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Department of Computer Science & Engineering
Subject: Advanced DBMS (MTCSEPC201)

Assignment Questions

Assignment No.1

1. Apply normalization on the following relation till 3NF:
R(A, B, C, D, E) with FDs: $A \rightarrow B$, $B \rightarrow C$, $AC \rightarrow D$, $D \rightarrow E$
2. Given a relation, decompose it into BCNF.
3. Compare 1NF, 2NF, 3NF with suitable examples.
4. Identify the normal form of a given relation and justify your reasoning.
5. Evaluate the key features and challenges of next-generation database systems

Assignment No.2

1. Apply guidelines to tune queries involving joins and selections.
2. Categorize the various architectures of parallel databases. Also illustrate the I/O parallelism in parallel query.
3. Design a transparency model for a given distributed environment.
4. Analyze the major issues faced by Object-Oriented Database Management Systems (OODBMSs) in practical implementation.
5. With a suitable example explain any two distributed deadlock detection or prevention techniques, and discuss how they help in maintaining system consistency.

Vision of department: To lead in technical, quality education, innovation, research for development of sustainable & inclusive technology for the society.

Mission of department: 1. To create ambience of academic excellence through state of art infrastructure. 2. To create student-centric pedagogy that will lead to employability. 3. To create a software engineering professional with knowledge of multidisciplinary fields, can provide innovative products & service to society. 4. To train and motivate the students for lifelong learning, employability, and entrepreneurship.