TASK-8

Normalizing DataBases using Foundamental dependeces:

Aim: To normalize the employee database up BCNF we decompose the schema using Functional dependencies to estimate Redundancy.

Initial Relation schema:

Employee (Employee, ID, name, dept, Job-title, manager, lo, Hire, Data salary).

Functional dependency:

* Employee - ID - Name, Dept, Job-title, manager-ID, hire-Date, salary)
* Department - manager ID
* manager - ID → name.

step by step normalization:

1DF (first normal form)

- no repeating groups (or) arrays in schema
- already in INF

2DF (Second Normal Form)

- Remove partial dependencies
- However, FDLF FDS suggest dependencies nont an primary key

Decompositions:

→ Employee (Employee - ID, Name, Dept-ID Job title, hire - Date salary)

- Department (Dept - D, manager - ID, name)

3NF (Third Normal form):

→ Eliminate transitivie dependency is D-manager-ID name.

(transitive via)

Department → manager-ID.

updated Tables:

Employee Employees, ID, name, department-ID, Job-title, Hire Date, salary).

department (Dept-ID, manager-ID).

manager (manage-ID, name)

BCNF:

→ every determinate must be a candidate key

→ all remaining FDS were determinants that ave candidate keys.

* employee_ID
* Department-ID
* manager-ID

no decomposition is needed

Find BCNF:

Employee (Employee_ID, name, Dept-ID, Job-title, hire date salary)

Department (Dept-ID, manager----ID)

manager (manager-ID, name)

VELTECH	
EX No.	8
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	15
SIGN WITH DATE	8/10/24

Result: Thus, the database was normalized to BCNF by decomposing it into employee department & manager tables based on Functional dependency.