Computer Science 4411b/9538b, Assignment 1

Due Feb. 6, 2017

This assignment is to be submitted through OWL. It can be in pdf or msword.

The purpose of this assignment is to gain some familiarity with the research literature in Computer Science, in the Database Management area.

There are 5 papers listed at the bottom, 4 fairly recent research papers and one “classic” paper, accessible from this assignment on the course web site. You are to pick one of these papers and write a 4 to 6 page review.

This review should consist of:

* a summary of the ideas reported in the paper, in your own words, not the words of the authors
* three strengths and three weaknesses of the paper
* some opinion of your own concerning the paper. These personal comments can include whether or not you would recommend this to your colleagues to read, or whether or not you think the ideas or results are important. Your comments could be whether or not you think the system or ideas reported on will ever become commercially available or part of a commercially available system (if they are not already), whether or not you think such a system will be successful, etc.
* a reference to the paper you are reviewing in a References section at the end of your review.

The 4 to 6 pages should be in 11 or 12 point type, have reasonable margins and not more than double spacing. Roughly 10 percent of the marks will be for spelling and grammar.

If you need to read additional material in order to clarify a point or figure out the basis of some of the ideas in the paper, then do so and include proper citations to these additional readings, as well as to the paper you are reviewing, in a References section at the end.  Do your citations to the paper being reviewed and any other papers you read in the style of a scientific paper, i.e. in the style of the paper you are reading. Note that the references below are sorted by the first author’s surname. This is one style. The IEEE style is to order the references by the order in which they are cited in the paper. Either style is acceptable. The IEEE style, is described in the IEEE Information for authors, available at: [www.ieee.org/documents/style\_manual.pdf](http://www.ieee.org/documents/style_manual.pdf). It has a good summary of what should go into each entry in the references section.

No group work is allowed on this assignment - your review should be the result of individual effort. Your writing will be analyzed by Turnitin, for originality.  Copying, word-for-word, sentences from the paper is considered plagiarism and will be reported to your Dean as an academic offense.

The papers to choose from are listed below. The papers are posted on the OWL site for download.

1. Guoqiang Jerry Chen, Janet L. Wiener, Shridhar Iyer, Anshul Jaiswal, Ran Lei, Nikhil Simha, Wei Wang, Kevin Wilfong, Tim Williamson, Serhat Yilmaz: Realtime Data Processing at Facebook. SIGMOD Conference 2016: 1087-1098
2. E. F. Codd: A Relational Model of Data for Large Shared Data Banks. Communications of ACM 13(6): 377-387 (1970)
3. Viktor Leis, Andrey Gubichev, Atanas Mirchev, Peter A. Boncz, Alfons Kemper, Thomas Neumann: How Good Are Query Optimizers, Really? PVLDB 9(3): 204-215 (2015)
4. Zhen Hua Liu, Beda Christoph Hammerschmidt, Doug McMahon, Ying Liu, Hui Joe Chang: Closing the functional and Performance Gap between SQL and NoSQL. SIGMOD Conference 2016: 227-238
5. Shadi A. Noghabi, Sriram Subramanian, Priyesh Narayanan, Sivabalan Narayanan, Gopalakrishna Holla, Mammad Zadeh, Tianwei Li, Indranil Gupta, Roy H. Campbell: Ambry: LinkedIn's Scalable Geo-Distributed Object Store. SIGMOD Conference 2016: 253-265

When you upload your review to OWL, please give it the title: “Review of Paper 1”, etc. and make it clear at the top which paper you are reviewing.