

Practice 1

1. Initiate an *iSQL*Plus* session using the user ID and password provided by the instructor.
2. *iSQL*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 this statement. Can you identify them?

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

6. Show the structure of the `DEPARTMENTS` table. Select all data from the table.

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

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.

Practice 1 (continued)

7. Show the structure of the EMPLOYEES table. Create a query to display the last name, job code, hire date, and employee number for each employee, with employee number appearing first. Save your SQL statement to a file named lab1_7.sql.

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)

8. Run your query in the file lab1_7.sql.

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
205	Higgins	AC_MGR	07-JUN-94
206	Gietz	AC_ACCOUNT	07-JUN-94

20 rows selected.

Practice 1 (continued)

9. Create a query to display 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.

If you have time, complete the following exercises:

10. Copy the statement from lab1_7.sql into the iSQL*Plus Edit window. Name the column headings Emp #, Employee, Job, and Hire Date, respectively. 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
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20 rows selected.

Practice 1 (continued)

11. 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.

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

12. Create a query to display all the data from the `EMPLOYEES` table. Separate each column by a comma. Name the column `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
206,William,Gietz,WGIETZ,515.123.8181,AC_ACCOUNT,205,07-JUN-94,8300,,110

20 rows selected.

Practice 2

1. Create a query to display the last name and salary of employees earning more than \$12,000. Place your SQL statement in a text file named `lab2_1.sql`. Run your query.

LAST_NAME	SALARY
King	24000
Kochhar	17000
De Haan	17000
Hartstein	13000

2. Create a query to display the employee last name and department number for employee number 176.

LAST_NAME	DEPARTMENT_ID
Taylor	80

3. Modify `lab2_1.sql` to display the last name and salary for all employees whose salary is not in the range of \$5,000 and \$12,000. Place your SQL statement in a text file named `lab2_3.sql`.

LAST_NAME	SALARY
King	24000
Kochhar	17000
De Haan	17000
Lorentz	4200
Rajs	3500
Davies	3100
Matos	2600
Vargas	2500
Whalen	4400
Hartstein	13000

10 rows selected.

Practice 2 (continued)

4. Display the employee last name, job ID, and start date of employees hired between February 20, 1998, and May 1, 1998. Order the query in ascending order by start date.

LAST_NAME	JOB_ID	HIRE_DATE
Matos	ST_CLERK	15-MAR-98
Taylor	SA_REP	24-MAR-98

5. Display the last name and department number of all employees in departments 20 and 50 in alphabetical order by name.

LAST_NAME	DEPARTMENT_ID
Davies	50
Fay	20
Hartstein	20
Matos	50
Mourgos	50
Rajs	50
Vargas	50

7 rows selected.

6. Modify lab2_3.sql to list the last name and salary of employees who earn between \$5,000 and \$12,000, and are in department 20 or 50. Label the columns Employee and Monthly Salary, respectively. Resave lab2_3.sql as lab2_6.sql. Run the statement in lab2_6.sql.

Employee	Monthly Salary
Mourgos	5800
Fay	6000

Practice 2 (continued)

7. Display the last name and hire date of every employee who was hired in 1994.

LAST_NAME	HIRE_DATE
Higgins	07-JUN-94
Gietz	07-JUN-94

8. Display the last name and job title of all employees who do not have a manager.

LAST_NAME	JOB_ID
King	AD_PRES

9. Display the last name, salary, and commission for all employees who earn commissions. Sort data in descending order of salary and commissions.

LAST_NAME	SALARY	COMMISSION_PCT
Abel	11000	.3
Zlotkey	10500	.2
Taylor	8600	.2
Grant	7000	.15

If you have time, complete the following exercises:

10. Display the last names of all employees where the third letter of the name is an *a*.

LAST_NAME
Grant
Whalen

11. Display the last name of all employees who have an *a* and an *e* in their last name.

LAST_NAME
De Haan
Davies
Whalen
Hartstein

Practice 2 (continued)

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

12. Display the last name, job, and salary for all employees whose job is sales representative or stock clerk and whose salary is not equal to \$2,500, \$3,500, or \$7,000.

LAST_NAME	JOB_ID	SALARY
Davies	ST_CLERK	3100
Matos	ST_CLERK	2600
Abel	SA_REP	11000
Taylor	SA_REP	8600

13. Modify `lab2_6.sql` to display the last name, salary, and commission for all employees whose commission amount is 20%. Resave `lab2_6.sql` as `lab2_13.sql`. Rerun the statement in `lab2_13.sql`.

Employee	Monthly Salary	COMMISSION_PCT
Zlotkey	10500	.2
Taylor	8600	.2