

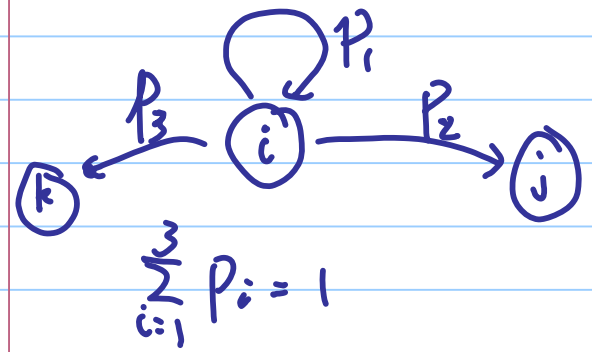
Note Title

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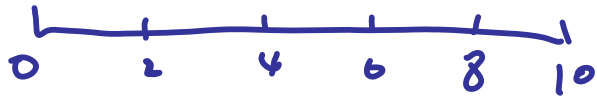
```

Simul_N = 1000; n=100; X = ones(n,1);
for k=1:Simul_N,
    U = rand(n,1);
    X(1) = (U(1) - 0.5) + X(2)/2;
    for i=2:n-1,
        X(i) = (U(i) - 0.5) + (X(i-1) + X(i+1)) / 2;
    end
    X(n) = (U(n) - 0.5) + X(n-1) / 2;
    % display or save X value for time k
end
  
```

when $i=2$
 $X(2) = (U - 0.5) + \frac{X(1) + X(3)}{2}$
 $X(1)$ is k 's value of X_1
 $X(3)$ is $(k-1)$'s value of X_3



generate U
 if $(U \leq P_1)$ jump to i ;
 else if $(P_1 < U \leq P_1 + P_2)$ jump to j ;
 else if $(P_1 + P_2 < U)$ jump to k ;



Edge = [0 2 4 6 8 10];