

**BDCC 18/19**  
**Worksheet #1**  
**Parallel Databases x Map-Reduce**  
**April 24th, 2019**

**Based on the following papers:**

- [Pavlo et al., SIGMOD 2009] [A Comparison of Approaches to Large-Scale Data Analysis](#)
- [Dean and Ghemawat, CACM 2010] [MapReduce: A Flexible Data Processing Tool](#)
- [Stonebraker et al., 2010] [mapReduce and Parallel DBMSs: friends or foes?](#)

**Answer the following questions:**

- 1) Does it make sense comparing map-reduce approaches with parallel and distributed database systems? Explain your answer.
- 2) What are the advantages of map-reduce over parallel and distributed databases?
- 3) What are the advantages of parallel and distributed databases over map-reduce?
- 4) What kind of operations are allowed in parallel and distributed databases that are not available “out-of-the-box” in map-reduce?
- 5) What kind of operations are allowed in map-reduce that are not available “out-of-the-box” in map-reduce?
- 6) Are there alternatives to Google’s mapreduce? How do they perform?
- 7) Search the web for parallel and distributed databases. In which situations would be interesting to use such solutions instead of using google’s mapreduce solution?