

**Problem 1:**

Create a query displaying the last name, first name and hire date from the employees table. Show only those employees that were hired on 6/7/94, 8/20/97, and 3/23/98. Sort the resulting set by hire\_date in descending order and last\_name in ascending order.

**SQL script:**

```
SQL> SELECT last_name, first_name, hire_date  
  2  FROM employees  
  3 WHERE hire_date IN ('07-JUN-94', '20-AUG-97', '23-MAR-98')  
  4 ORDER BY hire_date DESC, last_name ASC;
```

**Console Output:**

```
SQL> SELECT last_name, first_name, hire_date  
  2  FROM employees  
  3 WHERE hire_date IN ('07-JUN-94', '20-AUG-97', '23-MAR-98')  
  4 ORDER BY hire_date DESC, last_name ASC;
```

LAST_NAME	FIRST_NAME	HIRE_DATE
Bloom	Harrison	23-MAR-98
Bissot	Laura	20-AUG-97
Hall	Peter	20-AUG-97
Baer	Hermann	07-JUN-94
Gietz	William	07-JUN-94
Higgins	Shelley	07-JUN-94
Mavris	Susan	07-JUN-94

7 rows selected.

**Problem 2:**

Display all stock managers (Last and first name and phone number) (job\_id = 'ST\_MAN') in the phone area code of 650 from the employees' table. Order by last\_name.

**SQL script:**

```
SQL> SELECT last_name, first_name, phone_number  
  2  FROM employees  
  3 WHERE job_id = 'ST_MAN' AND SUBSTR(phone_number, 1, 3) = '650'  
  4 ORDER BY last_name;
```

**Console Output:**

```
SQL> SELECT last_name, first_name, phone_number  
  2  FROM employees  
  3 WHERE job_id = 'ST_MAN' AND SUBSTR(phone_number, 1, 3) = '650'  
  4 ORDER BY last_name;
```

LAST_NAME	FIRST_NAME	PHONE_NUMBER
Fripp	Adam	650.123.2234
Kaufling	Payam	650.123.3234
Mourgos	Kevin	650.123.5234
Vollman	Shanta	650.123.4234
Weiss	Matthew	650.123.1234

**Problem 3:**

In addition to the result set of the query in problem 2, the HR manager needs to see also all employees that earn more than \$10,000. Display the salary column in addition to the last, first, and phone numbers.

(Instructions: Take the query from problem 2 and add the additional filter and column from problem 2.).

**SQL Script:**

```
SQL> SELECT last_name, first_name, phone_number, salary  
  2  FROM employees  
  3 WHERE (job_id = 'ST_MAN' AND SUBSTR(phone_number, 1, 3) = '650') OR salary > 10000  
  4 ORDER BY last_name;
```

**Console Output:**

```
SQL> SELECT last_name, first_name, phone_number, salary
  2  FROM employees
  3 WHERE (job_id = 'ST_MAN' AND SUBSTR(phone_number, 1, 3) = '650') OR salary > 10000
  4 ORDER BY last_name;
```

LAST_NAME	FIRST_NAME	PHONE_NUMBER	SALARY
Abel	Ellen	011.44.1644.429267	11000
Cambrault	Gerald	011.44.1344.619268	11000
De Haan	Lex	515.123.4569	17000
Errazuriz	Alberto	011.44.1344.429278	12000
Fripp	Adam	650.123.2234	8200
Greenberg	Nancy	515.124.4569	12000
Hartstein	Michael	515.123.5555	13000
Higgins	Shelley	515.123.8080	12000
Kaufling	Payam	650.123.3234	7900
King	Steven	515.123.4567	24000
Kochhar	Neena	515.123.4568	17000
Fripp	Adam	650.123.2234	8200
Greenberg	Nancy	515.124.4569	12000
Hartstein	Michael	515.123.5555	13000
Higgins	Shelley	515.123.8080	12000
Kaufling	Payam	650.123.3234	7900
King	Steven	515.123.4567	24000
Kochhar	Neena	515.123.4568	17000
LAST_NAME	FIRST_NAME	PHONE_NUMBER	SALARY
Mourgos	Kevin	650.123.5234	5800
Ozer	Lisa	011.44.1343.929268	11500
Partners	Karen	011.44.1344.467268	13500
Raphaely	Den	515.127.4561	11000
Russell	John	011.44.1344.429268	14000
Vishney	Clara	011.44.1346.129268	10500
Vollman	Shanta	650.123.4234	6500
Weiss	Matthew	650.123.1234	8000
Zlotkey	Eleni	011.44.1344.429018	10500

20 rows selected.

**Problem 4:**

Create a query showing the last and first names of employees. Order it by the last name. Translate the telephone area codes into the following values and alias this expression with Area:

> 011 -> International > 650 -> SF Peninsula > 515 -> Central Iowa > all other -> Unknown

**SQL Script:**

```
SQL> SELECT last_name, first_name,
  2 CASE SUBSTR(phone_number, 1, 3)
  3 WHEN '011' THEN 'International'
  4 WHEN '650' THEN 'SF Peninsula'
  5 WHEN '515' THEN 'Central Iowa'
  6 ELSE 'Unknown'
  7 END AS "Area"
  8 FROM employees
  9 ORDER BY last_name;
```

**Console Output:**

```
SQL> SELECT last_name, first_name,
  2 CASE SUBSTR(phone_number, 1, 3)
  3 WHEN '011' THEN 'International'
  4 WHEN '650' THEN 'SF Peninsula'
  5 WHEN '515' THEN 'Central Iowa'
  6 ELSE 'Unknown'
  7 END AS "Area"
  8 FROM employees
  9 ORDER BY last_name;
```

LAST_NAME	FIRST_NAME	Area
Abel	Ellen	International
Ande	Sundar	International
Atkinson	Mozhe	SF Peninsula
Austin	David	Unknown
Baer	Hermann	Central Iowa
Baida	Shelli	Central Iowa
Banda	Amit	International
Bates	Elizabeth	International
Bell	Sarah	SF Peninsula

Tucker	Peter	International
Tuvault	Oliver	International
<b>LAST_NAME</b>	<b>FIRST_NAME</b>	<b>Area</b>
-----	-----	-----
Urman	Jose Manuel	Central Iowa
Vargas	Peter	SF Peninsula
Vishney	Clara	International
Vollman	Shanta	SF Peninsula
Walsh	Alana	SF Peninsula
Weiss	Matthew	SF Peninsula
Whalen	Jennifer	Central Iowa
Zlotkey	Eleni	International

107 rows selected.

#### Problem 5:

Create a query showing the employee\_id, last\_name, and phone number. Show only those records where the last\_name starts with the letters A, D, F, H, K. Implement the following custom sort order on the area code of the phone number (first 3 numbers): 011, 650, 590, 603, 515 (meaning 011 first, then 650, etc.). In addition to this custom sort, also sort by the last name.

#### SQL Script:

```
SQL> SELECT employee_id, last_name, phone_number
  2  FROM employees
  3  WHERE SUBSTR(last_name, 1, 1) IN ('A', 'D', 'H', 'F', 'K')
  4  ORDER BY
  5  CASE SUBSTR(phone_number, 1, 3)
  6  WHEN '011' THEN 0
  7  WHEN '650' THEN 1
  8  WHEN '590' THEN 2
  9  WHEN '603' THEN 3
 10 WHEN '515' THEN 4
 11 ELSE 5
 12 END, last_name;
```

**Console Output:**

```
SQL> SELECT employee_id, last_name, phone_number
  2  FROM employees
  3  WHERE SUBSTR(last_name, 1, 1) IN ('A', 'D', 'H', 'F', 'K')
  4  ORDER BY
  5  CASE SUBSTR(phone_number, 1, 3)
  6  WHEN '011' THEN 0
  7  WHEN '650' THEN 1
  8  WHEN '590' THEN 2
  9  WHEN '603' THEN 3
 10 WHEN '515' THEN 4
 11 ELSE 5
 12 END, last_name;
```

EMPLOYEE_ID	LAST_NAME	PHONE_NUMBER
174	Abel	011.44.1644.429267
166	Ande	011.44.1346.629268
160	Doran	011.44.1345.629268
170	Fox	011.44.1343.729268
152	Hall	011.44.1344.478968
175	Hutton	011.44.1644.429266
156	King	011.44.1345.429268
173	Kumar	011.44.1343.329268
130	Atkinson	650.124.6234
142	Davies	650.121.2994
105	Austin	590.423.4569
103	Hunold	590.423.4567
202	Fay	603.123.6666
102	De Haan	515.123.4569
109	Faviet	515.124.4169
201	Hartstein	515.123.5555
EMPLOYEE_ID	LAST_NAME	PHONE_NUMBER
205	Higgins	515.123.8080
118	Himuro	515.127.4565
115	Khoo	515.127.4562
100	King	515.123.4567
101	Kochhar	515.123.4568

27 rows selected.

**Problem 6:**

Create a query showing employee\_id, department\_id, start and end date from the job history table with employee\_id, department\_id, hire date, and the fixed string 'Current' from the employees' table. Order it by employee\_id, department\_id.

**SQL Script:**

```
SQL> SELECT employee_id, department_id, start_date, TO_CHAR(end_date) AS end_date
  2  FROM job_history
  3  UNION
  4  SELECT employee_id, department_id, hire_date, 'Current'
  5  FROM employees
  6  ORDER BY employee_id, department_id;
```

**Console Output:**

```
SQL> SELECT employee_id, department_id, start_date, TO_CHAR(end_date) AS end_date
  2  FROM job_history
  3  UNION
  4  SELECT employee_id, department_id, hire_date, 'Current'
  5  FROM employees
  6  ORDER BY employee_id, department_id;
```

EMPLOYEE_ID	DEPARTMENT_ID	START_DATE	END_DATE
100	90	17-JUN-87	Current
101	90	21-SEP-89	Current
101	110	21-SEP-89	27-OCT-93
101	110	28-OCT-93	15-MAR-97
102	60	13-JAN-93	24-JUL-98
102	90	13-JAN-93	Current
103	60	03-JAN-90	Current
104	60	21-MAY-91	Current
105	60	25-JUN-97	Current
106	60	05-FEB-98	Current
107	60	07-FEB-99	Current

```
-----  
192      50 04-FEB-96 Current  
193      50 03-MAR-97 Current  
194      50 01-JUL-98 Current  
195      50 17-MAR-99 Current  
196      50 24-APR-98 Current  
197      50 23-MAY-98 Current  
198      50 21-JUN-99 Current  
199      50 13-JAN-00 Current  
200      10 17-SEP-87 Current  
200      90 17-SEP-87 17-JUN-93  
200      90 01-JUL-94 31-DEC-98
```

```
EMPLOYEE_ID DEPARTMENT_ID START_DATE END_DATE  
-----  
201      20 17-FEB-96 19-DEC-99  
201      20 17-FEB-96 Current  
202      20 17-AUG-97 Current  
203      40 07-JUN-94 Current  
204      70 07-JUN-94 Current  
205      110 07-JUN-94 Current  
206      110 07-JUN-94 Current
```

117 rows selected.