

CMSC 330, Fall 2017 Quiz 2

Name (as it appears on Gradescope) _____

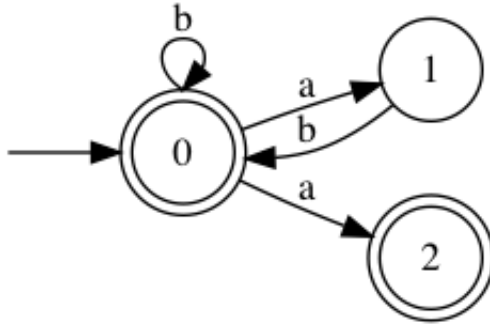
Discussion Time (circle one) 10am 11am 12pm 1pm 2pm 3pm

Discussion TA (circle one) Joseph Greg Justin Michael BT Daniel David Derek
 ~ Cameron Eric Kesha Shriraj Pei-Jo Michael Bryan Kameron

Instructions

- Do not start this quiz until you are told to do so.
- You have 15 minutes for this quiz.
- This is a closed book quiz. No notes or other aids are allowed.
- For partial credit, show all your work and clearly indicate your answers.

1. (10 points total) Consider the following NFA:



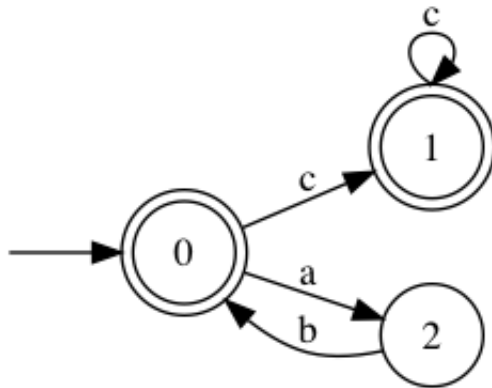
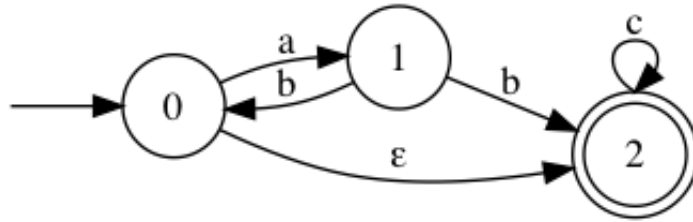
(a) (1 point each) For each string below, circle “accept” if the string is accepted by the NFA, and “reject” if it is rejected.

- ϵ **accept** / reject
- ababb **accept** / reject
- bbbbaa accept / **reject**
- ba **accept** / reject
- baab accept / **reject**

(b) (5 points) Write down a regular expression for the language accepted by this NFA.

(b|ab)* (a| ϵ)

2. (10 points) Convert the following NFA to a DFA using the algorithm discussed in class.



Where state 0 should be labeled $\{0,2\}$, state 1 should be labeled $\{2\}$, state 2 should be labeled $\{1\}$.