

CSE 311: Foundations of Computing I

Assignment #8

due: Fri, June 3, 1:30pm

This homework will use the jFLAP.jar simulator that can be found on the Assignments page of the class web site. It should be turned in *online*, using the Catalyst dropbox that is linked to from the Assignments page. The assignment is worth a total of 50 points, while the other 7 homeworks are each worth 100 points.

1. (24 points) Construct finite-state machines that recognizes the languages described in supplementary exercise 22. Save your files as hw8a.jff, hw8b.jff and hw8c.jff.
2. (26 points) Construct a Turing machine that will recognize the language  $\{0^{2^n} \mid n \in \mathbb{N}\} = \{0, 00, 0000, 00000000, \dots\}$ . Save your file as hw8d.jff