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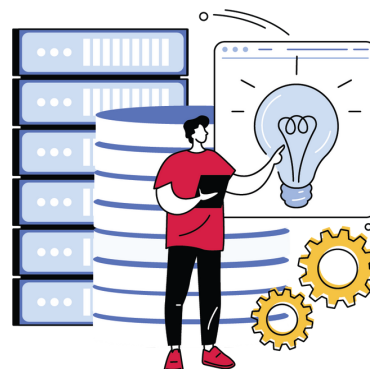
JOINT CREATIVE CLASSROOM (JCC)

ADVANCED DATABASE SYSTEMS

Number of ECTS: 3
Synchronous workload: 35
Asynchronous workload: 51
Dates: 10/2022-02/2023
Language: English
Number of participants: 30

Goal of JCC:

The aim of this course is to acquaint students with the theory and technology needed to implement advanced database systems including relational, temporal, deductive, object oriented, active and graph databases. In addition, various indexing, partitioning, optimization, and denormalization techniques will be covered. Students will learn about new trends and open questions in the field of database theory.

Learning outcomes:

• conduct database analytics through practical work in SQL
• use basic concepts of data flow systems
• implement various database optimization techniques
• implement database indexing and partitioning techniques
• apply different optimization techniques in complex database applications
• manage temporal data
• analyze conflicts in active databases
• implement a data flow application using the default data flow system
• analyze databases using a specific data model
• implement an active database using the default database management system
• design and implement a complex database application

Learning outcomes assessment:

Forming teams for the implementation of the student's projects dealing with advanced database systems. Students will need to implement a complex example database, generate adequate data, implement a contextual application, present their work and write a report.

Teachers:

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Prerequisites for the JCC:

Students should have completed the elementary database course

Number and type of assesment:

Students will work on students' projects and take the final exam (test)