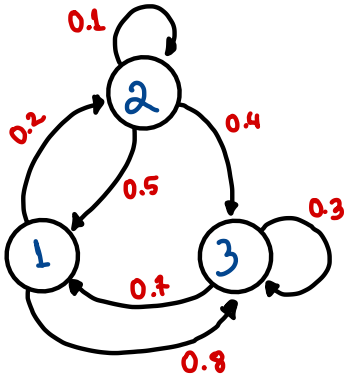
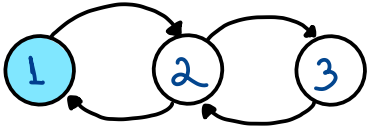


* there is no absorbing states
* {1, 2, 3} are recurrent states



* i → i paths:

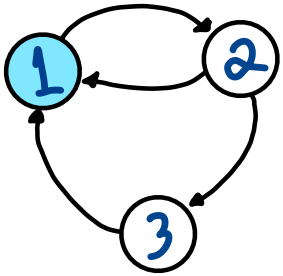
1 → 2 → 1 (L = 2)

1 → 2 → 3 → 2 → 1 (L = 4)

L = K > 1

4 is multiple of 2

State 1 is periodic



* i → i paths:

1 → 2 → 1 (L = 2)

1 → 2 → 3 → 1 (L = 3)

L = K > 1

3 is not multiple of 2

State 1 is aperiodic