

```
CREATE TABLE REGIONS (  
  
    region_id INT,  
  
    region_name VARCHAR2(50),  
  
    CONSTRAINT country_id_pk PRIMARY KEY (country_id)  
  
);
```

```
CREATE TABLE COUNTRIES (  
  
    country_id CHAR(2),  
  
    country_name VARCHAR(50),  
  
    region_id INT,  
  
    CONSTRAINT country_id_pk PRIMARY KEY (country_id),  
  
    CONSTRAINT region_id_in_countries FOREIGN KEY (region_id) REFERENCES REGIONS(region_id)  
  
);
```

```
CREATE TABLE LOCATIONS (  
  
    location_id INT,  
  
    street_address VARCHAR(100),  
  
    postal_code VARCHAR(20),  
  
    city VARCHAR(50),  
  
    state_province VARCHAR(50),  
  
    country_id CHAR(2),  
  
    CONSTRAINT location_id_pk PRIMARY KEY (location_id),  
  
    CONSTRAINT country_id_in_locations FOREIGN KEY (country_id) REFERENCES COUNTRIES(country_id)  
  
);
```

```
CREATE TABLE DEPARTMENTS (  
  
    department_id INT,
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```
department_name VARCHAR2(100),

manager_id INT,

location_id INT,

CONSTRAINT department_id_pk PRIMARY KEY (department_id),

CONSTRAINT location_id_in_departments FOREIGN KEY (location_id) REFERENCES LOCATIONS (location_id)

);
```

```
CREATE TABLE EMPLOYEES (

    employee_id INT,

    first_name VARCHAR2(50),

    last_name VARCHAR2(50) NOT NULL,

    email VARCHAR2(100) UNIQUE NOT NULL,

    phone_number VARCHAR2(20),

    hire_date DATE NOT NULL,

    job_id INT,

    salary NUMBER(10,2) NOT NULL,

    commission_pct NUMBER(5,2),

    manager_id INT,

    department_id INT,

    CONSTRAINT employee_id_pk PRIMARY KEY (employee_id),

    CONSTRAINT manager_id_in_employees FOREIGN KEY (manager_id) REFERENCES EMPLOYEES (employee_id),

    CONSTRAINT department_id_in_employees FOREIGN KEY (department_id) REFERENCES DEPARTMENTS (department_id)

);
```

```
ALTER TABLE DEPARTMENTS ADD CONSTRAINT manager_id_in_departements FOREIGN KEY (manager_id) REFERENCES EMPLOYEES (employee_id);
```

```
CREATE TABLE JOB_HISTORY (
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employee_id INT,  
  
start_date DATE NOT NULL,  
  
end_date DATE NOT NULL,  
  
job_id INT NOT NULL,  
  
department_id INT NOT NULL,  
  
CONSTRAINT employee_id_start_date_pk PRIMARY KEY (employee_id, start_date),  
  
CONSTRAINT department_id_in_job_history FOREIGN KEY (department_id) REFERENCES DEPARTMENTS (department_id),  
  
CONSTRAINT employee_id_in_job_history FOREIGN KEY (employee_id) REFERENCES EMPLOYEES (employee_id)  
  
);
```

```
CREATE TABLE JOBS (  
  
    job_id INT,  
  
    job_title VARCHAR2(255) NOT NULL,  
  
    min_salary NUMBER(10,2) NOT NULL,  
  
    max_salary NUMBER(10,2) NOT NULL,  
  
    CONSTRAINT job_id_pk PRIMARY KEY (job_id)  
  
);
```

```
ALTER TABLE JOB_HISTORY ADD CONSTRAINT job_id_in_job_history FOREIGN KEY (job_id) REFERENCES JOBS (job_id);
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```
ALTER TABLE EMPLOYEES ADD CONSTRAINT job_id_in_employees FOREIGN KEY (job_id) REFERENCES JOBS (job_id);
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ALTER TABLE JOBS ADD CONSTRAINT chk_salary CHECK (max_salary >= min_salary + 2000);
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INSERT INTO JOBS (job_id, job_title, min_salary, max_salary) VALUES (JOBS_SEQ.NEXTVAL, 'Developer', 3000, 7000);
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```
INSERT INTO JOBS (job_id, job_title, min_salary, max_salary) VALUES (JOBS_SEQ.NEXTVAL, 'Manager', 5000, 10000);
```

```
INSERT INTO JOBS (job_id, job_title, min_salary, max_salary) VALUES (JOBS_SEQ.NEXTVAL, 'Analyst', 4000, 9000);
```

```
INSERT INTO JOBS (job_id, job_title, min_salary, max_salary) VALUES (JOBS_SEQ.NEXTVAL, 'Support', 2500, 6000);
```

SELECT \* FROM JOBS;

INSERT INTO EMPLOYEES (employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, salary, commission\_pct, manager\_id, department\_id) VALUES  
(EMPLOYEES\_SEQ.NEXTVAL, 'Jan', 'Kowalski', 'jan.k@example.com', '123456789', SYSDATE, 1, 5000, NULL, NULL, NULL);

INSERT INTO EMPLOYEES (employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, salary, commission\_pct, manager\_id, department\_id) VALUES  
(EMPLOYEES\_SEQ.NEXTVAL, 'Anna', 'Nowak', 'anna.n@example.com', '987654321', SYSDATE, 2, 7000, 5, 3, NULL);

INSERT INTO EMPLOYEES (employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, salary, commission\_pct, manager\_id, department\_id) VALUES  
(EMPLOYEES\_SEQ.NEXTVAL, 'Piotr', 'Zieliński', 'piotr.z@example.com', '555666777', SYSDATE, 3, 6000, 3, 3, NULL);

INSERT INTO EMPLOYEES (employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, salary, commission\_pct, manager\_id, department\_id) VALUES  
(EMPLOYEES\_SEQ.NEXTVAL, 'Maria', 'Wiśniewska', 'maria.w@example.com', '444333222', SYSDATE, 4, 4500, NULL, 2, NULL);

SELECT \* FROM EMPLOYEES;

UPDATE EMPLOYEES SET manager\_id = 1 WHERE employee\_id IN (2, 3);

UPDATE JOBS SET min\_salary = min\_salary + 500, max\_salary = max\_salary + 500 WHERE LOWER(job\_title) LIKE '%b%' OR LOWER(job\_title) LIKE '%s%';

SELECT DISTINCT job\_id FROM EMPLOYEES WHERE job\_id IN (SELECT job\_id FROM jobs WHERE max\_salary > 9000);

UPDATE EMPLOYEES SET manager\_id = NULL WHERE manager\_id IN (SELECT employee\_id FROM employees WHERE job\_id IN (2, 3));

DELETE FROM EMPLOYEES WHERE job\_id IN (SELECT job\_id FROM JOBS WHERE max\_salary > 9000);

DELETE FROM JOBS WHERE max\_salary > 9000;

DROP TABLE EMPLOYEES CASCADE CONSTRAINTS;

FLASHBACK TABLE EMPLOYEES TO BEFORE DROP;