

CS 331 Programming Languages, Spring 2025
In-Class Worksheet 2: Grammars, DFAs

For this page's solutions, see the January 15 lecture slides, slides 11–14.

6. Based on Grammar D, write a derivation for xy .

7. Write a grammar that generates the following language:

$\{ ab, abb, abbb, abbbb, abbbbbb, abbbbbbb, \dots \}$

8. How could we change the grammar from Exercise 7 so that the language it generates also contains the string "a"?

For this page's solutions, see the January 15 lecture slides, slides 35–36.

1. What language is recognized by the DFA whose diagram is shown?
2. Draw the diagram of a DFA that recognizes the language consisting of all strings of 0s and 1s that contain at least one character.