课后练习18

$W(i,j)=Q(i)+\sum_{l=i+1}^{j}Q(l)+P(l)$
$C(i,j)=min_{i<k<j}\{C(i,k-1)+C(k,j)\}+W(i,j)$
$P(1:4)=(3,3,1,1)$
$Q(0:4)=(1,3,2,1,1)$

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j-i=1，0<=i<4
W(0,1)=Q(0)+Q(1)+P(1)=1+3+3=7
C(0,1)=0+7=7
R(0,1)=k=1
W(1,2)=Q(1)+Q(2)+P(2)=3+2+3=8
C(1,2)=0+8=8
R(1,2)=k=2
W(2,3)=Q(2)+Q(3)+P(3)=2+1+1=4
C(2,3)=4
R(2,3)=k=3
W(3,4)=Q(3)+Q(4)+P(4)=1+1+1=3
C(3,4)=3
R(3,4)=k=4

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j-i=2 0<=i<3
W(0,2)=Q(0)+Q(1)+P(1)+Q(2)+P(2)=1+3+3+2+3=12
C(0,2)=min(8, 7)+W(0,2)=19
R(0,2)=2
W(1,3)=3+2+3+1+1=10
C(1,3)=min(C(1,1)+C(2,3), C(1,2)+C(3,3))+W(1,3)=14
R(1,3)=2
W(2,4)=2+1+1+1+1=6

C(2,4)=min(C(2,2)+C(3,4), C(2,3)+C(4,4))+W(2,4)=9
R(2,4)=3

j-i=3 0<=i<2
W(0,3)=1+3+2+1+3+3+1=14
C(0,3)=min(C00+C13, C01+C23, C02+C33)+W03=min(14, 7+4, 19)+14=25
R(0,3)=2
W(1,4)=3+2+1+1+3+1+1=12
C(1,4)=min(C11+C24, C12+C34, C13+C44)+W14=min(9, 11, 14)+12=21
R(1,4)=2

j-i=4
W(0,4)=1+7+8=16
C(0,4)=min(C00+C14, C01+C24, C02+C34, C03+C44)+W04=min(21, 16, 22, 25)+16=32
R(0,4)=2

T(0,4)=2->T(0,1), T(2,4)
T(0,1)=1->T(0,0),T(1,1)
T(2,4)=3->T(2,2),T(3,4)


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