UCL Department of Computer Science
CS M038/GZ06: Mobile and Cloud Computing
Spring 2014
Kyle Jamieson and Brad Karp

One-pager: Chord (Stoica et al., 2001) **Due: Start of lecture, 12th February 2014**

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").