Practice 1

Part 1

Test your knowledge:

1. Initiate an *i*SQL*Plus session using the user ID and password that are provided by the instructor.
2. *i*SQL*Plus commands access the database.

   True/False
3. The following `SELECT` statement executes successfully:

```
SELECT last_name, job_id, salary AS Sal
FROM   employees;
```

   True/False
4. The following `SELECT` statement executes successfully:

```
SELECT *
FROM   job_grades;
```

   True/False
5. There are four coding errors in the following statement. Can you identify them?

```
SELECT    employee_id, last_name
sal x 12  ANNUAL SALARY
FROM      employees;
```

Part 2

Note the following location for the lab files:

`E:\labs\SQL1\labs`

If you are asked to save any lab files, save them at this location.

*To start iSQL*Plus, start your browser. You need to enter a URL to access iSQL*Plus. The URL requires the host name, which your instructor will provide. Enter the following command, replacing the host name with the value that your instructor provides:*

`http://<HOSTNAME:5560>/isqlplus`

You have been hired as a SQL programmer for Acme Corporation. Your first task is to create some reports based on data from the Human Resources tables.

6. Your first task is to determine the structure of the `DEPARTMENTS` table and its contents.

Name	Null?	Type
DEPARTMENT_ID	NOT NULL	NUMBER(4)
DEPARTMENT_NAME	NOT NULL	VARCHAR2(30)
MANAGER_ID		NUMBER(6)
LOCATION_ID		NUMBER(4)

Practice 1 (continued)

DEPARTMENT_ID	DEPARTMENT_NAME	MANAGER_ID	LOCATION_ID
10	Administration	200	1700
20	Marketing	201	1800
50	Shipping	124	1500
60	IT	103	1400
80	Sales	149	2500
90	Executive	100	1700
110	Accounting	205	1700
190	Contracting		1700

8 rows selected.

7. You need to determine the structure of the `EMPLOYEES` table.

Name	Null?	Type
EMPLOYEE_ID	NOT NULL	NUMBER(6)
FIRST_NAME		VARCHAR2(20)
LAST_NAME	NOT NULL	VARCHAR2(25)
EMAIL	NOT NULL	VARCHAR2(25)
PHONE_NUMBER		VARCHAR2(20)
HIRE_DATE	NOT NULL	DATE
JOB_ID	NOT NULL	VARCHAR2(10)
SALARY		NUMBER(8,2)
COMMISSION_PCT		NUMBER(2,2)
MANAGER_ID		NUMBER(6)
DEPARTMENT_ID		NUMBER(4)

The HR department wants a query to display the last name, job code, hire date, and employee number for each employee, with employee number appearing first. Provide an alias `STARTDATE` for the `HIRE_DATE` column. Save your SQL statement to a file named `lab_01_07.sql` so that you can dispatch this file to the HR department.

Practice 1 (continued)

8. Test your query in the `lab_01_07.sql` file to ensure that it runs correctly.

EMPLOYEE_ID	LAST_NAME	JOB_ID	STARTDATE
100	King	AD_PRES	17-JUN-87
101	Kochhar	AD_VP	21-SEP-89
102	De Haan	AD_VP	13-JAN-93
103	Hunold	IT_PROG	03-JAN-90
104	Ernst	IT_PROG	21-MAY-91
107	Lorentz	IT_PROG	07-FEB-99
124	Mourgos	ST_MAN	16-NOV-99
141	Rajs	ST_CLERK	17-OCT-95
142	Davies	ST_CLERK	29-JAN-97
143	Matos	ST_CLERK	15-MAR-98
144	Vargas	ST_CLERK	09-JUL-98
149	Zlotkey	SA_MAN	29-JAN-00
174	Abel	SA_REP	11-MAY-96
176	Taylor	SA_REP	24-MAR-98
▪ ▪ ▪			
206	Gietz	AC_ACCOUNT	07-JUN-94

20 rows selected.

9. The HR department needs a query to display all unique job codes from the `EMPLOYEES` table.

JOB_ID
AC_ACCOUNT
AC_MGR
AD_ASST
AD_PRES
AD_VP
IT_PROG
MK_MAN
MK_REP
SA_MAN
SA_REP
ST_CLERK
ST_MAN

12 rows selected.

Practice 1 (continued)

Part 3

If you have time, complete the following exercises:

10. The HR department wants more descriptive column headings for its report on employees. Copy the statement from `lab_01_07.sql` to the *i*SQL*Plus text box. Name the column headings `Emp #`, `Employee`, `Job`, and `Hire Date`, respectively. Then run your query again.

Emp #	Employee	Job	Hire Date
100	King	AD_PRES	17-JUN-87
101	Kochhar	AD_VP	21-SEP-89
102	De Haan	AD_VP	13-JAN-93
103	Hunold	IT_PROG	03-JAN-90
104	Ernst	IT_PROG	21-MAY-91
107	Lorentz	IT_PROG	07-FEB-99
124	Mourgos	ST_MAN	16-NOV-99
141	Rajs	ST_CLERK	17-OCT-95
142	Davies	ST_CLERK	29-JAN-97
143	Matos	ST_CLERK	15-MAR-98
144	Vargas	ST_CLERK	09-JUL-98
▪ ▪ ▪			
206	Gietz	AC_ACCOUNT	07-JUN-94

20 rows selected.

11. The HR department has requested a report of all employees and their job IDs. Display the last name concatenated with the job ID (separated by a comma and space) and name the column `Employee and Title`.

Employee and Title
King, AD_PRES
Kochhar, AD_VP
De Haan, AD_VP
Hunold, IT_PROG
Ernst, IT_PROG
Lorentz, IT_PROG
Mourgos, ST_MAN
Rajs, ST_CLERK
Davies, ST_CLERK
▪ ▪ ▪
Gietz, AC_ACCOUNT

20 rows selected.

Practice 1 (continued)

If you want an extra challenge, complete the following exercise:

12. To familiarize yourself with the data in the `EMPLOYEES` table, create a query to display all the data from that table. Separate each column output by a comma. Name the column title `THE_OUTPUT`.

THE_OUTPUT
100,Steven,King,SKING,515.123.4567,AD_PRES,,17-JUN-87,24000,,90
101,Neena,Kochhar,NKOCHHAR,515.123.4568,AD_VP,100,21-SEP-89,17000,,90
102,Lex,De Haan,LDEHAAN,515.123.4569,AD_VP,100,13-JAN-93,17000,,90
103,Alexander,Hunold,AHUNOLD,590.423.4567,IT_PROG,102,03-JAN-90,9000,,60
104,Bruce,Ernst,BERNST,590.423.4568,IT_PROG,103,21-MAY-91,6000,,60
107,Diana,Lorentz,DLORENTZ,590.423.5567,IT_PROG,103,07-FEB-99,4200,,60
124,Kevin,Mourgos,KMOURGOS,650.123.5234,ST_MAN,100,16-NOV-99,5800,,50
141,Trenna,Rajs,TRAJS,650.121.8009,ST_CLERK,124,17-OCT-95,3500,,50
142,Curtis,Davies,CDAVIES,650.121.2994,ST_CLERK,124,29-JAN-97,3100,,50
143,Randall,Matos,RMATOS,650.121.2874,ST_CLERK,124,15-MAR-98,2600,,50
144,Peter,Vargas,PVARGAS,650.121.2004,ST_CLERK,124,09-JUL-98,2500,,50
▪ ▪ ▪
206,William,Gietz,WGIETZ,515.123.8181,AC_ACCOUNT,205,07-JUN-94,8300,,110

20 rows selected.