2. DATA MANIPULATION


```
    2  VALUES (103, 'Emily', 'Johnson', 'ejohnson@xyz.com', '987-456-7890', TO_DATE('2021-03-20', 'YYYY-MM-DD'), 'IT_PROG', 52000, 0.10, 100, 60);

1 row created.

SQL> INSERT INTO employees (employee_id, first_name, last_name, email, phone_number, hire_date, job_id, salary, commision_pct, manager_id, department_id)
    2  VALUES (104, 'Micheal', 'Brown', 'mbrown@xyz.com', '111-226-7890', TO_DATE('2018-04-22', 'YYYY-MM-DD'), 'AD-ASST', 30000, 0.05, 102, 10);

1 row created.

SQL> SELECT employee_id,first_name,last_name,salary FROM employees;

EMPLOYEE_ID FIRST_NAME          LAST_NAME                    SALARY
----------- ------------------- ------------------------ ----------
        101 John                Smith                         60000
        102 Jane                Doe                           45000
        103 Emily               Johnson                       52000
        104 Micheal             Brown                         30000

SQL> SELECT employee_id,first_name,last_name FROM employees WHERE manager_id = 100;

EMPLOYEE_ID FIRST_NAME          LAST_NAME
----------- ------------------- ------------------------
        101 John                Smith
        103 Emily               Johnson

SQL> SELECT employee_id,first_name,last_name FROM employees WHERE salary>= 48000;

EMPLOYEE_ID FIRST_NAME          LAST_NAME
----------- ------------------- ------------------------
        101 John                Smith
        103 Emily               Johnson

SQL> SELECT employee_id,first_name,last_name FROM employees WHERE last_name ='AUSTIN';

no rows selected

SQL> SELECT employee_id,first_name,last_name FROM employees WHERE department_id IN (60,70,80);

EMPLOYEE_ID FIRST_NAME          LAST_NAME
----------- ------------------- ------------------------
        101 John                Smith
        103 Emily               Johnson

SQL>
```



```
MANAGER_ID
----------
       100
       102
       101

SQL> CREATE TABLE departments(
    2  dept_id NUMBER(6) NOT NULL,
    3  dept_name VARCHAR2(20) NOT NULL,
    4  manager_id NUMBER(6),
    5  location_id NUMBER(4)
    6  );

Table created.

SQL> CREATE TABLE job_grades(
    2  grade_level VARCHAR2(2),
    3  lowest_sal NUMBER,
    4  highest_sal NUMBER
    5  );

Table created.

SQL> CREATE TABLE locations(
    2  location_id NUMBER(4) NOT NULL,
    3  st_addr VARCHAR2(40
    4
SQL> CREATE TABLE locations(
    2  location_id NUMBER(4) NOT NULL,
    3  st_addr VARCHAR2(40
    4  0
    5
SQL> CREATE TABLE locations(
    2  location_id NUMBER(4) NOT NULL,
    3  st_addr VARCHAR2(40),
    4  postal_code VARCHAR2(12),
    5  city VARCHAR2(30) NOT NULL,
    6  state_province VARCHAR2(25),
    7  country_id CHAR(2)
    8  );

Table created.

SQL>
```

2. DATA MANIPULATION


```
    4    manager_id NUMBER(6),
    5    location_id NUMBER(4)
    6  );

Table created.

SQL> CREATE TABLE job_grades(
    2    grade_level VARCHAR2(2),
    3    lowest_sal NUMBER,
    4    highest_sal NUMBER
    5  );

Table created.

SQL> CREATE TABLE locations(
    2    location_id NUMBER(4) NOT NULL,
    3    st_addr VARCHAR2(40
    4
SQL> CREATE TABLE locations(
    2    location_id NUMBER(4) NOT NULL,
    3    st_addr VARCHAR2(40
    4    0
    5
SQL> CREATE TABLE locations(
    2    location_id NUMBER(4) NOT NULL,
    3    st_addr VARCHAR2(40),
    4    postal_code VARCHAR2(12),
    5    city VARCHAR2(30) NOT NULL,
    6    state_province VARCHAR2(25),
    7    country_id CHAR(2)
    8  );

Table created.

SQL> CREATE TABLE emp(
    2    id NUMBER(7),
    3    last_name VARCHAR(25),
    4    first_name VARCHAR2(25),
    5    dept_id NUMBER(7)
    6  );

Table created.

SQL>
```



```
Table created.

SQL> CREATE TABLE job_grades(
    2    grade_level VARCHAR2(2),
    3    lowest_sal NUMBER,
    4    highest_sal NUMBER
    5  );

Table created.

SQL> CREATE TABLE locations(
    2    location_id NUMBER(4) NOT NULL,
    3    st_addr VARCHAR2(40
    4
SQL> CREATE TABLE locations(
    2    location_id NUMBER(4) NOT NULL,
    3    st_addr VARCHAR2(40
    4    0
    5
SQL> CREATE TABLE locations(
    2    location_id NUMBER(4) NOT NULL,
    3    st_addr VARCHAR2(40),
    4    postal_code VARCHAR2(12),
    5    city VARCHAR2(30) NOT NULL,
    6    state_province VARCHAR2(25),
    7    country_id CHAR(2)
    8  );

Table created.

SQL> CREATE TABLE emp(
    2    id NUMBER(7),
    3    last_name VARCHAR(25),
    4    first_name VARCHAR2(25),
    5    dept_id NUMBER(7)
    6  );

Table created.

SQL> ALTER TABLE emp MODIFY last_name VARCHAR2(50);

Table altered.

SQL>
```

2. DATA MANIPULATION

```
Run SQL Command Line                                                    —    □    ×

SQL> DESCRIBE dept;
ERROR:
ORA-04043: object dept does not exist


SQL> ALTER TABLE emp DROP COLUMN first_name;

Table altered.

SQL> sql copy code DESCRIBE emp;
SP2-0734: unknown command beginning "sql copy c..." - rest of line ignored.
SQL> sql copy code DESCRIBE emp;
SP2-0734: unknown command beginning "sql copy c..." - rest of line ignored.
SQL> DESCRIBE dept;
ERROR:
ORA-04043: object dept does not exist


SQL> DESCRIBE emp;
 Name                                     Null?    Type
 ---------------------------------------- -------- ----------------------------
 EMPLOYEE_ID                              NOT NULL NUMBER(6)
 LAST_NAME                               NOT NULL VARCHAR2(25)
 SALARY                                            NUMBER(8,2)
 DEPT_ID                                           NUMBER(4)

SQL> DESCRIBE dept;
ERROR:
ORA-04043: object dept does not exist


SQL> DESCRIBE departments;
 Name                                     Null?    Type
 ---------------------------------------- -------- ----------------------------
 DEPT_ID                                  NOT NULL NUMBER(6)
 DEPT_NAME                               NOT NULL VARCHAR2(20)
 MANAGER_ID                                        NUMBER(6)
 LOCATION_ID                                       NUMBER(4)

SQL>
```