

# CHAPTER - 3

## RELATIONAL MODEL

Subject : DBMS

ASSIGNMENT NO – 03

Chapter - 3

1. Define Key? Explain types of Key with examples?
2. Difference Between primary key and foreign key with suitable example.
3. Explain union and difference in Relational algebra with suitable example.
4. Write short notes on : Entity, attribute, superkey, tuple, Domain, Cardinality.
5. Explain select and project operations in Relational Algebra.
6. Explain Unary and Binary relations.
7. Explain the Natural join and Cartesian product with example.

8. Consider relational database :

Supplier (Supno, sname, supaddress)

Item (Itemno, Iname, stock)

Supp-Item (Supno, Itemno, rate)

Write relational algebraic expression for the following :

- (a) List all suppliers from 'Varanasi' city who supplies PISTON.
- (b) Display all suppliers supply PISTON RINGS
- (c) Change supplier names to upper case
- (d) List all suppliers supplying DOOR Lock from 'Jaipur' city.

9. Consider relational database :

Customer (cust-no, cust-name, address, city)

Loan (loan-no, loan-amt, loan-date, cust-no)

Customer and loan are related with one to many relationships.

Write relational algebraic expression of the following :

- (i) Display customer with loan amount greater than 1,00,000.
- (ii) List names of customer who do not have loan at the bank.
- (iii) List loan details of customer name as “Mr. Dhumale”.
- (iv) List of the customer who have taken loan from the bank with amount more than 50,000 and city as ‘Pune’.

10. Consider the database and write relational algebraic expression

Patient Master (PatientNo. PatientName, Sex, Address City, Allergy, Chief Complaints)

- (i ) Display all patients whose Allergy is “Nimesulide”
- (ii ) Display all male patients from city Calcutta.
- (iii ) Update all patients whose sex is “M” with “Male”.
- (iv) List all patients whose chief complaint is “fever”.

\*\*\*\*\* **Best of Luck** \*\*\*\*\*