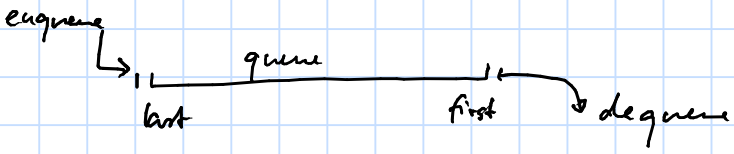
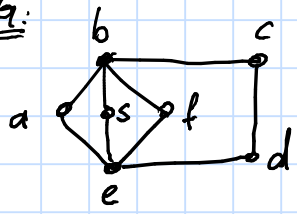
BFS

pseudocode
see lecture slide.

QUEUE (dt. Warteschlange) ≙ FIFO



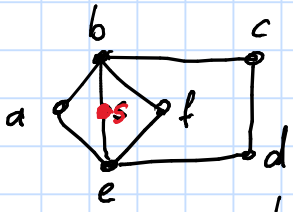
Exmpl: G:



(1.) s a b c d e f
∞ ∞ ∞ ∞ ∞ ∞ ∞ δ(u)

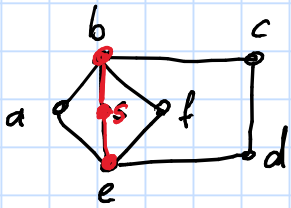
(2.) Q = (s)

s a b c d e f
0 ∞ ∞ ∞ ∞ ∞ ∞ δ(u)



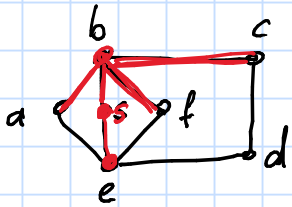
(3.) u = s
Q = ∅
N(s) = {b, e}
pred(b) = s
pred(e) = s
Q = (e b)

s a b c d e f
0 ∞ 1 ∞ ∞ 1 ∞ δ(u)



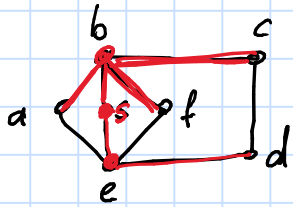
(4.) u = b
Q = (e)
N(b) = {s, a, f, c}
δ(s) ≠ ∞
δ(a) = δ(f) = δ(c) = ∞ ← Taze kun.
pred(a) = pred(f) = pred(c) = b
δ(a) = δ(f) = δ(c) = δ(b) + 1 = 2
Q = (a, f, c, e)

s a b c d e f
0 2 1 2 ∞ 1 2 δ(u)



(5.) u = e
Q = (a, f, c)
N(e) = {a, f, s, d}
δ(a) ≠ ∞, δ(f) ≠ ∞, δ(s) ≠ ∞
δ(d) = ∞
↳ δ(d) = 2 + 1 = 3
pred(d) = e
Q = (d a f c)

s a b c d e f
0 2 1 2 3 1 2 δ(u)



(6.) Q = (a f) ✓
(7.) Q = (a) ✓
(8.) Q = ∅ out: δ, pred.