WP-Modul Transaction Management

Lehrende/r	Prof. Dr. Justus Klingemann
Modulumfang	2 SWS lecture, 2 SWS exercise
Termine	to be announced
Prüfungsvorleistung	none
Prüfungsleistung	written examination, 90 minutes
Beginn der Lehr-veranstaltungen	to be announced
Weitere Informationen	none

WICHTIG: Alle Vorleistungen und Prüfungsleistungen müssen fristgerecht im HIS-Portal angemeldet werden!

Kurzvorstellung der Modulinhalte

In this module we will discuss how the deployment of transaction systems can increase the robustness of a system without adding additional complexity to the application development. We will learn algorithms to handle problems resulting from concurrent access to data and errors resulting from system failures. This includes:

- *What is the concept of a transaction?*

- *The idea of concurrency control*

- *What is serialization and what kind of executions do we consider as correct?*

- *Concurrency control based on locks and optimistic concurrency control*

- *How can the management of different versions be used to increase concurrency?*

- *What is the goal of recovery?*

- *What is necessary to allow recovery?*

- *How can we perform recovery and how can we optimize recovery algorithms?*