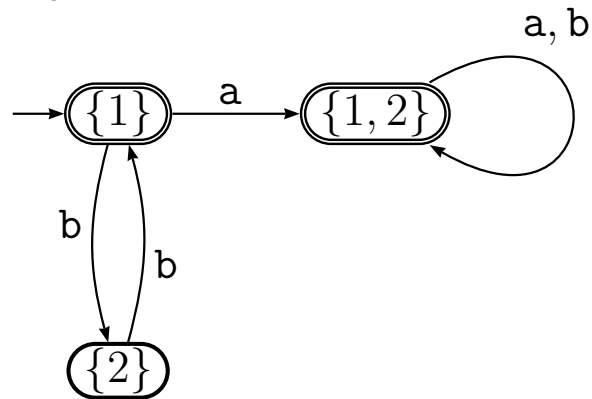**Problem 1: [Sipser] 1.16**
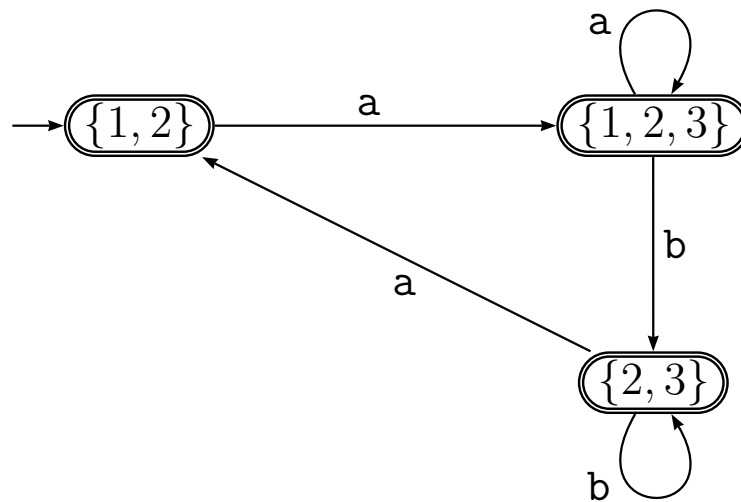
part (a):
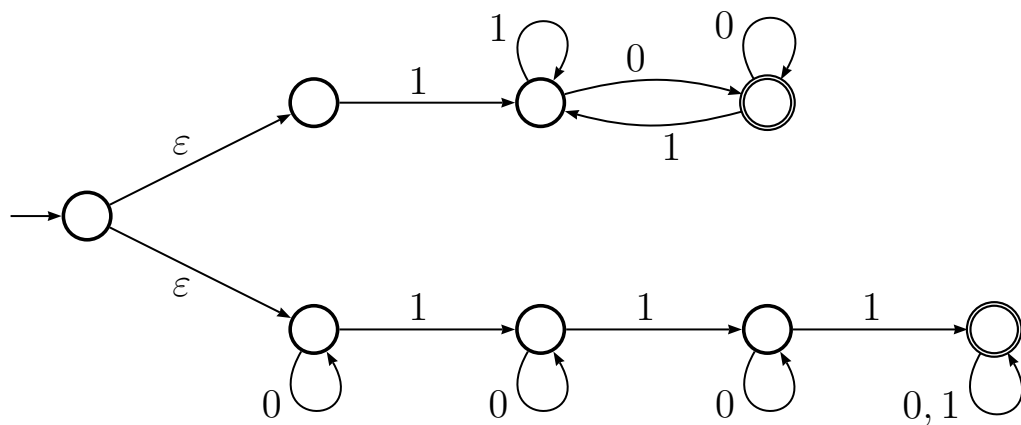

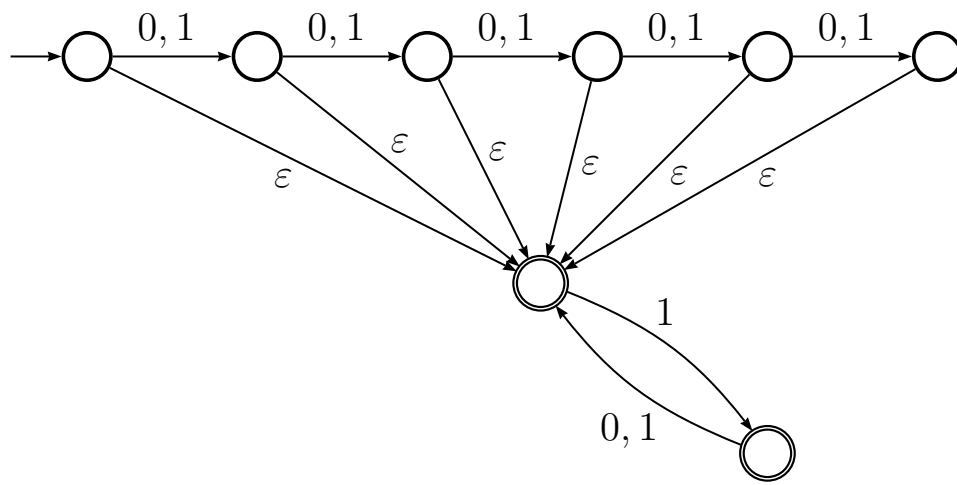part (b):

Problem 2: [Sipser] 1.8 (a), 1.9(a), 1.10 (a)

1.8 (a)

1.9 (a)

1.10 (a)