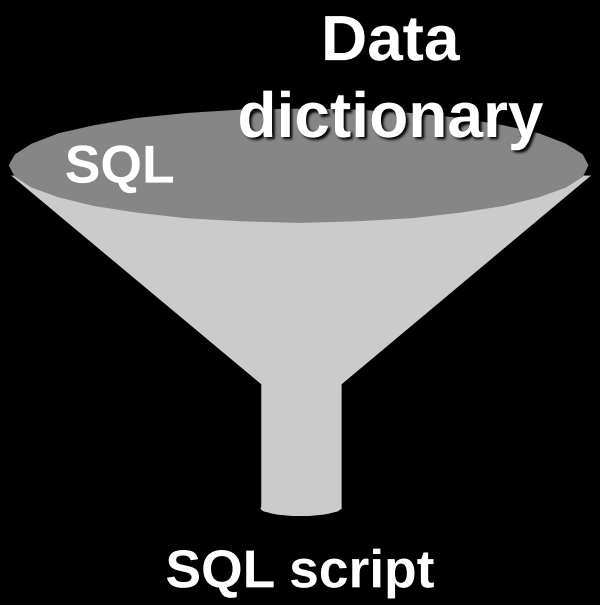
Writing Advanced Scripts

Objectives

After completing this appendix, you should be able to do the following:

- Describe the types of problems that are solved by using SQL to generate SQL
- Write a script that generates a script of `DROP TABLE` statements
- Write a script that generates a script of `INSERT INTO` statements

Using SQL to Generate SQL



- SQL can be used to generate scripts in SQL
- The data dictionary
  - Is a collection of tables and views that contain database information
  - Is created and maintained by the Oracle server

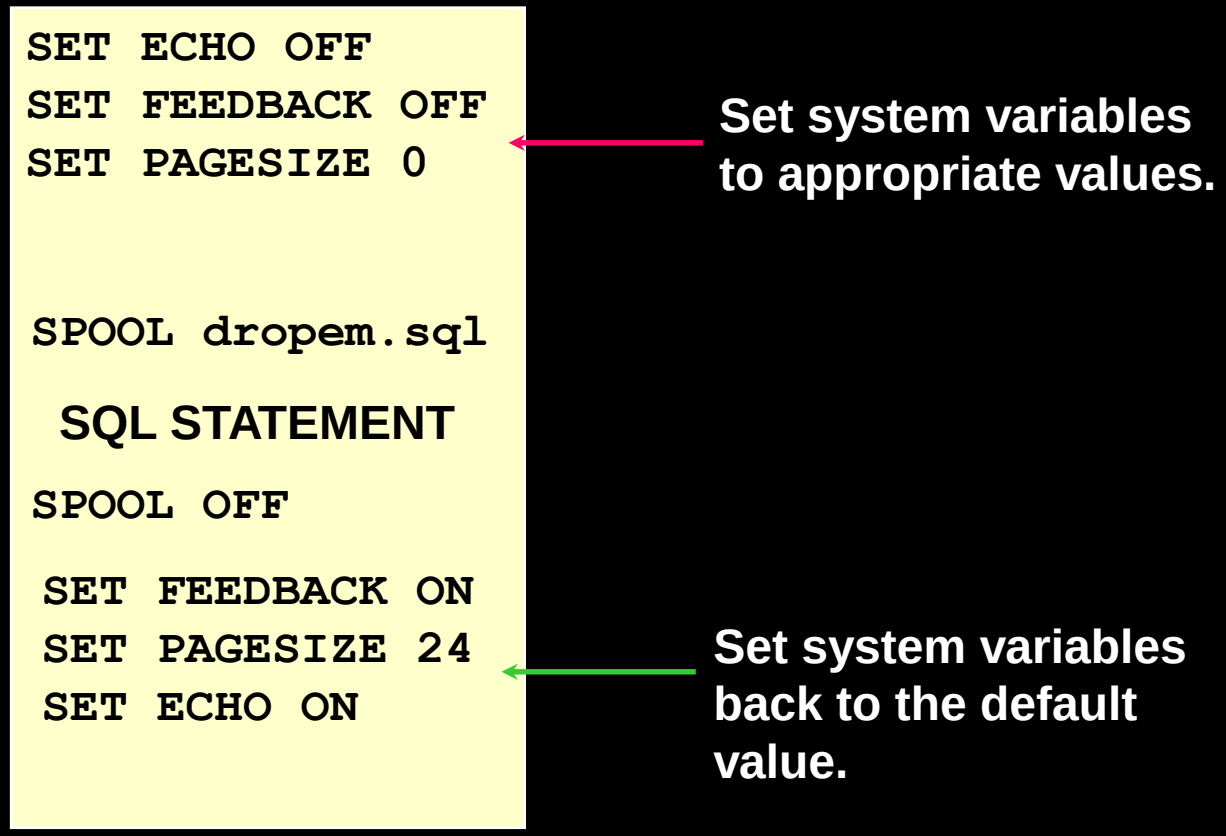
Creating a Basic Script

```
SELECT 'CREATE TABLE ' || table_name || '_test '
       || 'AS SELECT * FROM ' || table_name
       ||' WHERE 1=2;'
       AS "Create Table Script"
FROM   user_tables;
```

Create Table Script
CREATE TABLE COUNTRIES_test AS SELECT * FROM COUNTRIES WHERE 1=2;
CREATE TABLE DEPARTMENTS_test AS SELECT * FROM DEPARTMENTS WHERE 1=2;
CREATE TABLE EMPLOYEES_test AS SELECT * FROM EMPLOYEES WHERE 1=2;
CREATE TABLE JOBS_test AS SELECT * FROM JOBS WHERE 1=2;
CREATE TABLE JOB_GRADES_test AS SELECT * FROM JOB_GRADES WHERE 1=2;
CREATE TABLE JOB_HISTORY_test AS SELECT * FROM JOB_HISTORY WHERE 1=2;
CREATE TABLE LOCATIONS_test AS SELECT * FROM LOCATIONS WHERE 1=2;
CREATE TABLE REGIONS_test AS SELECT * FROM REGIONS WHERE 1=2;

8 rows selected.

Controlling the Environment



The Complete Picture

```
SET ECHO OFF
SET FEEDBACK OFF
SET PAGESIZE 0

SELECT 'DROP TABLE ' || object_name || ';'
FROM    user_objects
WHERE   object_type = 'TABLE'
/

SET FEEDBACK ON
SET PAGESIZE 24
SET ECHO ON
```

Dumping the Contents of a Table to a File

```
SET HEADING OFF ECHO OFF FEEDBACK OFF
SET PAGESIZE 0


SELECT
 'INSERT INTO departments_test VALUES
  (' || department_id || ', ''' || department_name ||
   ''', ''' || location_id || ''');'
  AS "Insert Statements Script"
FROM   departments
/


SET PAGESIZE 24
SET HEADING ON ECHO ON FEEDBACK ON
```

Dumping the Contents of a Table to a File

Source	Result
`'''X'''`	`'X'`
`''''`	`'`
`''''||department_name||''''`	`'Administration'`
`''', '''`	`','`
`''');'`	`');`

Generating a Dynamic Predicate

```
COLUMN my_col NEW_VALUE dyn_where_clause

SELECT DECODE('&&deptno', null,
DECODE ('&&hiredate', null, ' ',
'WHERE hire_date=TO_DATE(''''||'&&hiredate'',''DD-MON-YYYY'')'),
DECODE ('&&hiredate', null,
'WHERE department_id = ' || '&&deptno',
'WHERE department_id = ' || '&&deptno' ||
' AND hire_date = TO_DATE(''''||'&&hiredate'',''DD-MON-YYYY'')'))
AS my_col FROM dual;
```

```
SELECT last_name FROM employees &dyn_where_clause;
```

Summary

In this appendix, you should have learned the following:

- You can write a SQL script to generate another SQL script.
- Script files often use the data dictionary.
- You can capture the output in a file.

Practice D Overview

This practice covers the following topics:

- Writing a script to describe and select the data from your tables
- Writing a script to revoke user privileges