

Wednesday 7/30: State Diagrams pt. 2

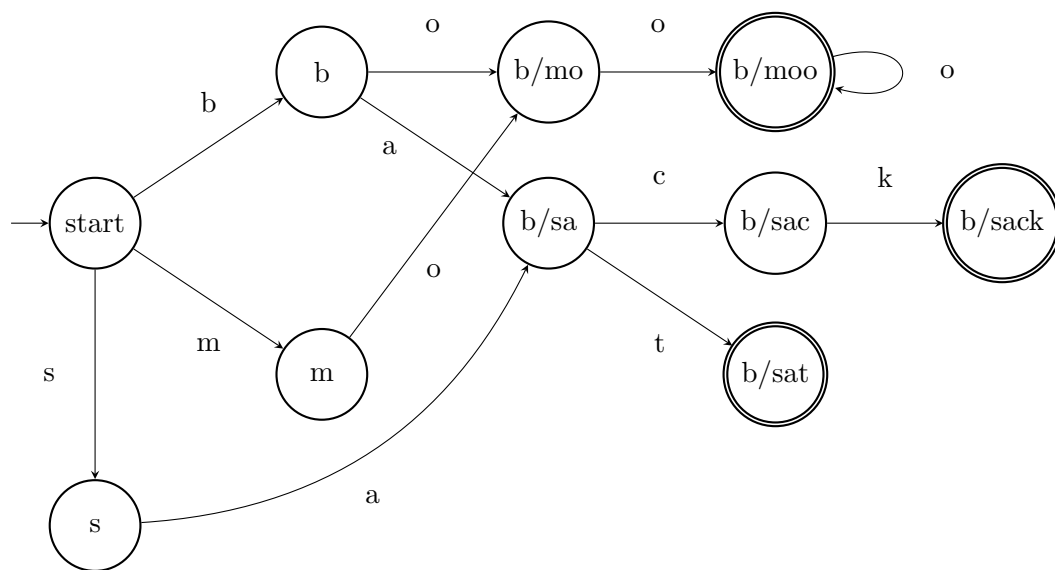
Today we will do a few more complicated examples of state diagrams.

phone lattice example: Draw a phone lattice that accepts the following list of words:

bat, back, sat, sack

boo, booo, booooo...

moo, mooo, mooooo...



We assume all other transitions go to a dump state.

modular arithmetic example: Build a deterministic state diagram that takes a sequence of 1's 2's and 3's and enters an accept state whenever the number is a multiple of 3. Assume that the empty string is not a multiple of 3.

We know that we can determine a multiple of 3 by taking the sum of the digits thus far and checking if that value is a multiple of 3. So, this means that as we move through our state diagram we are keeping track of the sum of the digits, and determining the value of that sum mod 3.

