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| 1 | With reference to relational database explain the following terms   1. Relation 2. Tuple 3. Relation instance 4. Domain of attribute |
| 2 | Define and Differentiate between Super Key, Candidate Key and Primary Key. Give appropriate example |
| 3 | List the basic operators of Relational Algebra. Explain any 3 operators with respective syntax and example. |
| 4 | Draw the ER Diagram for Bank Management system. Write detail description. |
| 5 | Consider the following schema and set of functional dependencies:  Class (course\_id, title, dept\_name, credits, sec\_id, semester, year, building, room\_no, capacity, time slot\_id)  F={  course\_id -> title, dept\_name, credits,  building->room no capacity  course\_id, sec\_id, semester, year -> building, room\_no, time\_slot\_id  }  Assume the above relation is in 1NF. Check the current highest normal form of the given relation. Decompose the schema to BCNF. |
| 6 | Compare BCNF & 3NF |
| 7 | Explain the rules for reduction of following notation in ERD, with appropriate examples   1. Weak Entity set 2. Multivalued attribute in Strong Entity set 3. Many to One relationship set. |
| 8 | For given relation R(A,B,C,G,H,I)  Functional dependencies={ A->B, A->C, CG->H, CH->I,B->H}   1. Find out closure of A,B,CG 2. Find out candidate key 3. Find out closure of functional dependencies 4. Find out canonical cover for given set |
| 9 | Explain 3NF with appropriate example. |
| 10 | Explain 1NF, 2NF With Example. |
| 11 | What is SQL? Explain DDL and DML commands. Create student table and apply DDL and DML Commands. |
| 12 | Assume the Relations given below.  Student(Enrno, name, courseld, emailId, cellno)  Course(courseld, course\_nm, duration)  Write SQL statements for following:  a. Find out list of students who have enrolled in "computer" course.  b. List name of all courses with their duration.  c. list names of all students start with "a".  d. List email Id and cell no of mechanical engineering students |