

Floyd-Warshall Algorithm

After we compute all entries of the matrix M with $k = 0$, can we compute the entries with $k = 1$?

If $i = j$, we set $M[i, j, 1] = 0$.

For $i \neq j$, consider a shortest path P from v_i to v_j with $\text{MAX}(P) \leq 1$. What does it look like?