

EXERCISE 7

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1. Write a query to display the last name, department number, and department name for all employees.

The screenshot shows the Oracle Database Express Edition interface. The SQL command window displays the following query:

```
SELECT e.last_name, e.department_id, d.department_name
FROM employees e
LEFT JOIN departments d ON e.department_id = d.department_id;
```

The results window shows the output of the query:

LAST_NAME	DEPARTMENT_ID	DEPARTMENT_NAME
Smith	10	HR
Brown	20	IT
Johnson	20	IT
Davies	30	Finance
King	-	-

5 rows returned in 0.00 seconds [CSV Export](#)

2. Create a unique listing of all jobs that are in department 80. Include the location of the department in the output.

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > **SQL Commands**

Autocommit Display 10 ▾

```
SELECT DISTINCT e.job_id, l.city
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN locations l ON d.location_id = l.location_id
WHERE e.department_id = 80;
```

Results Explain Describe Saved SQL History

JOB_ID	CITY
IT_PROG	Toronto

1 rows returned in 0.00 seconds [CSV Export](#)

3. Write a query to display the employee last name, department name, location ID, and city of all employees who earn a commission

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User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

```
SELECT e.last_name, d.department_name, d.location_id, l.city
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN locations l ON d.location_id = l.location_id
WHERE e.commission_pct IS NOT NULL;
```

Results Explain Describe Saved SQL History

LAST_NAME	DEPARTMENT_NAME	LOCATION_ID	CITY
Brown	Marketing	1100	Toronto
Johnson	IT	1100	Toronto

2 rows returned in 0.00 seconds [CSV Export](#)

4. Display the employee last name and department name for all employees who have an a(lowercase) in their last names. P

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > SQL Commands

Autocommit Display 10 ▾

```
SELECT e.last_name, d.department_name
FROM employees e
JOIN departments d ON e.department_id = d.department_id
WHERE LOWER(e.last_name) LIKE '%a%';
```

Results Explain Describe Saved SQL History

LAST_NAME	DEPARTMENT_NAME
Davies	Finance

1 rows returned in 0.00 seconds [CSV Export](#)

5. Write a query to display the last name, job, department number, and department name for all employees who work in Toronto

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

```
SELECT e.last_name, e.job_id, d.department_id, d.department_name
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN locations l ON d.location_id = l.location_id
WHERE l.city = 'Toronto';
```

Results Explain Describe Saved SQL History

LAST_NAME	JOB_ID	DEPARTMENT_ID	DEPARTMENT_NAME
Johnson	IT_PROG	20	IT
Brown	IT_PROG	80	Marketing

2 rows returned in 0.00 seconds [CSV Export](#)

6. Display the employee last name and employee number along with their manager's last name and manager number. Label the columns Employee, Emp#, Manager, and Mgr#, Respectively

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

```
SELECT e.last_name AS Employee, e.employee_id AS Emp#,
       m.last_name AS Manager, m.employee_id AS Mgr#
  FROM employees e
 LEFT JOIN employees m ON e.manager_id = m.employee_id;
```

Results Explain Describe Saved SQL History

EMPLOYEE	EMP#	MANAGER	MGR#
Brown	104	Johnson	102
Davies	105	King	103
Johnson	102	King	103
Smith	101	King	103
King	103	-	-

5 rows returned in 0.00 seconds [CSV Export](#)

7. Modify lab4_6.sql to display all employees including King, who has no manager. Order the results by the employee number.

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User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

```
SELECT e.last_name AS Employee, e.employee_id AS Emp#,  
       m.last_name AS Manager, m.employee_id AS Mgr#  
  FROM employees e  
 LEFT JOIN employees m ON e.manager_id = m.employee_id  
 ORDER BY e.employee_id;
```

Results Explain Describe Saved SQL History

EMPLOYEE	EMP#	MANAGER	MGR#
Smith	101	King	103
Johnson	102	King	103
King	103	-	-
Brown	104	Johnson	102
Davies	105	King	103

5 rows returned in 0.00 seconds [CSV Export](#)

8. Create a query that displays employee last names, department numbers, and all the employees who work in the same department as a given employee. Give each column an appropriate label

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

```
SELECT e1.last_name AS Employee, e1.department_id,
       e2.last_name AS Colleague
  FROM employees e1
 JOIN employees e2
    ON e1.department_id = e2.department_id
 WHERE e1.employee_id <> e2.employee_id;
```

Results Explain Describe Saved SQL History

EMPLOYEE	DEPARTMENT_ID	COLLEAGUE
Wilson	20	Johnson
Johnson	20	Wilson

2 rows returned in 0.00 seconds [CSV Export](#)

9. Show the structure of the JOB_GRADES table. Create a query that displays the name, job, department name, salary, and grade for all employees

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

DESC job_grades;

[Results](#) [Explain](#) [Describe](#) [Saved SQL](#) [History](#)

Object Type TABLE Object JOB_GRADES

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
JOB_GRADES	GRADE_LEVEL	Varchar2	2	-	-	-	✓	-	-
	LOWEST_SAL	Number	-	-	-	-	✓	-	-
	HIGHEST_SAL	Number	-	-	-	-	✓	-	-

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User: SYSTEM

Home > SQL > SQL Commands

 Autocommit Display 10 ▾

```
SELECT e.last_name, e.job_id, d.department_name, e.salary, j.grade_level
FROM employees e
JOIN departments d ON e.department_id = d.department_id
JOIN job_grades j ON e.salary BETWEEN j.lowest_sal AND j.highest_sal;
```

Results Explain Describe Saved SQL History

LAST_NAME	JOB_ID	DEPARTMENT_NAME	SALARY	GRADE_LEVEL
Smith	AD_ASST	HR	4000	B
Brown	IT_PROG	Marketing	5800	B
Johnson	IT_PROG	IT	6000	C
Davies	FI_MGR	Finance	7200	C

4 rows returned in 0.00 seconds [CSV Export](#)

10. Create a query to display the name and hire date of any employee hired after employee Davies.

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

```
SELECT last_name, hire_date
FROM employees
WHERE hire_date > (
    SELECT hire_date
    FROM employees
    WHERE last_name = 'Davies'
);
```

Results Explain Describe Saved SQL History

LAST_NAME	HIRE_DATE
Brown	10-JUL-22

1 rows returned in 0.00 seconds

[CSV Export](#)

11. Display the names and hire dates for all employees who were hired before their managers, along with their manager's names and hire dates. Label the columns Employee, Emp Hired, Manager, and Mgr Hired, respectively.

ORACLE® Database Express Edition

User: SYSTEM

Home > SQL > **SQL Commands** Autocommit Display 10 ▾

```
SELECT e.last_name AS Employee, e.hire_date AS "Emp Hired",
       m.last_name AS Manager, m.hire_date AS "Mgr Hired"
FROM employees e
JOIN employees m ON e.manager_id = m.employee_id
WHERE e.hire_date < m.hire_date;
```

Results Explain Describe Saved SQL History

EMPLOYEE	Emp Hired	MANAGER	Mgr Hired
Grant	01-JAN-21	Taylor	01-JAN-22

1 rows returned in 0.00 seconds

[CSV Export](#)