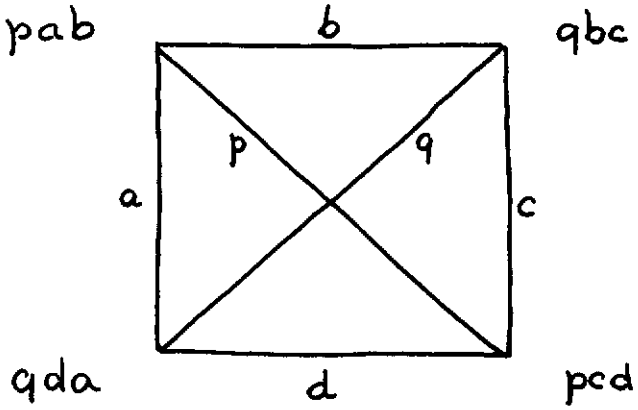
EWD754.html

An error in EWD744.

When Scholten and I tried this morning to prove the correctness of the assertion made in the Note on page EWD744-2, we encountered difficulties, which were only resolved by finding a counterexample.



Obviously the six edges p,q,a,b,c, and d can not be ordered in a way with which pab, qbc, pcd, and qda are compatible. It is also easily verified that the four-process system, in which the processes claim three resources in the given orders, is deadlock-free. All by itself the cyclic path (a,b,c,d) could cause deadlock, but the shared resources p and q — even one of them would have sufficed — prevent the deadlock. The counterexample is symmetric in the four processes!

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