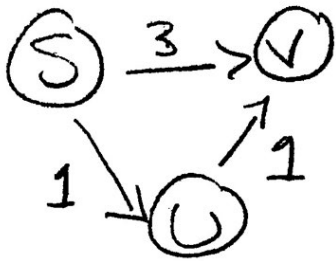
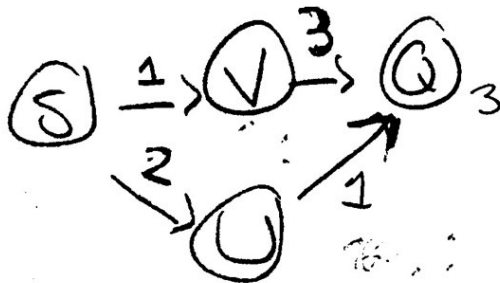


Relaxation



EQ:

IF $Dist[U] + weight(U, Q) < Dist[Q]$
 $Current = Dist[U] + weight(U, Q)$

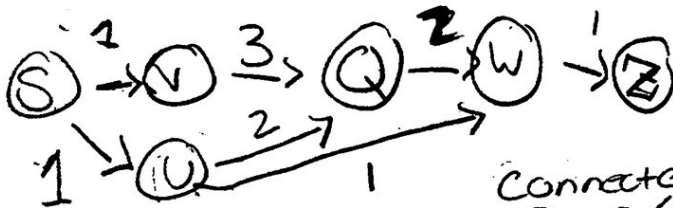


Key:

"~" = Previously calculated Path to.

"-" = Direct path.

$S \rightarrow V \rightarrow Q = 4$
 $S \sim U \rightarrow Q = 3$



Connected Pieces (Q):
 U

Step-through?

$curr = (S \rightarrow V = 1)$
 $curr = (S \rightarrow V \rightarrow Q = 4)$

$Dist[U] + weight(U, Q) < curr$

Relaxed

$curr = (S \sim U \rightarrow Q \rightarrow W = 5)$

$1 + 2 < 4$ ✓

$curr = Dist[U] \rightarrow Q$

Relaxed

$curr = (S \sim U \rightarrow W = 2)$

$curr = (S \sim U \rightarrow Q = 3)$

$curr = (S \sim U \rightarrow W \rightarrow Z = 3)$

$Dist[U] + weight(U, W) < curr$

Optimal path:

$S \sim U \rightarrow W \rightarrow Z = 3$

$S \rightarrow U \rightarrow W \rightarrow Z$

$1 + 1 < 5$ ✓

$curr = Dist[U] \rightarrow W$

$curr = (S \sim U \rightarrow W = 2)$

Relaxed!