



UCL Department of Computer Science
CS Mo38/GZo6: Mobile and Cloud Computing
2010–2011, Term 2
Kyle Jamieson and Brad Karp

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

Due: Start of lecture, 26th January 2011

Instructions: in your own words, answer the following question as succinctly as possible (in 200–500 words, but shorter answers within this range are encouraged). Quoting figures or text from the assigned reading or from any other source is specifically prohibited.

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”).