UCL Department of Computer Science
CS M038/GZ06: Mobile and Cloud Computing
Spring 2014
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One-pager: An Analysis of Facebook Photo Caching (Huang *et al.*, 2013)   Due: Start of lecture, 21st March 2014

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

Imagine you are the engineer in charge of Facebook's photo caching architecture: you are weighing the pros and cons of changing the cache replacement algorithm in use at edge caches. On the basis of Table 4 and Figure 10(a), your colleague Louis Reasoner suggests that you switch to a Least Frequently Used (LFU) caching policy, as it is simple to implement and raises object hit ratios somewhat.

Is Louis' suggestion a good idea? If so, explain why; if not, explain why not, make a counterproposal based on the data, and justify your counterproposal.

Hint: Think about the role the edge cache plays in Facebook's caching hierarchy.