CMPT 740 - G100 Database Systems

Instructor(s): Tianzheng Wang

Calendar Objective/Description:
Introduction to advanced database system concepts, including query processing, transaction processing, distributed and heterogeneous databases, object-oriented and object-relational databases, data mining and data warehousing, spatial and multimedia systems and Internet information systems.

Instructor's Objectives:
Did you ever wonder how come Amazon and Alibaba are capable of handling so many online orders for Black Friday, Single's Day? Have you had an unlucky case where your bank charged you an overdraft fee while you think you have money? Are you frustrated when you see "service unavailable due to maintenance" on your favourite website? This is the course for you to know all about it.

CMPT 740 is a systems-oriented course on the design and implementation of relational database systems, the backbone of many today’s data-intensive applications, like e-commerce, banking, social-network, telecom, etc. This course provides an in-depth coverage of core topics in the making of relational database systems, topics includes data storage, indexing, query optimization and transaction processing.

Prerequisites:
None

Topics:
- Data storage, indexing
- Query processing
- Transaction processing
- Logging and crash recovery

Grading:
To be discussed in the first class.

Required Books:

Reference Books:
Transaction Processing: Concepts and Techniques, Jim Gray, Andreas Reuter, 9781558601901

Academic Honesty Statement:
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).