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a)

The above database is a relational database hence requires SQL.

-It allows changes to a database structure to be implemented easily without impacting the rest of the database

-The data base has tables that can only exist due to the presence of one other entity one serving a different role to the other

1. ER Diagram

Managed by

1 1

Has

1 N

Employees

Company

1 N 1

Has

Has

N

Has

M

Department

N

Children

1. CREATE DATABASE company2;
2. CREATE TABLE Employees(
3. ssn INT NOT NULL PRIMARY KEY ,
4. employee\_name CHAR(100),
5. phone\_number INTEGER,
6. d\_id INT,
7. no\_of\_children INT,
8. salary INT
9. );
11. CREATE TABLE Department (
12. dno INT  NOT NULL PRIMARY KEY,
13. dname CHAR(100),
14. budget INT,
15. manager\_id INT
16. );
18. CREATE TABLE Children(
19. cid INTEGER NOT NULL PRIMARY KEY,
20. parent\_id INT,
21. yob INT,
22. names CHAR (100)
23. );
24. ALTER TABLE Children ADD FOREIGN KEY(parent\_id) REFERENCES Employees(ssn) ON DELETE CASCADE;
25. ALTER TABLE Department ADD FOREIGN KEY(manager\_id) REFERENCES Employees(ssn) ON DELETE SET NULL;
26. ALTER TABLE Employees ADD FOREIGN KEY(d\_id) REFERENCES Department(dno) ON DELETE SET NULL;
28. INSERT INTO Employees-- (ssn ,employee\_name, phone\_number, d\_id, no\_of\_children, salary)
29. VALUES (100, 'Tom Erichsen', 0786543255,01, 4, 20000000),
30. (102, 'Miranda Muwanguzi', 0726539257, 02, 1, 30000000),
31. (104, 'Leticia Adams', 0705543284,03,5, 90000000),
32. (106, 'Allan Nyiringe', 0754113295,04,4, 75000000),
33. (105, 'Daphine Kamusiime', 0776543151,05,8, 80000000);
34. INSERT INTO Department
35. VALUES (01, 'Photography', 20000000,100),
36. (02, 'Public relations', 30000000,102),
37. (03, 'Marketing', 90000000,104),
38. (04, 'Catering',  75000000,106),
39. (05, 'Communications',800000000,105);
40. INSERT INTO Children
41. VALUES (11, 100,2000,'joey'),
42. (12,102, 2001,'kim'),
43. (13, 104, 2002,'farook'),
44. (14,106, 2003, 'angel'),
45. (15,105, ,2004, 'mica');