Q1. List the first name, last name, department name and current job title of all staff.

```
SELECT first_name, last_name, department_name, job_title
FROM (staff NATURAL JOIN departments)NATURAL JOIN jobs;
```

first_name	last_name	department_name	job_title
William	Gietz	Accounting	Public Accountant
Shelley	Higgins	Accounting	Accounting Manager
Jennifer	Whalen	Administration	Administration Assistant
Steven	King	Executive	President
Neena	Kochhar	Executive	Administration Vice President
Lex	De Haan	Executive	Administration Vice President
Daniel	Faviet	Finance	Accountant
John	Chen	Finance	Accountant
Ismael	Sciarra	Finance	Accountant
Jose Manuel	Urman	Finance	Accountant

106 Rows returned

Q2. List every country name and the number of staff in each country. Order the result by country name.

```
SELECT country_name, count(staff_id)
FROM ((countries NATURAL JOIN locations) NATURAL JOIN departments)
NATURAL JOIN staff
    GROUP BY country_name
    ORDER BY country_name;
```

country_name	count(staff_id)
Canada	2
Germany	1
United Kingdom	35
United States of America	68

4 Rows returned

Q3. Who has spent the shortest amount of time in a job? Print their name (first and last name), how long the job lasted in days and the job title.

```
SELECT concat(first_name,' ', last_name) AS name, end_date - start_date, job_title
FROM (job_history NATURAL JOIN jobs) INNER JOIN staff
ON job_history.staff_id = staff.staff_id
ORDER by (end_date - start_date) DESC
LIMIT 1;
```

	name	end_date - start_date	job_title
	Jennifer Whalen	59700	Administration Assistant

1 Row returned

Q4. For all supervisors who supervise five or more staff, list their first name, last name, job title, and the number of staff members they supervise.

```
SELECT supervisor.first_name, supervisor.last_name, jobs.job_title,
count(wrk.staff_id)

FROM staff wrk INNER JOIN staff supervisor

ON wrk.supervisor_id = supervisor.staff_id

INNER JOIN jobs

ON supervisor.job_id = jobs.job_id

GROUP BY wrk.supervisor_id

HAVING count(wrk.staff_id)>=5;
```

first_name	last_name	job_title	count(wrk.staff_id)
Steven	King	President	14
Neena	Kochhar	Administration Vice President	5
Nancy	Greenberg	Finance Manager	5
Den	Raphaely	Purchasing Manager	5
Matthew	Weiss	Stock Manager	8
Adam	Fripp	Stock Manager	8
Payam	Kaufling	Stock Manager	8
Shanta	Vollman	Stock Manager	8
Kevin	Mourgos	Stock Manager	8
John	Russell	Sales Manager	6

14 Rows returned

Q5. Print department names of departments that currently have neither a manager nor any staff.

```
SELECT department_name
FROM departments
WHERE department_id NOT IN
   (SELECT department_id
    FROM departments NATURAL JOIN staff);
```

department_name
Treasury
Corporate Tax
Control And Credit
Shareholder Services
Benefits
Manufacturing
Construction
Contracting
Operations
IT Support

16 Rows returned

Q6. Which region has the most locations? Print the region name, as well as the total number of locations in that region.

```
SELECT region_name, count(location_id)
FROM (locations NATURAL JOIN countries) NATURAL JOIN regions
    GROUP BY region_name
    ORDER BY count(location_id) DESC
    LIMIT 1;
```

	region_name	count(location_id)
	Europe	9

1 Row returned

Q7. Some staff members are eligible for a commission. Find the names of staff who will exceed the maximum salary for their job title if they achieve their commission. The calculation of a staff member's total income if the commission is achieved is their salary multiplied by the commission percent and added onto their original salary. List the staff member's first name, last name and the amount by which they will exceed the maximum salary for their current job role. Order the results from the highest amount to lowest.

```
SELECT first_name, last_name, salary*commission_pct+salary-max_salary AS exceeded_amount

FROM staff NATURAL JOIN jobs

WHERE salary*commission_pct+salary > max_salary

ORDER by exceeded_amount DESC;
```

first_name	last_name	exceeded_amount
Lisa	Ozer	23670.0000
Ellen	Abel	22920.0000
Janette	King	14920.0000
Clara	Vishnev	11170.0000
Peter	Tucker	9920.0000
Patrick	Sully	8170.0000
Allan	McEwen	1420.0000

7 Rows returned

Q8. List the cities, country names and region names for cities outside the United States of America and Europe where no staff work.

```
SELECT city, country_name, region_name
FROM locations NATURAL JOIN countries NATURAL JOIN regions
WHERE (city NOT IN
    (SELECT city
    FROM staff NATURAL JOIN departments NATURAL JOIN locations
    GROUP by city))
AND (country_name != 'United States of America')
AND (region_name != 'Europe');
```

	city	country_name	region_name
	Sao Paulo	Brazil	Americas
	Whitehorse	Canada	Americas
	Mexico City	Mexico	Americas
	Sydney	Australia	Asia
	Beijing	China	Asia
	Bombay	India	Asia
	Tokyo	Japan	Asia
	Hiroshima	Japan	Asia
	Singapore	Singapore	Asia

9 Rows returned

Q9. Print job titles, the date the jobs ended, and the current manager's first and last name for all jobs that ended in 2006 which are currently not managed by Steven King.

```
SELECT job_title, end_date, staff.first_name, staff.last_name
FROM departments NATURAL JOIN job_history NATURAL JOIN jobs
INNER JOIN staff
ON departments.manager_id= staff.staff_id
WHERE (end_date LIKE '2006%')
    AND (staff.first_name != 'Steven')
    AND (staff.last_name != 'King');
```

job_title	end_date	first_name	last_name
Programmer	2006-07-24	Alexander	Hunold
Sales Representative	2006-12-31	John	Russell

2 Rows returned

Q10. Print the first name, last name and current salary for all staff who held more than one job position prior to their current position, and whose current salary is below the average value of maximum salaries for all positions they held in the past prior to their current position.

```
SELECT first_name, last_name, salary
FROM job_history INNER JOIN staff
ON job_history.staff_id = staff.staff_id
INNER JOIN jobs
ON job_history.job_id = jobs.job_id
WHERE staff.staff_id IN
   (SELECT job_history.staff_id
   FROM job_history NATURAL JOIN jobs
   GROUP by job_history.staff_id
   HAVING avg(max_salary) > salary)
GROUP by job_history.staff_id
HAVING count(job_history.staff_id)>1;
```

	first_name	last_name	salary
	Jonathon	Tavlor	86000.00
	Jennifer	Whalen	44000.00

2 Rows returned