

README Extra Credit

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- **What was the extra work**

- I coded a python script that allows you to concatenate two different NFA's.

- **Why did you choose it (i.e. in what area did you feel deficient and how did this work help improve your understanding) You can point to specific homeworks or problem types on exams.**

- Deficient Area: I realized on exam 2 when I had the last question wrong that I never really understood what happened on the concatenation of NFA's. I didn't really understand why things happened and what epsilon transitions would need to be added. Thus, I realized that by making code about it I had to thoroughly understand the problem to be able to translate it to code, and thus would help me have a more concrete conceptual understanding about it.
- How did this help improve my understanding: I finally understood where epsilon transitions go when concatenating NFA's and how they help connect the first NFA's accept states to the second NFA's start states.

- **What files are what**

- dbenecke_concatenationNFA.py: python script that concatenates 2 NFA's
- dbenecke_nfa1.csv: first NFA to concatenate
- dbenecke_nfa2.csv: second NFA to concatenate
- Dbenecke_concatenated_nfa_output.csv: output of the python script. Thus, the final concatenated NFA

- **Explanation of csv input**

- 1st line: set of states
 - The set of states have to be named differently for each NFA. For example if NFA1 has states q0,q1,q2,q3,q4 then NFA2 must have different state names like p0,p1,p2.

NFA2 can't have any state named neither of
q0,q1,q2,q3,q4

- 2nd line: alphabet
- 3rd line: start state
- 4th line: accept state
- 5th line onward: transitions