1. Write a SQL query to find those employees whose salary is higher than 9000. Return first name, last name and department number and salary.

Code

```
--Q1
select FIRST_NAME,LAST_NAME,DEPARTMENT_ID,SALARY
from Employee where SALARY>9000;
```

Output

	FIRST_NAME	LAST_NAME	DEPARTMENT_ID	SALARY
1	Steven	King	90	24000
2	Neena	Kochhar	90	17000
3	Lex	De Haan	90	17000
4	Nancy	Greenberg	100	12008
5	Den	Raphaely	30	11000
6	John	Russell	80	14000
7	Karen	Partners	80	13500
8	Alberto	Errazuriz	80	12000
9	Gerald	Cambrault	80	11000
10	Eleni	Zlotkey	80	10500
11	Peter	Tucker	80	10000
12	David	Bernstein	80	9500
13	Janette	King	80	10000
14	Patrick	Sully	80	9500
15	Clara	Vishney	80	10500
16	Danielle	Greene	80	9500
17	Lisa	Ozer	80	11500
18	Harrison	Bloom	80	10000
19	Tayler	Fox	80	9600
20	Ellen	Abel	80	11000
21	Michael	Hartstein	20	13000
22	Hermann	Baer	70	10000
23	Shelley	Higgins	110	12008

2. Write a SQL query to identify employees who do not have a department number. Return employee_id, first_name, last_name, email, phone_number, hire_date, job_id, salary,commission_pct, manager_id and department_id.

Code

```
--Q2
select EMPLOYEE_ID,FIRST_NAME,LAST_NAME,EMAIL,PHONE_NUMBER,HIRE_DATE,
JOB_ID,SALARY,COMMISSION_PCT,MANAGER_ID,DEPARTMENT_ID from Employee
where DEPARTMENT_ID is null;
```

Output

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID

3. Write a SQL query to find those employees whose first name does not contain the letter 'T'. Sort the result-set in ascending order by department ID. Return full name (first and last name together), hire_date, salary and department_id.

Code

```
--Q3
select CONCAT(FIRST_NAME,LAST_NAME) AS FULL_NAME,hire_date,
salary, department_id from Employee where FIRST_NAME not like '%T%'
order by DEPARTMENT_ID;
```

Output

	FULL_NAME	hire_date	salary	department_id
1	Kimberely Grant	2007-05-24	7000	0
2	Jennifer Whalen	2003-09-17	4400	10
3	Michael Hartstein	2004-02-17	13000	20
4	Den Raphaely	2002-12-07	11000	30
5	Alexander Khoo	2003-05-18	3100	30
6	Shelli Baida	2005-12-24	2900	30
7	Sigal Tobias	2005-07-24	2800	30
8	Guy Himuro	2006-11-15	2600	30
9	Karen Colmenares	2007-08-10	2500	30
10	Susan Mavris	2002-06-07	6500	40
11	Jean Fleaur	2006-02-23	3100	50
12	Girard Geoni	2008-02-03	2800	50
13	Alexis Bull	2005-02-20	4100	50
14	Julia Dellinger	2006-06-24	3400	50
15	Kelly Chung	2005-06-14	3800	50
16	Jennifer Dilly	2005-08-13	3600	50
17	Randall Perkins	2007-12-19	2500	50
18	Sarah Bell	2004-02-04	4000	50
19	Samuel McCain	2006-07-01	3200	50
20	Vance Jones	2007-03-17	2800	50
21	Alana Walsh	2006-04-24	3100	50
22	Kevin Feeney	2006-05-23	3000	50
23	Donald OConnell	2007-06-21	2600	50
24	Douglas Grant	2008-01-13	2600	50

4. Write a SQL query to find those employees who earn between 9000 and 12000 (Begin and end values are included.) and get some commission. Return all fields.

Code

```
--Q4
select * from Employee where SALARY between 9000 and 12000 and not COMMISSION_PCT= 0;
```

Output

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1	147	Alberto	Errazuriz	AERRAZUR	011.44.1344.429278	2005-03-10	SA_MAN	12000	0.300000011920929	100	80
2	148	Gerald	Cambrault	GCAMBRAU	011.44.1344.619268	2007-10-15	SA_MAN	11000	0.300000011920929	100	80
3	149	Eleni	Zlotkey	EZLOTKEY	011.44.1344.429018	2008-01-29	SA_MAN	10500	0.200000002980232	100	80
4	150	Peter	Tucker	PTUCKER	011.44.1344.129268	2005-01-30	SA_REP	10000	0.300000011920929	145	80
5	151	David	Bernstein	DBERNSTE	011.44.1344.345268	2005-03-24	SA_REP	9500	0.25	145	80
6	152	Peter	Hall	PHALL	011.44.1344.478968	2005-08-20	SA_REP	9000	0.25	145	80
7	156	Janette	King	JKING	011.44.1345.429268	2004-01-30	SA_REP	10000	0.349999994039536	146	80
8	157	Patrick	Sully	PSULLY	011.44.1345.929268	2004-03-04	SA_REP	9500	0.349999994039536	146	80
9	158	Allan	McEwen	AMCEWEN	011.44.1345.829268	2004-08-01	SA_REP	9000	0.349999994039536	146	80
10	162	Clara	Vishney	CVISHNEY	011.44.1346.129268	2005-11-11	SA_REP	10500	0.25	147	80
11	163	Danielle	Greene	DGREENE	011.44.1346.229268	2007-03-19	SA_REP	9500	0.150000005960464	147	80
12	168	Lisa	Ozer	LOZER	011.44.1343.929268	2005-03-11	SA_REP	11500	0.25	148	80
13	169	Harrison	Bloom	HBLOOM	011.44.1343.829268	2006-03-23	SA_REP	10000	0.200000002980232	148	80
14	170	Tayler	Fox	TFOX	011.44.1343.729268	2006-01-24	SA_REP	9600	0.200000002980232	148	80
15	174	Ellen	Abel	EABEL	011.44.1644.429267	2004-05-11	SA_REP	11000	0.300000011920929	149	80

5. Write a SQL query to find those employees who do not earn any commission. Return full name (first and last name), and salary.

Code

```
--Q5
select CONCAT(FIRST_NAME,LAST_NAME) AS FULL_NAME, salary
from Employee where COMMISSION_PCT=0;
```

Output

	FULL_NAME	salary
1	Steven King	24000
2	Neena Kochhar	17000
3	Lex De Haan	17000
4	Alexander Hunold	9000
5	Bruce Ernst	6000
6	David Austin	4800
7	Valli Pataballa	4800
8	Diana Lorentz	4200
9	Nancy Greenberg	12008
10	Daniel Faviet	9000
11	John Chen	8200
12	Ismael Sciarra	7700
13	Jose Manuel Urman	7800
14	Luis Popp	6900
15	Den Raphaely	11000
16	Alexander Khoo	3100
17	Shelli Baida	2900
18	Sigal Tobias	2800
19	Guy Himuro	2600
20	Karen Colmenares	2500
21	Matthew Weiss	8000
22	Adam Fripp	8200
23	Payam Kaufling	7900
24	Shanta Vollman	6500
25	Kevin Mourgos	5800
26	Julia Nayer	3200
27	Irene Mikkilineni	2700
28	James Landry	2400

6. Write a SQL query to find those employees who work under a manager. Return full name (first and last name), salary, and manager ID.

Code

```
--Q6
select CONCAT(FIRST_NAME,LAST_NAME) AS FULL_NAME,
salary, MANAGER_ID from Employee where not MANAGER_ID=0;
```

Output

	FULL_NAME	salary	MANAGER_ID
1	Neena Kochhar	17000	100
2	Lex De Haan	17000	100
3	Alexander Hunold	9000	102
4	Bruce Ernst	6000	103
5	David Austin	4800	103
6	Valli Pataballa	4800	103
7	Diana Lorentz	4200	103
8	Nancy Greenberg	12008	101
9	Daniel Faviet	9000	108
10	John Chen	8200	108
11	Ismael Sciarra	7700	108
12	Jose Manuel Urman	7800	108
13	Luis Popp	6900	108
14	Den Raphaely	11000	100
15	Alexander Khoo	3100	114
16	Shelli Baida	2900	114
17	Sigal Tobias	2800	114
18	Guy Himuro	2600	114
19	Karen Colmenares	2500	114
20	Matthew Weiss	8000	100
21	Adam Fripp	8200	100
22	Payam Kaufling	7900	100
23	Shanta Vollman	6500	100
24	Kevin Mourgos	5800	100
25	Julia Nayer	3200	120
26	Irene Mikkilineni	2700	120
27	James Landry	2400	120
28	Steven Markle	2200	120

7. Write a SQL query to find employees whose first names contain the letters F, T, or M. Sort the result-set in descending order by salary. Return all fields

Code

```
--Q7
select * from Employee where FIRST_NAME like '%F%' or FIRST_NAME like '%T%' or FIRST_NAME like '%M%' order by SALARY desc;
```

Output

	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	EMAIL	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1	100	Steven	King	SKING	515.123.4567	2003-06-17	AD_PRES	24000	0	0	90
2	201	Michael	Hartstein	MHARTSTE	515.123.5555	2004-02-17	MK_MAN	13000	0	100	20
3	147	Alberto	Errazuriz	AERRAZUR	011.44.1344.429278	2005-03-10	SA_MAN	12000	0.300000011920929	100	80
4	150	Peter	Tucker	PTUCKER	011.44.1344.129268	2005-01-30	SA_REP	10000	0.300000011920929	145	80
5	156	Janette	King	JKING	011.44.1345.429268	2004-01-30	SA_REP	10000	0.349999994039536	146	80
6	204	Hermann	Baer	HBAER	515.123.8888	2002-06-07	PR_REP	10000	0	101	70
7	170	Tayler	Fox	TFOX	011.44.1343.729268	2006-01-24	SA_REP	9600	0.200000002980232	148	80
8	157	Patrick	Sully	PSULLY	011.44.1345.929268	2004-03-04	SA_REP	9500	0.349999994039536	146	80
9	152	Peter	Hall	PHALL	011.44.1344.478968	2005-08-20	SA_REP	9000	0.25	145	80
10	176	Jonathon	Taylor	JTAYLOR	011.44.1644.429265	2006-03-24	SA_REP	8600	0.200000002980232	149	80
11	206	William	Gietz	WGIETZ	515.123.8181	2002-06-07	AC_ACCOUNT	8300	0	205	110
12	121	Adam	Fripp	AFRIPP	650.123.2234	2005-04-10	ST_MAN	8200	0	100	50
13	120	Matthew	Weiss	MWEISS	650.123.1234	2004-07-18	ST_MAN	8000	0	100	50
14	153	Christopher	Olsen	COLSEN	011.44.1344.498718	2006-03-30	SA_REP	8000	0.200000002980232	145	80
15	122	Payam	Kaufling	PKAUFLIN	650.123.3234	2003-05-01	ST_MAN	7900	0	100	50
16	112	Jose Manuel	Urman	JMURMAN	515.124.4469	2006-03-07	FI_ACCOUNT	7800	0	108	100
17	111	Ismael	Sciarra	ISCIARRA	515.124.4369	2005-09-30	FI_ACCOUNT	7700	0	108	100
18	154	Nanette	Cambrault	NCAMBRAU	011.44.1344.987668	2006-12-09	SA_REP	7500	0.200000002980232	145	80
19	171	William	Smith	WSMITH	011.44.1343.629268	2007-02-23	SA_REP	7400	0.150000005960464	148	80
20	172	Elizabeth	Bates	EBATES	011.44.1343.529268	2007-03-24	SA_REP	7300	0.150000005960464	148	80
21	164	Mattea	Marvins	MMARVINS	011.44.1346.329268	2008-01-24	SA_REP	7200	0.100000001490116	147	80
22	178	Kimberely	Grant	KGRANT	011.44.1644.429263	2007-05-24	SA_REP	7000	0.150000005960464	149	0
23	161	Sarath	Sewall	SSEWALL	011.44.1345.529268	2006-11-03	SA_REP	7000	0.25	146	80
24	123	Shanta	Vollman	SVOLLMAN	650.123.4234	2005-10-10	ST_MAN	6500	0	100	50
25	167	Amit	Banda	ABANDA	011.44.1346.729268	2008-04-21	SA_REP	6200	0.100000001490116	147	80
26	173	Sundita	Kumar	SKUMAR	011.44.1343.329268	2008-04-21	SA_REP	6100	0.100000001490116	148	80
27	202	Pat	Fay	PFAY	603.123.6666	2005-08-17	MK_REP	6000	0	201	20

8. Write a SQL query to find those employees who earn above 12000 or the seventh character in their phone number is 3. Sort the result-set in descending order by first name. Return full name (first name and last name), hire date, commission percentage, email, and telephone separated by '-', and salary.

Code

```
--Q8
select CONCAT(FIRST_NAME,LAST_NAME) AS FULL_NAME, hire_date, COMMISSION_PCT, REPLACE(Phone_number,'.','-') as Telephone,
email,salary from Employee where SALARY>12000 or PHONE_NUMBER like '______3%' order by FIRST_NAME desc;
```

Output

	FULL_NAME	hire_date	COMMISSION_PCT	Telephone	email	salary
1	Steven King	2003-06-17	0	515-123-4567	SKING	24000
2	Shelley Higgins	2002-06-07	0	515-123-8080	SHIGGINS	12008
3	Neena Kochhar	2005-09-21	0	515-123-4568	NKOCHHAR	17000
4	Nancy Greenberg	2002-08-17	0	515-124-4569	NGREENBE	12008
5	Michael Hartstein	2004-02-17	0	515-123-5555	MHARTSTE	13000
6	Lex De Haan	2001-01-13	0	515-123-4569	LDEHAAN	17000
7	Karen Partners	2005-01-05	0.300000011920929	011-44-1344-467268	KPARTNER	13500
8	John Russell	2004-10-01	0.400000005960464	011-44-1344-429268	JRUSSEL	14000

9. Write a SQL query to find those employees whose first name contains a character 's' in the third position. Return first name, last name and department id.

Code

```
--Q9
select FIRST_NAME, Last_name, department_id from Employee where FIRST_NAME like '__s%';
```

Output

	FIRST_NAME	Last_name	department_id
1	Jose Manuel	Urman	100
2	Jason	Mallin	50
3	Joshua	Patel	50
4	Lisa	Ozer	80
5	Susan	Mavris	40

10. Write a SQL query to find those employees who worked more than two jobs in the past.

    Return employee id.

Code

```
--Q10
select employee_id from Job_History group by EMPLOYEE_ID having COUNT(employee_id)>1;
```

Output

	employee_id
1	101
2	176
3	200

11. Write a SQL query to count the number of employees, the sum of all salary, and difference between the highest salary and lowest salaries by each job id. Return job_id, count, sum, salary_difference.

Code

```
--Q11
select JOB_ID,COUNT(employee_id) as 'No of Employees',
SUM(Salary) as 'Total Salary',
(Max(SALARY)-Min(SALARY)) as 'Salary_Diff'
from Employee group by JOB_ID;
```

Output

	JOB_ID	No of Employees	Total Salary	Salary_Diff
1	AC_ACCOUNT	1	8300	0
2	AC_MGR	1	12008	0
3	AD_ASST	1	4400	0
4	AD_PRES	1	24000	0
5	AD_VP	2	34000	0
6	FI_ACCOUNT	5	39600	2100
7	FI_MGR	1	12008	0
8	HR_REP	1	6500	0
9	IT_PROG	5	28800	4800
10	MK_MAN	1	13000	0
11	MK_REP	1	6000	0
12	PR_REP	1	10000	0
13	PU_CLERK	5	13900	600
14	PU_MAN	1	11000	0
15	SA_MAN	5	61000	3500
16	SA_REP	30	250500	5400
17	SH_CLERK	20	64300	1700
18	ST_CLERK	20	55700	1500
19	ST_MAN	5	36400	2400

12. Write a SQL query to find each job ids where two or more employees worked for more than 300 days. Return job id.

Code

```
--Q12
select JOB_ID from Job_History
where DATEDIFF(day,START_DATE,END_DATE) >300
group by JOB_ID having count(JOB_ID)>1;
```

Output

	JOB_ID
1	AC_ACCOUNT
2	ST_CLERK

13. Write a SQL query to count the number of employees worked under each manager. Return manager ID and number of employees.

Code

```
--Q13
select MANAGER_ID,count(EMPLOYEE_ID) as 'No of Emp'
from Employee group by MANAGER_ID having MANAGER_ID!=0;
```

Output

	MANAGER_ID	No of Emp
1	100	14
2	101	5
3	102	1
4	103	4
5	108	5
6	114	5
7	120	8
8	121	8
9	122	8
10	123	8
11	124	8
12	145	6
13	146	6
14	147	6
15	148	6
16	149	6
17	201	1
18	205	1

14. Write a SQL query to calculate the average salary of employees who receive a commission percentage for each department. Return department id, average salary.

Code

```
--Q14
select DEPARTMENT_ID,AVG(salary) as 'Average Salary'
from Employee where COMMISSION_PCT!=0 group by DEPARTMENT_ID;
```

Output

	DEPARTMENT_ID	Average Salary
1	0	7000
2	80	8955

15. Write a SQL query to find the departments where more than ten employees receive commissions. Return department id.

Code

```
--Q15
select DEPARTMENT_ID from Employee where COMMISSION_PCT!=0 group by DEPARTMENT_ID having COUNT(EMPLOYEE_ID)>10;
```

Output

	DEPARTMENT_ID
1	80

16. Write a SQL query to find those job titles where maximum salary falls between 10000 and 15000 (Begin and end values are included.). Return job_title, max_salary-min_salary.

Code

```
--Q16
select JOB_TITLE,MAX_SALARY,MIN_SALARY from Jobs where MAX_SALARY between 10000 and 15000;
```

Output

	JOB_TITLE	MAX_SALARY	MIN_SALARY
1	Sales Representative	12008	6000
2	Purchasing Manager	15000	8000
3	Programmer	10000	4000
4	Marketing Manager	15000	9000
5	Public Relations Representative	10500	4500

17. Write a SQL query to find details of those jobs where the minimum salary exceeds 9000.

Return all the fields of jobs

Code

```
--Q17
select * from Jobs where MIN_SALARY>9000;
```

Output

	JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
1	AD_PRES	President	20080	40000
2	AD_VP	Administration Vice President	15000	30000
3	SA_MAN	Sales Manager	10000	20080

18. Write a SQL query to find those employees who work in the same department as ‘Clara’. Exclude all those records where first name is ‘Clara’. Return first name, last name and hire date.

Code

```
--Q18
select FIRST_NAME,LAST_NAME,HIRE_DATE from Employee
where FIRST_NAME!='Clara'
and DEPARTMENT_ID=(select DEPARTMENT_ID from Employee where FIRST_NAME='Clara');
```

Output

	FIRST_NAME	LAST_NAME	HIRE_DATE
1	John	Russell	2004-10-01
2	Karen	Partners	2005-01-05
3	Alberto	Errazuriz	2005-03-10
4	Gerald	Cambrault	2007-10-15
5	Eleni	Zlotkey	2008-01-29
6	Peter	Tucker	2005-01-30
7	David	Bernstein	2005-03-24
8	Peter	Hall	2005-08-20
9	Christopher	Olsen	2006-03-30
10	Nanette	Cambrault	2006-12-09
11	Oliver	Tuvault	2007-11-23
12	Janette	King	2004-01-30
13	Patrick	Sully	2004-03-04
14	Allan	McEwen	2004-08-01
15	Lindsey	Smith	2005-03-10
16	Louise	Doran	2005-12-15
17	Sarath	Sewall	2006-11-03
18	Danielle	Greene	2007-03-19
19	Mattea	Marvins	2008-01-24
20	David	Lee	2008-02-23
21	Sundar	Ande	2008-03-24
22	Amit	Banda	2008-04-21
23	Lisa	Ozer	2005-03-11
24	Harrison	Bloom	2006-03-23
25	Tayler	Fox	2006-01-24
26	William	Smith	2007-02-23
27	Elizabeth	Bates	2007-03-24

19. Write a SQL query to find those employees who earn more than the average salary and work in the same department as an employee whose first name contains the letter 'J'. Return employee ID, first name and salary.

Code

```
--Q19
select EMPLOYEE_ID,FIRST_NAME,SALARY from Employee
where SALARY>(select AVG(salary) from Employee)
and
DEPARTMENT_ID in (select DEPARTMENT_ID from Employee where FIRST_NAME like '%J%');
```

Output

	EMPLOYEE_ID	FIRST_NAME	SALARY
1	108	Nancy	12008
2	109	Daniel	9000
3	110	John	8200
4	111	Ismael	7700
5	112	Jose Manuel	7800
6	113	Luis	6900
7	120	Matthew	8000
8	121	Adam	8200
9	122	Payam	7900
10	123	Shanta	6500
11	145	John	14000
12	146	Karen	13500
13	147	Alberto	12000
14	148	Gerald	11000
15	149	Eleni	10500
16	150	Peter	10000
17	151	David	9500
18	152	Peter	9000
19	153	Christopher	8000
20	154	Nanette	7500
21	155	Oliver	7000
22	156	Janette	10000
23	157	Patrick	9500
24	158	Allan	9000
25	159	Lindsey	8000
26	160	Louise	7500
27	161	Sarath	7000

20. Write a query to display the employee id, name (first name and last name) and the job id column with a modified title SALESMAN for those employees whose job title is ST_MAN and DEVELOPER for whose job title is IT_PROG.

Code

```
--Q20
select EMPLOYEE_ID,CONCAT(FIRST_NAME,LAST_NAME) AS FULL_NAME,
case
    when JOB_ID='ST_MAN' then 'SALESMAN'
    when JOB_ID='IT_PROG' then 'DEVELOPER'
    else JOB_ID
    END
'JOB_ID' from Employee ;
```

Output

	EMPLOYEE_ID	FULL_NAME	JOB_ID
1	100	Steven King	AD_PRES
2	101	Neena Kochhar	AD_VP
3	102	Lex De Haan	AD_VP
4	103	Alexander Hunold	DEVELOPER
5	104	Bruce Ernst	DEVELOPER
6	105	David Austin	DEVELOPER
7	106	Valli Pataballa	DEVELOPER
8	107	Diana Lorentz	DEVELOPER
9	108	Nancy Greenberg	FI_MGR
10	109	Daniel Faviet	FI_ACCOUNT
11	110	John Chen	FI_ACCOUNT
12	111	Ismael Sciarra	FI_ACCOUNT
13	112	Jose Manuel Urman	FI_ACCOUNT
14	113	Luis Popp	FI_ACCOUNT
15	114	Den Raphaely	PU_MAN
16	115	Alexander Khoo	PU_CLERK
17	116	Shelli Baida	PU_CLERK
18	117	Sigal Tobias	PU_CLERK
19	118	Guy Himuro	PU_CLERK
20	119	Karen Colmenares	PU_CLERK
21	120	Matthew Weiss	SALESMAN
22	121	Adam Fripp	SALESMAN
23	122	Payam Kaufling	SALESMAN
24	123	Shanta Vollman	SALESMAN
25	124	Kevin Mourgos	SALESMAN
26	125	Julia Nayer	ST_CLERK
27	126	Irene Mikkilineni	ST_CLERK

1. Write a SQL query to find the first name, last name, department, city, and state province for each employee.

Code

```
--Q21
select FIRST_NAME,LAST_NAME,DEPARTMENT_NAME,CITY,STATE_PROVINCE
from Department right outer join Employee
on Employee.DEPARTMENT_ID=Department.DEPARTMENT_ID
left outer join location on Department.LOCATION_ID=location.LOCATION_ID;
```

Output

	FIRST_NAME	LAST_NAME	DEPARTMENT_NAME	CITY	STATE_PROVIN
1	Steven	King	Executive	Seattle	Washington
2	Neena	Kochhar	Executive	Seattle	Washington
3	Lex	De Haan	Executive	Seattle	Washington
4	Alexander	Hunold	IT	Southlake	Texas
5	Bruce	Ernst	IT	Southlake	Texas
6	David	Austin	IT	Southlake	Texas
7	Valli	Pataballa	IT	Southlake	Texas
8	Diana	Lorentz	IT	Southlake	Texas
9	Nancy	Greenberg	Finance	Seattle	Washington
10	Daniel	Faviet	Finance	Seattle	Washington
11	John	Chen	Finance	Seattle	Washington
12	Ismael	Sciarra	Finance	Seattle	Washington
13	Jose Manuel	Urman	Finance	Seattle	Washington
14	Luis	Popp	Finance	Seattle	Washington
15	Den	Raphaely	Purchasing	Seattle	Washington
16	Alexander	Khoo	Purchasing	Seattle	Washington
17	Shelli	Baida	Purchasing	Seattle	Washington
18	Sigal	Tobias	Purchasing	Seattle	Washington
19	Guy	Himuro	Purchasing	Seattle	Washington
20	Karen	Colmenares	Purchasing	Seattle	Washington
21	Matthew	Weiss	Shipping	South San Francisco	California
22	Adam	Fripp	Shipping	South San Francisco	California
23	Payam	Kaufling	Shipping	South San Francisco	California
24	Shanta	Vollman	Shipping	South San Francisco	California
25	Kevin	Mourgos	Shipping	South San Francisco	California
26	Julia	Nayer	Shipping	South San Francisco	California

Query executed successfully.

2. Write a SQL query to find the first name, last name, salary, and job grade for all employees

Code

```
--Q22
select FIRST_NAME,LAST_NAME,SALARY,GRADE_LEVEL
from Employee join Job_Grades
on SALARY between LOWEST_SAL and HIGHEST_SAL;
```

Output

	FIRST_NAME	LAST_NAME	SALARY	GRADE_LEVEL
1	Shelli	Baida	2900	A
2	Sigal	Tobias	2800	A
3	Guy	Himuro	2600	A
4	Karen	Colmenares	2500	A
5	Irene	Mikkilineni	2700	A
6	James	Landry	2400	A
7	Steven	Markle	2200	A
8	Mozhe	Atkinson	2800	A
9	James	Marlow	2500	A
10	TJ	Olson	2100	A
11	Michael	Rogers	2900	A
12	Ki	Gee	2400	A
13	Hazel	Philtanker	2200	A
14	John	Seo	2700	A
15	Joshua	Patel	2500	A
16	Randall	Matos	2600	A
17	Peter	Vargas	2500	A
18	Martha	Sullivan	2500	A
19	Girard	Geoni	2800	A
20	Timothy	Gates	2900	A
21	Randall	Perkins	2500	A
22	Vance	Jones	2800	A
23	Donald	OConnell	2600	A
24	Douglas	Grant	2600	A
25	David	Austin	4800	B
26	Valli	Pataballa	4800	B

Query executed successfully.

3. Write a SQL query to find all those employees who work in department ID 80 or 40.

   Return first name, last name, department number and department name

Code

```
--Q23
select  FIRST_NAME,LAST_NAME,E.DEPARTMENT_ID,DEPARTMENT_NAME
from Employee E inner join Department D
on E.DEPARTMENT_ID=D.DEPARTMENT_ID
where E.DEPARTMENT_ID=80 or E.DEPARTMENT_ID=40;
```

Output

	FIRST_NAME	LAST_NAME	DEPARTMENT_ID	DEPARTMENT_NAME
1	John	Russell	80	Sales
2	Karen	Partners	80	Sales
3	Alberto	Errazuriz	80	Sales
4	Gerald	Cambrault	80	Sales
5	Eleni	Zlotkey	80	Sales
6	Peter	Tucker	80	Sales
7	David	Bernstein	80	Sales
8	Peter	Hall	80	Sales
9	Christopher	Olsen	80	Sales
10	Nanette	Cambrault	80	Sales
11	Oliver	Tuvault	80	Sales
12	Janette	King	80	Sales
13	Patrick	Sully	80	Sales
14	Allan	McEwen	80	Sales
15	Lindsey	Smith	80	Sales
16	Louise	Doran	80	Sales
17	Sarath	Sewall	80	Sales
18	Clara	Vishney	80	Sales
19	Danielle	Greene	80	Sales
20	Mattea	Marvins	80	Sales
21	David	Lee	80	Sales
22	Sundar	Ande	80	Sales
23	Amit	Banda	80	Sales
24	Lisa	Ozer	80	Sales
25	Harrison	Bloom	80	Sales
26	Tayler	Fox	80	Sales

Query executed successfully.

4. Write a SQL query to find those employees whose first name contains the letter ‘z’.

   Return first name, last name, department, city, and state province.

Code

```
--Q24
select FIRST_NAME,LAST_NAME,DEPARTMENT_NAME,CITY,STATE_PROVINCE
from Employee E inner join Department D
on E.DEPARTMENT_ID=D.DEPARTMENT_ID
inner join location L ON D.LOCATION_ID=L.LOCATION_ID
where  FIRST_NAME like '%z%';
```

Output

	FIRST_NAME	LAST_NAME	DEPARTMENT_NAME	CITY	STATE_PROVINCE
1	Mozhe	Atkinson	Shipping	South San Francisco	California
2	Hazel	Philtanker	Shipping	South San Francisco	California
3	Elizabeth	Bates	Sales	Oxford	Oxford

5. Write a SQL query to find all employees who joined on 1st January 1993 and left on or before 31 August 1997. Return job title, department name, employee name, and joining date of the job.

Code

```
--Q25
select CONCAT(E.FIRST_NAME,E.LAST_NAME) AS 'NAME',JOB_TITLE, DEPARTMENT_NAME,START_DATE
from Job_History H INNER join Employee E ON H.EMPLOYEE_ID=E.EMPLOYEE_ID
inner join Jobs J on H.JOB_ID=J.JOB_ID inner join Department D on H.DEPARTMENT_ID=D.DEPARTMENT_ID
WHERE start_date>='1993-01-01' AND start_date<='1997-08-31';
```

Output

	NAME	JOB_TITLE	DEPARTMENT_NAME	START_DATE
1	Jennifer Whalen	Administration Assistant	Executive	1995-09-17

6. Write a SQL query to calculate the difference between the maximum salary of the job and the employee's salary. Return job title, employee name, and salary difference.

Code

```
--Q26
select JOB_TITLE,CONCAT(E.FIRST_NAME,E.LAST_NAME) AS 'NAME',
(MAX_SALARY-SALARY) as 'Salary Diff'
from Employee E inner join Jobs J on E.JOB_ID=J.JOB_ID;
```

Output

	JOB_TITLE	NAME	Salary Diff
1	President	Steven King	16000
2	Administration Vice President	Neena Kochhar	13000
3	Administration Vice President	Lex De Haan	13000
4	Programmer	Alexander Hunold	1000
5	Programmer	Bruce Ernst	4000
6	Programmer	David Austin	5200
7	Programmer	Valli Pataballa	5200
8	Programmer	Diana Lorentz	5800
9	Finance Manager	Nancy Greenberg	3992
10	Accountant	Daniel Faviet	0
11	Accountant	John Chen	800
12	Accountant	Ismael Sciarra	1300
13	Accountant	Jose Manuel Urman	1200
14	Accountant	Luis Popp	2100
15	Purchasing Manager	Den Raphaely	4000
16	Purchasing Clerk	Alexander Khoo	2400
17	Purchasing Clerk	Shelli Baida	2600
18	Purchasing Clerk	Sigal Tobias	2700
19	Purchasing Clerk	Guy Himuro	2900
20	Purchasing Clerk	Karen Colmenares	3000
21	Stock Manager	Matthew Weiss	500
22	Stock Manager	Adam Fripp	300
23	Stock Manager	Payam Kaufling	600
24	Stock Manager	Shanta Vollman	2000
25	Stock Manager	Kevin Mourgos	2700
26	Stock Clerk	Julia Nayer	1800

Query executed successfully.

7. Write a SQL query to find the department name and the full name (first and last name) of the manager.

Code

```
--Q27
select DEPARTMENT_NAME,CONCAT(E.FIRST_NAME,E.LAST_NAME) AS 'NAME'
from Employee E inner join Department D on E.EMPLOYEE_ID=D.MANAGER_ID;
```

Output

	DEPARTMENT_NAME	NAME
1	Executive	Steven King
2	IT	Alexander Hunold
3	Finance	Nancy Greenberg
4	Purchasing	Den Raphaely
5	Shipping	Adam Fripp
6	Sales	John Russell
7	Administration	Jennifer Whalen
8	Marketing	Michael Hartstein
9	Human Resources	Susan Mavris
10	Public Relations	Hermann Baer
11	Accounting	Shelley Higgins

8. Write a SQL query to find the department name, full name (first and last name) of the manager and their city.

Code

```
--Q28
select DEPARTMENT_NAME,CONCAT(E.FIRST_NAME,E.LAST_NAME) AS 'FULL NAME',
CITY from Department D inner join Employee E on D.MANAGER_ID=E.EMPLOYEE_ID
inner join location L ON D.LOCATION_ID=L.LOCATION_ID;
```

Output

	DEPARTMENT_NAME	FULL NAME	CITY
1	IT	Alexander Hunold	Southlake
2	Shipping	Adam Fripp	South San Francisco
3	Executive	Steven King	Seattle
4	Finance	Nancy Greenberg	Seattle
5	Purchasing	Den Raphaely	Seattle
6	Administration	Jennifer Whalen	Seattle
7	Accounting	Shelley Higgins	Seattle
8	Marketing	Michael Hartstein	Toronto
9	Human Resources	Susan Mavris	London
10	Sales	John Russell	Oxford
11	Public Relations	Hermann Baer	Munich

9. Write a SQL query to find out the full name (first and last name) of the employee with an ID and the name of the country where he/she is currently employed.

Code

```
--Q29
select CONCAT(E.FIRST_NAME,E.LAST_NAME) AS 'FULL NAME',EMPLOYEE_ID,COUNTRY_NAME
from Employee E inner join Department D on E.DEPARTMENT_ID=D.DEPARTMENT_ID
inner join location L on D.LOCATION_ID=L.LOCATION_ID
inner join Countries C on L.COUNTRY_ID=C.COUNTRY_ID;
```

Output

	FULL NAME	EMPLOYEE_ID	COUNTRY_NAME
1	Steven King	100	United States of America
2	Neena Kochhar	101	United States of America
3	Lex De Haan	102	United States of America
4	Alexander Hunold	103	United States of America
5	Bruce Ernst	104	United States of America
6	David Austin	105	United States of America
7	Valli Pataballa	106	United States of America
8	Diana Lorentz	107	United States of America
9	Nancy Greenberg	108	United States of America
10	Daniel Faviet	109	United States of America
11	John Chen	110	United States of America
12	Ismael Sciarra	111	United States of America
13	Jose Manuel Urman	112	United States of America
14	Luis Popp	113	United States of America
15	Den Raphaely	114	United States of America
16	Alexander Khoo	115	United States of America
17	Shelli Baida	116	United States of America
18	Sigal Tobias	117	United States of America
19	Guy Himuro	118	United States of America
20	Karen Colmenares	119	United States of America
21	Matthew Weiss	120	United States of America
22	Adam Fripp	121	United States of America
23	Payam Kaufling	122	United States of America
24	Shanta Vollman	123	United States of America
25	Kevin Mourgos	124	United States of America
26	Julia Nayer	125	United States of America

Query executed successfully.