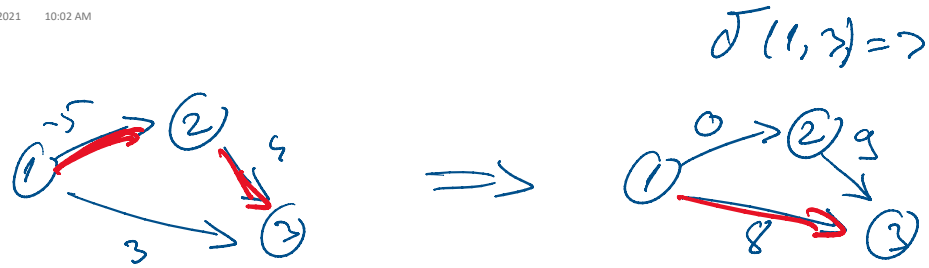
Curs 05

Thursday, March 25, 2021 10:02 AM



$\delta(1,3) = 7$

$\hat{\delta}(1,3) = 8$

G $\quad$ G'

$w(u,v)$ $\quad$ $\hat{w}(u,v) \geq 0$

$\delta(1,3) = \hat{\delta}(1,3) - 5$

δ $\quad$ $\hat{\delta}$

Lema 4.1 $\quad G = (V,E)$ $\quad w: E \to \mathbb{R}$, $h: V \to \mathbb{R}$

$$\hat{w}(u,v) = w(u,v) + h(u) - h(v)$$

$p = \langle v_0 \dots v_k \rangle$ $\quad \delta(v_0, v_k) = w(p)$

$\hat{\delta}(v_0, v_k) = \hat{w}(p)$

$G' = (V', E')$ $\quad G = (V,E)$

$V' = V \cup \{s\}$

$E' = E \cup \{(s,v) \mid v \in V\}$, $w(s,v) = 0$ $\forall v \in V$

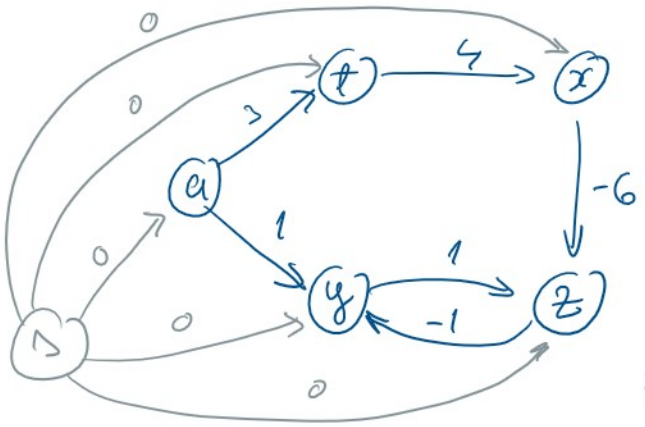
$\hat{w}(u,v) = w(u,v) + h(u) - h(v)$

$\Delta = d_{uv}$

for $u \in V$

DIJKSTRA $(G, \hat{w}, u) \Rightarrow \hat{\delta}(u,v)$

$d_{uv} = \hat{\delta}(u,v) - h(u) + h(v)$

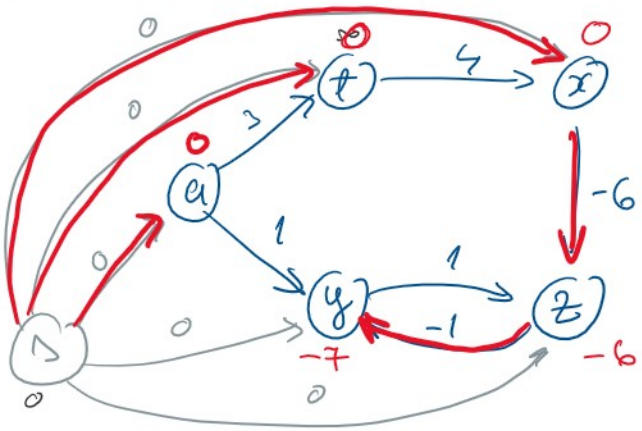


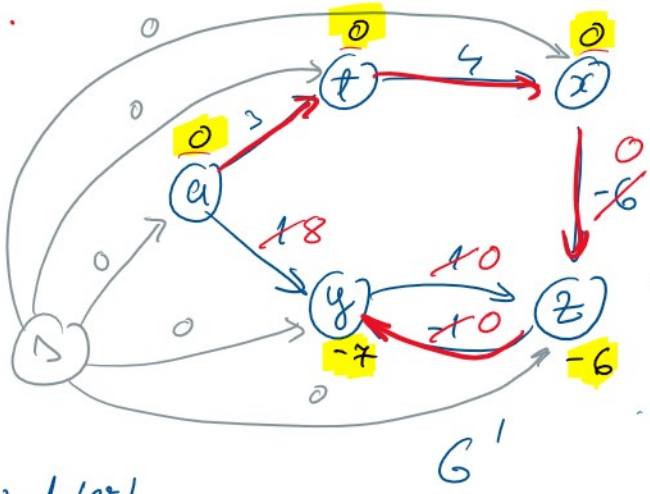
$\sigma_s(a,y) = 1$

$\boxed{\sigma_{BF}(a,y) = 0}$

s d_{ix} $n \times n$

$d_{ay} = \hat{\sigma}(a,y) + h(a) + h(y) = 1 - 0 - 7 = -6$





G'

$\hat{w}(u,v) = w(u,v) + h(u) - h(v)$

$\hat{w}(a,t) = w(a,t) + h(a) - h(t) = 3 + 0 - 0 = 3$

$\hat{w}(x,z) = w(x,z) + h(x) - h(z) = -6 + 0 - (-6) = 0$

$\hat{w}(z,y) = w(z,y) + h(z) - h(y) = -1 - 6 + 7 = 0$

$\hat{w}(y,z) = w(y,z) + h(y) - h(z) = 1 - 7 + 6 = 0$

$\hat{w}(a,y) = w(a,y) + h(a) - h(y) = 1 + 0 + 7 = 8$