Date: 30/9/25

Task 8: Normalizing databases using functional dependancies upto BCNF

Aim: To Implement the databases using functional dependcies upto BCNF

For Employee Database:

1. Employee attributes: Emp-ID, Name, Dept, Job-Title, Manager-ID, Hire-Date, Salary.
2. Define relational schema: Employee (Emp-ID, Name, Dept
3. Determine functional dependencies (FDs)
   - employee-ID → Name, Deptment, Job-Title Manager ID, Hire-Date Salary).

Step 2: Convert to 1NF

1. Eliminate the repeating groups
2. Move non-key attributes to seperate tables

Create Department table

Step 3: Convert to 2NF

1. Ensure each non-key attribute depends on the entire primary key.
2. Move non-key attributes to seperate tables if they depend only part on primary key

Step 4: Convert to 3NF
1. Ensure there are no transitive dependencies
2. Move non-key attributes to separate tables.

Step 5: Convert to BCNF
1. Ensure every determinant is a candidate key.
2. Overlapping candidate keys.
3. Decompose relations.

Using griffith tool
* Input the relational schema and functional dependancies
* Griffith tool generates a dependency graph.
* Analyze the graph
* Verify the schema

Steps:
1. Create new project in Griffith.
2. Define the relational schema
3. Run the dependancy graph.
4. Apply transformation

Normalized schema

1. Employee (Emp-ID, Name, Dept-ID, Job_Title, Hire_Date, Salary).
2. Dept (Dept-ID, Manager-ID).
3. Manager (Manager-ID, Names.

VEL TECH	
EX NO.	8
PERFORMANCE (5)	5
RESULT AND ANALYS'S (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	15
SIGN WITH DATE	30/9/24

Result:

Thus the Implementation of Normalising dependences database ~~PL/SQL~~ function and ~~Loop~~s on database management employee is successfully completed.