Kürzeste Pfade

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Algorithm FLOYD-WARSHALL(W)
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1: for i = 1 to n do
2: for j = 1 to n do
3: d_{i,j} := w_{i,j}
4: end for
5: end for
6: for i = 1 to n do
7: for j = 1 to n do
8: for k = 1 to n do
9: d_{j,k} := \min(d_{j,k}, d = 1)
10: if d_{j,j} < 0 then
11: if d_{j,j} < 0 then
12: end for
13: end for
15: end for
16: return (d_{i,j})_{1 \le i,j \le n}
```

 $\begin{aligned} d_{j,k} &:= \min(d_{j,k}, d_{j,i} + d_{i,k}) \\ \textbf{end for} \\ &\textbf{if } d_{j,j} < 0 \textbf{ then} \\ & \text{STOP} \quad \% \textbf{ Zyklen mit negativen Gewicht!} \\ \textbf{end if} \end{aligned}$

Laufzeit: $\Theta(|V|^3)$.