

One-Pager: Chord (Stoica *et al.*, 2001)

Due at start of lecture, 26th January, 2009

In a typed essay of 200–500 words, concisely and clearly answer the following question:

In Section 6.1, the authors mention that Chord can perform lookups either in *iterative* or *recursive* style.

Assume that no packets are dropped by the Internet, so that no retransmissions of messages by hosts are required. Would you expect iterative lookups to be lower-latency than recursive ones, recursive ones to be lower-latency than iterative ones, or would you expect these two lookup styles' latencies to be roughly equal, and why? Justify your answer by counting the number of one-way hops taken in each style of lookup, so that you can compute the relative difference in latency between the two lookup styles (*e.g.*, “style A should take X times longer than style B”).