PA195: NoSQL Databases
Course Organization

Fall 2023

Overview

- Lectures
- Seminars
- Team project

- Completion – colloquium
  - attendance at seminars
  - presentation of results achieved in the team project

Lectures

- Weekly lectures
  - Slides will be available in IS.
  - (An invited talk by an expert from industry.)
  - Some lectures will be dedicated to project consultations.

Seminars

- Bi-weekly in a computer room
- You can use your own laptop
  - prerequisites are to install certain SW (Java SDK & Idea, …)
- Five seminars for each group
- Last weeks of seminars will be devoted to the project presentations

Group Projects

- There are dozens of “NoSQL” technologies
  - or hundreds, but dozens are widely used
- During the course:
  - Detailed description of 5-7 technologies, namely **HDFS, Hadoop MapReduce, Redis (Riak), Infinispan, MongoDB, Cassandra, Neo4j**
  - Objectives of the projects:
    - let the students explore other NoSQL database systems,
    - actually, touch those systems, and
    - present the findings to the others and contrast with lectures.

Projects: Assignment Details (1)

- You will form a team of 4 students
  - During the first weeks of the semester
  - A list of enrolled students is available in the study materials

- Each team will pick a NoSQL technology
  - or a Big Data processing technology,
  - not discussed in the course in detail,
  - approved by the teacher (send me an email),
    - so, it will be different from ones picked by the other groups (FCFS).
  - Inspiration: http://db-engines.com/en/ranking/.

Projects: Assignment Details (2)

- The project consists of:
  1. Study the functionality of the system
     - objectives, key features, drawbacks, etc.
     - during the semester, we will see what features a system can have
     - contrast the findings with the info given in lectures.
  2. Download, run and play with the system
     - practical work with the system (test on some data, queries, …) and
     - report the experience.
  3. Prepare presentation about the system
     - inputs from the above,
     - presentation for 20 minutes,
     - hand in a ZIP archive with presentation slides, sources, experiment results,...

Course Completion

- There are two requirements to pass the course:
  - Attendance at the seminars
    - only 1 absence is tolerated,
    - if necessary, student can attend another bi-week seminar with the same topic.
    - Seminar schedule in an interactive syllabus in IS
  - Projects
    - successful fulfillment of the student's responsibility within the team
    - presentation of the project
    - during the presentation, the team will say aloud who did what.
  - Participation in min. two presentation dates (sessions).

Spotted a mistake? Report it, please.

Any questions?