Assignment: 03 - Comparisons

Bucket: 1 - Homework

Due Date: 2016-02-06

Grading Hidden? no

Teams? yes

Description:

Time to evaluate performance. Conduct benchmarks that compare the cost of computing (A) mean and (B) median price, and (C) fast median for (i) singe threaded Java, (ii) multi-threaded Java, (iii) pseudo-distributed MR, and (iv) distributed MR.

Make sure to include author information for each code element.

- Group assignment, two students.
- Each version of the algorithm should only output "m C v" triples where m identifies the month, C is an airline active in 2015 (among the top 10 in numbers of flights) and v is either the median or mean.
- Devise your own approach to speed up computation of the median, this may include approximation techniques. If you choose to approximate, make sure to measure accuracy.
- Create a benchmarking harness that will automatically run all 12 configurations for different input sizes and generate graphs of the performance. The harness should output timings in a CSV file and generate a PDF using R.
- Use the data sets of A2, if you need larger data, duplicate some files.
- Produce a report that describes your conclusions.
- Submit source code (java, shell scripts, R, etc), PDFs and text files.
- No .class files, .jar files, word docs, etc.
- Do not submit input data.

Bonus work: Add a Map-Reduce implementation written in Scala to the comparison. If you get this working, your grades for up to three of Quiz 1, Quiz 2, and A0, A0 review, and A1 review will be set to full credit.

Due date: The date shown above at 10:45pm. Bottlenose will accept submissions until midnight, but if the server is overloaded at 11:55 and you miss the deadline, it's late.

Extension: Two days. There will be no extension for the next assignment.

Assignment Download: ()

Your Submissions

Team Members: Yogiraj Awati, Sarita Joshi, Ashish Kalbhor, Sharmodeep Sarkar

New Team Submission (/assignments/30/submissions/new)

Date	Status	Automatic	Teacher	Score	Link
2016-02-06 23:55:57 -0500		ø / 100	70.0 / 100	70.0 / 100	View (/submissions/2994)

Course Page (http://www.ccs.neu.edu/home/ntuck/courses/2016/01/cs6240/index.html) | Piazza (https://piazza.com/class/ij4yepvnz8v3zf)

ajax-status: none