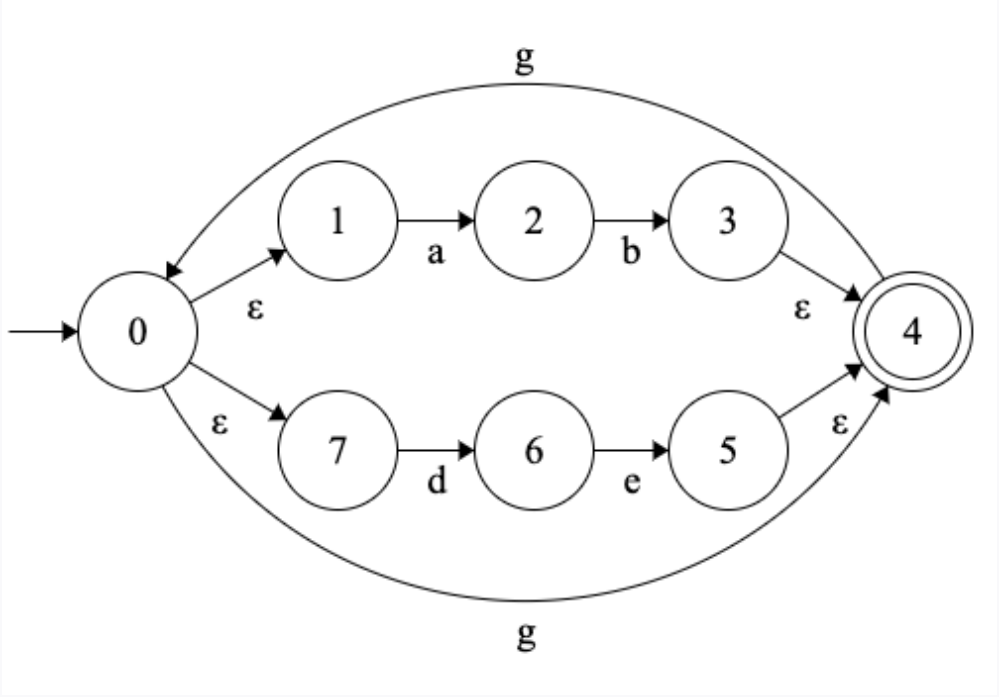
- [ ] 0
- [x] 1,3
- [x] 3,5
- [x] 5
- [x] 2,3,4,5

Save Answer ***Unsaved Changes**

Q2

8 Points

Use the following for the next 2 subquestions



Q2.1

4 Points

What is a regex for the NFA?

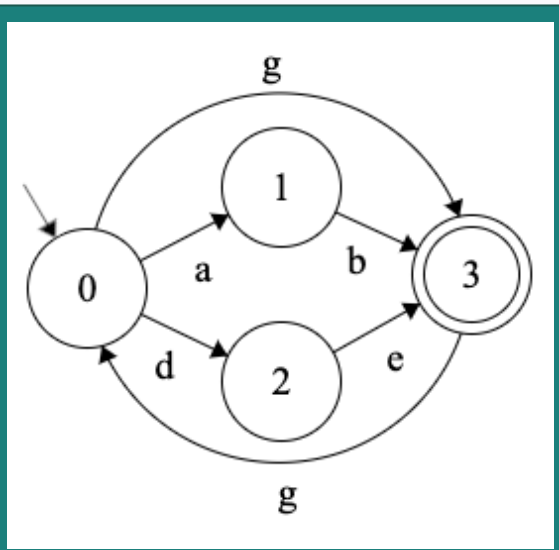
((g|ab|de)g)*(g|ab|de)

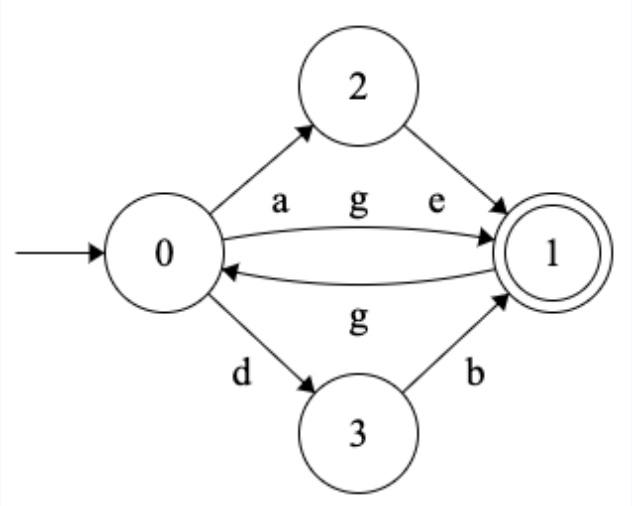
Save Answer *Unsaved Changes

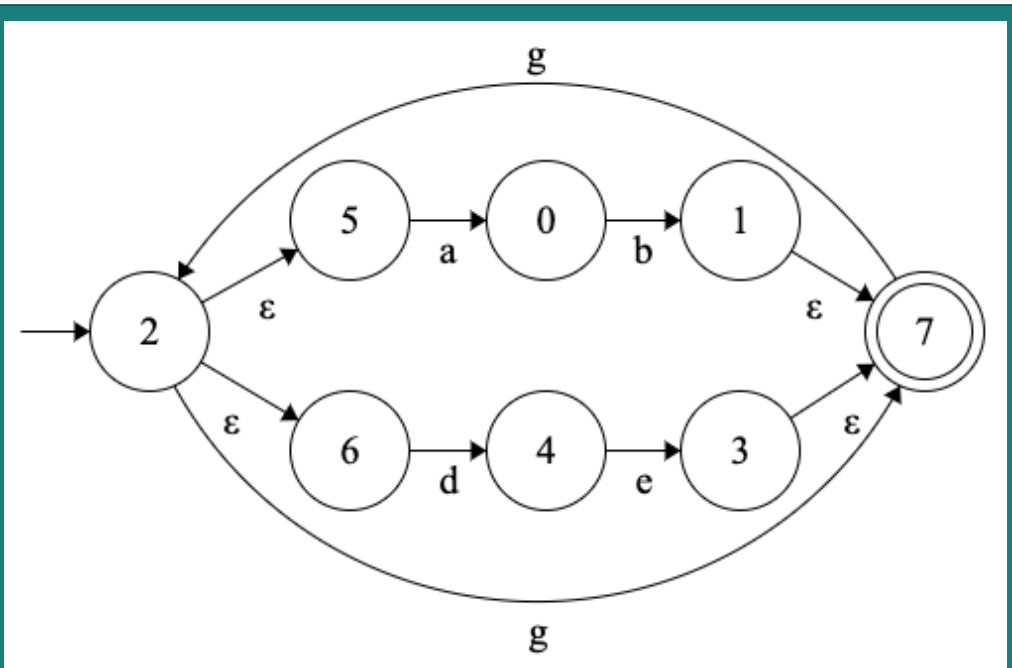
Q2.2

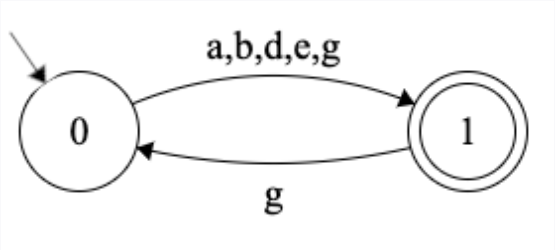
4 Points

Which of the following FSMs are equivalent to the NFA?









Save Answer *Unsaved Changes

Save All Answers

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