Lecture C3.Discrete Time Markov Chain 3

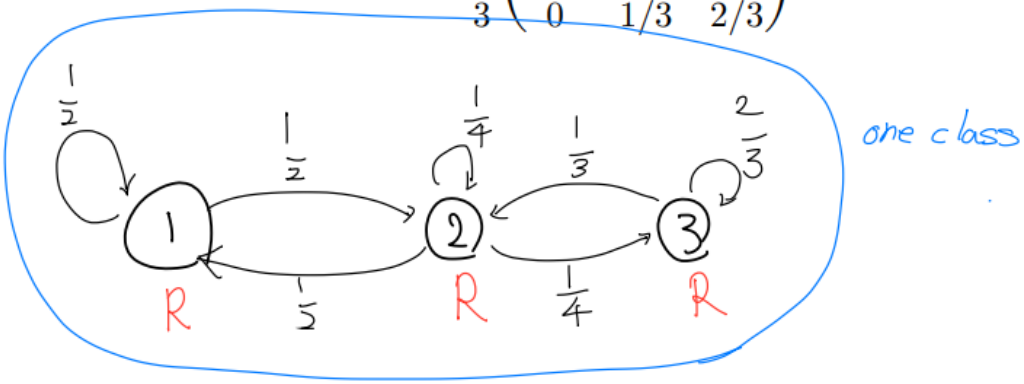
Baek, Jong min

2021-01-11

차 례

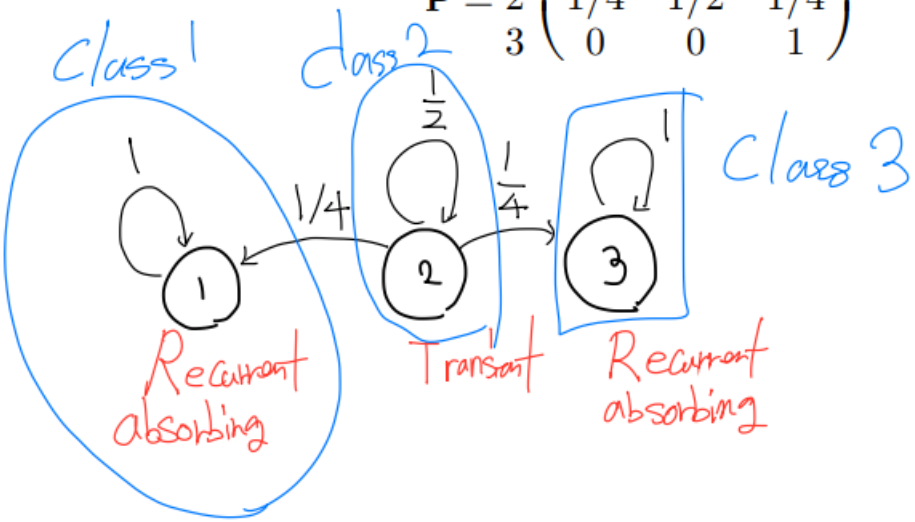
Exercise 1

$$\mathbf{P} = \begin{matrix} 1 \\ 2 \\ 3 \end{matrix} \begin{pmatrix} 1/2 & 1/2 & 0 \\ 1/2 & 1/4 & 1/4 \\ 0 & 1/3 & 2/3 \end{pmatrix}$$



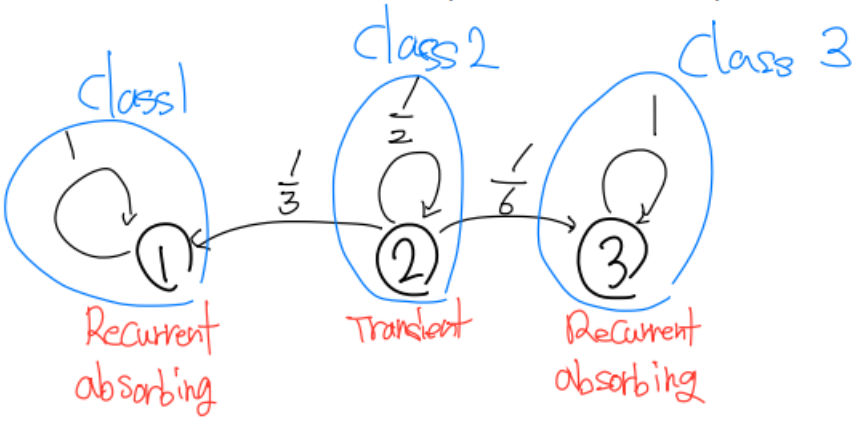
Exercise 2

$$\mathbf{P} = \begin{matrix} 1 \\ 2 \\ 3 \end{matrix} \begin{pmatrix} 1 & 0 & 0 \\ 1/4 & 1/2 & 1/4 \\ 0 & 0 & 1 \end{pmatrix}$$



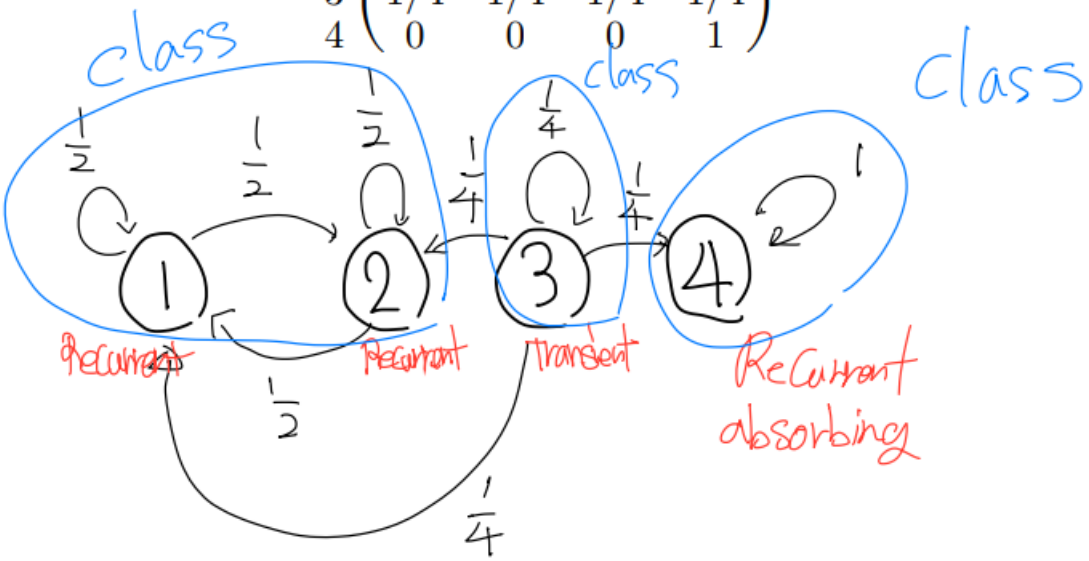
Exercise 3

$$\mathbf{P} = \begin{array}{c} 1 \\ 2 \\ 3 \end{array} \begin{pmatrix} 1 & 0 & 0 \\ 1/3 & 1/2 & 1/6 \\ 0 & 0 & 1 \end{pmatrix}$$



Exercise 4

$$\mathbf{P} = \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \end{array} \begin{pmatrix} 1/2 & 1/2 & 0 & 0 \\ 1/2 & 1/2 & 0 & 0 \\ 1/4 & 1/4 & 1/4 & 1/4 \\ 0 & 0 & 0 & 1 \end{pmatrix}$$



Random Walk - Stationary Distribution

S = {0,1,2,⋯} and p = 1/3, using flow balance equation.

Page 26

$\mathbb{P}[y_t + 2 = (NC, C) \mid Y_t = (C, C)] = \ ?$

C3.Rmd

```
"Hello"
```

```
## [1] "Hello"
```