1. CREATE A TABLE CALLED EMP WITH BELOW PROPERTIES?

CREATE TABLE EMP (

emp\_id NUMBER PRIMARY KEY,

first\_name VARCHAR(255) NOT NULL,

last\_name VARCHAR(255),

email VARCHAR(255) NOT NULL,

phone\_number VARCHAR(20) NOT NULL,

dept\_id NUMBER,

address\_id NUMBER,

blood\_group VARCHAR(10),

dob DATE,

doj DATE,

dot DATE,

created\_ts TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

reference VARCHAR(255),

role VARCHAR(100),

salary FLOAT,

band NUMBER,

reports\_to NUMBER,

CONSTRAINT fk\_emp\_dept FOREIGN KEY (dept\_id) REFERENCES DEPARTMENT(department\_id),

CONSTRAINT fk\_emp\_address FOREIGN KEY (address\_id) REFERENCES ADDRESS(add\_id)

);

1. CREATE A TABLE CALLED ADDRESS With below properties .

CREATE TABLE ADDRESS (

add\_id NUMBER PRIMARY KEY,

country VARCHAR(100),

state VARCHAR(100),

city VARCHAR(100),

street VARCHAR(255),

zipcode NUMBER,

pre\_known\_add JSON,

created\_ts TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

last\_updated\_ts TIMESTAMP DEFAULT CURRENT\_TIMESTAMP ON UPDATE CURRENT\_TIMESTAMP

);

1. CREATE A TABLE CALLED DEPARTMENT With below properties.

CREATE TABLE DEPARTMENT (

department\_id NUMBER PRIMARY KEY,

department\_name VARCHAR(255),

department\_code CHAR(4) NOT NULL,

address\_id NUMBER,

dept\_head\_id NUMBER NOT NULL,

CONSTRAINT fk\_department\_address FOREIGN KEY (address\_id) REFERENCES ADDRESS(add\_id)

);

1. Insert valid data into ADDRESS Table all the columns should be populated?

INSERT INTO ADDRESS (add\_id, country, state, city, street, zipcode, pre\_known\_add, created\_ts, last\_updated\_ts)

VALUES

(1, 'USA', 'California', 'San Francisco', '123 Market St', 94105,

'{"landmark": "Near Union Square", "apartment": "Suite 500"}',

CURRENT\_TIMESTAMP, CURRENT\_TIMESTAMP),

(2, 'USA', 'New York', 'New York City', '456 Madison Ave', 10022,

'{"landmark": "Opposite Central Park", "apartment": "Floor 12"}',

CURRENT\_TIMESTAMP, CURRENT\_TIMESTAMP),

(3, 'Canada', 'Ontario', 'Toronto', '789 Bay St', M5G2C8,

'{"landmark": "Near Eaton Centre", "building": "Tower A"}',

CURRENT\_TIMESTAMP, CURRENT\_TIMESTAMP),

(4, 'UK', 'England', 'London', '10 Downing St', SW1A2AA,

'{"landmark": "Near Westminster", "house": "No. 10"}',

CURRENT\_TIMESTAMP, CURRENT\_TIMESTAMP);

1. Insert data into DEPARTMENT Table all the columns should be populated?

INSERT INTO DEPARTMENT (department\_id, department\_name, department\_code, address\_id, dept\_head\_id)

VALUES

(1, 'Engineering', 'ENG1', 1, 101),

(2, 'Finance', 'FIN2', 2, 102),

(3, 'Human Resources', 'HR03', 3, 103),

(4, 'Marketing', 'MKT4', 4, 104);

1. Insert data into EMP Table all the columns should be populated ?

INSERT INTO EMP (emp\_id, first\_name, last\_name, email, phone\_number, dept\_id, address\_id, blood\_group, dob, doj, dot, created\_ts, reference, role, salary, band, reports\_to)

VALUES

(1001, 'John', 'Doe', 'john.doe@email.com', '123-456-7890', 1, 1, 'O+', '1990-05-15', '2020-06-10', NULL, CURRENT\_TIMESTAMP, 'Referral', 'Software Engineer', 85000, 3, 101),

(1002, 'Jane', 'Smith', 'jane.smith@email.com', '987-654-3210', 2, 2, 'A-', '1988-07-22', '2019-08-15', NULL, CURRENT\_TIMESTAMP, 'LinkedIn', 'Financial Analyst', 78000, 3, 102),

(1003, 'Robert', 'Brown', 'robert.brown@email.com', '456-789-0123', 3, 3, 'B+', '1992-02-10', '2021-01-05', NULL, CURRENT\_TIMESTAMP, 'Company Transfer', 'HR Manager', 92000, 4, 103),

(1004, 'Emily', 'Davis', 'emily.davis@email.com', '321-654-0987', 4, 4, 'AB-', '1995-10-30', '2022-03-20', NULL, CURRENT\_TIMESTAMP, 'Campus Hire', 'Marketing Specialist', 72000, 2, 104);

1. Update data in EMP , ADDRESS & DEPARTMENT update example for each table ?

Update ADDRESS Table (Updating city)

sql

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UPDATE ADDRESS

SET city = 'Los Angeles'

WHERE add\_id = 1;

Updates the city from San Francisco to Los Angeles for add\_id = 1.

Update DEPARTMENT Table (Updating department\_name)

sql

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UPDATE DEPARTMENT

SET department\_name = 'Operations'

WHERE department\_id = 3;

Changes 'Human Resources' to 'Operations' for department\_id = 3.

Update EMP Table (Updating salary)

sql

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UPDATE EMP

SET salary = salary + 5000

WHERE emp\_id = 1002;

Increases the salary of employee 1002 by $5000.

1. DELETE DATA EMP , ADDRESS & DEPARTMENT delete example for each table?

Delete a specific employee from EMP table

sql

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DELETE FROM EMP

WHERE emp\_id = 1001;

Deletes the employee with emp\_id = 1001.

Delete a specific address from ADDRESS table

sql

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DELETE FROM ADDRESS

WHERE add\_id = 2;

Deletes the address with add\_id = 2.

Delete a specific department from DEPARTMENT table

sql

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DELETE FROM DEPARTMENT

WHERE department\_id = 3;

Deletes the department with department\_id = 3.

1. DROP Column reports to from EMP Table?

ALTER TABLE EMP

DROP COLUMN reports\_to;

1. DROP column dept\_head\_id from DEPARTMENT Table?

ALTER TABLE DEPARTMENT

DROP COLUMN dept\_head\_id;

1. Change EMP.band column to STRING Type?

ALTER TABLE EMP

MODIFY COLUMN band STRING;

1. Find out EMP Age by using EMP.dob column?

SELECT

EMP\_ID,

dob,

TIMESTAMPDIFF(YEAR, dob, CURRENT\_DATE) AS age

FROM

EMP;

1. Print todays date?

SELECT CURRENT\_DATE AS today\_date;

1. Find out EMP experience with this company by using EMP.doj column?

SELECT

EMP\_ID,

doj,

TIMESTAMPDIFF(YEAR, doj, CURRENT\_DATE) AS experience\_years,

TIMESTAMPDIFF(MONTH, doj, CURRENT\_DATE) % 12 AS experience\_months

FROM

EMP;

1. Add column EMP.comment\_col to EMP table?

ALTER TABLE EMP

ADD COLUMN comment\_col VARCHAR(255);

1. Add column DEPARTMENT.comment\_col to DEPARTMENT table?

ALTER TABLE DEPARTMENT

ADD COLUMN comment\_col VARCHAR(255);

1. Add column ADDRESS.comment\_col to ADDRESS table?

ALTER TABLE ADDRESS

ADD COLUMN comment\_col VARCHAR(255);

1. Truncate all the tables?

TRUNCATE TABLE EMP;

TRUNCATE TABLE DEPARTMENT;

TRUNCATE TABLE ADDRESS;

1. Create a view on top of EMP , DEPARTMENT & ADDRESS Tables?

CREATE VIEW EMP\_DEPT\_ADDRESS\_VIEW AS

SELECT

EMP.emp\_id,

CASE

WHEN EMP.last\_name IS NOT NULL THEN CONCAT(EMP.first\_name, ' ', EMP.last\_name)

ELSE EMP.first\_name

END AS name,

CONCAT(ADDRESS.street, ', ', ADDRESS.city, ', ', ADDRESS.state, ', ', ADDRESS.country, ', ', ADDRESS.zipcode) AS address,

DEPARTMENT.department\_name AS dept\_name,

EMP.salary

FROM

EMP

JOIN

DEPARTMENT ON EMP.department\_id = DEPARTMENT.department\_id

JOIN

ADDRESS ON EMP.emp\_id = ADDRESS.emp\_id;

1. DROP All tables?

DROP TABLE IF EXISTS EMP;

DROP TABLE IF EXISTS DEPARTMENT;

DROP TABLE IF EXISTS ADDRESS;