Purdue University
Computer Science Department
CS 448: Introduction to Database Systems
Prof: Bharat Bhargava

CS 448 – Homework #5 (3 points)

Due: 04/24/2018, before class

Reference: Fundamentals of Database Systems, Elmasri and Navathe, 6th or 7th Edition.

Answer all the questions in itemized fashion like the questions.

Question 1 (0.50 point)
Problem 22.1. (page 834 in 7th edition)
Or
Problem 23.1. (page 828 in 6th edition)

- Discuss the different types of transaction failures.
- What is meant by catastrophic failure.

Question 2 (0.50 point)
Problem 22.3. (page 834 in 7th edition)
Or
Problem 23.3. (page 828 in 6th edition)

- What is the system log used for?
- What are the typical kinds of entries in a system log?
- What are checkpoints and why are they important?
- What are transactions commit points, and why are they important?

Question 3 (0.50 point)
Problem 22.6. (page 834 in 7th edition)
Or
Problem 23.6. (page 828 in 6th edition)

What are UNDO-type and REDO-type log entries?

Question 4 (0.50 point)
Problem 23.1. (page 887 in 7th edition)
Or
Problem 25.1. (page 921 in 6th edition)

What are the main reasons for and potential advantages of distributed databases?

Question 5 (0.50 point)
Problem 23.5. (page 887 in 7th edition)
Or
Problem 25.5. (page 921 in 6th edition)

What are the main software modules of a DDBMS? Discuss the main functions of each of these modules in the context of the client/server architecture.

Question 6 (0.50 point)
Problem 30.30. (page 1160 in 7th edition)
Or
Problem 24.30. (page 873 in 6th edition)

How can privacy of data be preserved in database?