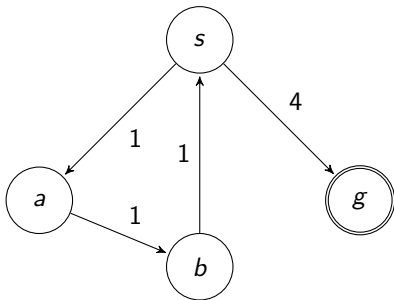


$$Q_{n+1}(x, y) := Q_0(x, y) + \frac{1}{2} \max\{Q_n(y, z) \mid \text{arc}=(y, z)\}$$

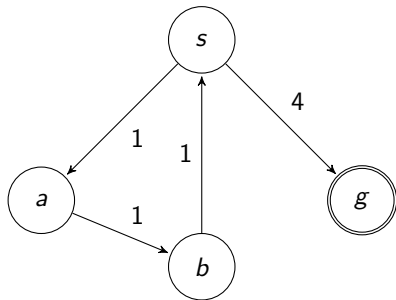
$$Q_0(x, y) := \begin{cases} 4 & \text{if } x = y \in G \\ -\text{cost}(x, y) & \text{else if } \text{arc}(x, y) \end{cases}$$



$$Q_{n+1}(x, y) := Q_0(x, y) + \frac{1}{2} \max\{Q_n(y, z) \mid \text{arc}=(y, z)\}$$

$$Q_0(x, y) := \begin{cases} 4 & \text{if } x = y \in G \\ -\text{cost}(x, y) & \text{else if } \text{arc}(x, y) \end{cases}$$

$$Q_0(s, a) = -1 > Q_0(s, g) = -4$$



From s , move to a or to g ?

$n = 0$: choose a

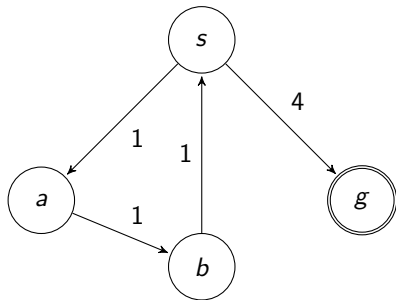
$$Q_{n+1}(x, y) := Q_0(x, y) + \frac{1}{2} \max\{Q_n(y, z) \mid \text{arc}=(y, z)\}$$

$$Q_0(x, y) := \begin{cases} 4 & \text{if } x = y \in G \\ -\text{cost}(x, y) & \text{else if } \text{arc}(x, y) \end{cases}$$

$$Q_0(s, a) = -1 > Q_0(s, g) = -4$$

$$Q_1(s, a) = -1 + \frac{1}{2}Q_0(a, b) = -\frac{3}{2}$$

$$Q_1(s, g) = -4 + \frac{1}{2}Q_0(g, g) = -2$$



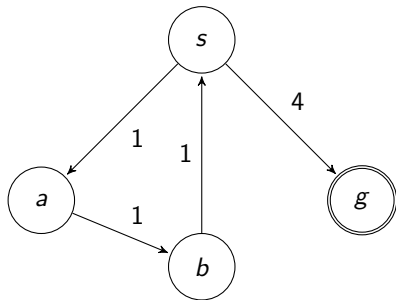
From s , move to a or to g ?

$n = 0$: choose a

$n = 1$: choose a

$$Q_{n+1}(x, y) := Q_0(x, y) + \frac{1}{2} \max\{Q_n(y, z) \mid \text{arc}=(y, z)\}$$

$$Q_0(x, y) := \begin{cases} 4 & \text{if } x = y \in G \\ -\text{cost}(x, y) & \text{else if } \text{arc}(x, y) \end{cases}$$



$$Q_0(s, a) = -1 > Q_0(s, g) = -4$$

$$Q_1(s, a) = -1 + \frac{1}{2}Q_0(a, b) = -\frac{3}{2}$$

$$Q_1(s, g) = -4 + \frac{1}{2}Q_0(g, g) = -2$$

$$Q_1(a, b) = -1 + \frac{1}{2}Q_0(b, s) = -\frac{3}{2}$$

$$Q_1(g, g) = 4 + \frac{1}{2}Q_0(g, g) = 6$$

$$Q_2(s, a) = -1 + \frac{1}{2}Q_1(a, b) = -\frac{7}{4}$$

$$Q_2(s, g) = -4 + \frac{1}{2}Q_1(g, g) = -1$$

From s , move to a or to g ?

$n = 0$: choose a

$n = 1$: choose a

$n = 2$: choose g