**List the first name, last name, department name and current job title of all staff. (1 mark)**

```
SELECT
        first_name, last_name, job_title, department_name
FROM
        (staff
        LEFT JOIN departments ON staff.department_id = departments.department_id)
                NATURAL JOIN
        jobs;
```

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

107 row(s) Returned

**List every country name and the number of staff in each country. Order the result by country name. (1 mark)**

SELECT
    countries.country_name, COUNT(staff_id) AS Count
FROM
    staff
        NATURAL JOIN
    departments
        NATURAL JOIN
    locations
        RIGHT OUTER JOIN
    countries ON locations.country_id = countries.country_id
GROUP BY countries.country_id
ORDER BY country_name

| country_name | Count |
|---|---|
| Argentina | 0 |
| Australia | 0 |
| Belgium | 0 |
| Brazil | 0 |
| Canada | 2 |
| China | 0 |
| Denmark | 0 |
| Egypt | 0 |
| France | 0 |
| Germany | 1 |

25 row(s) returned

**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. (1 mark)**

SELECT
        staff.first_name,
        staff.last_name,
        DATEDIFF(job_history.end_date,
                job_history.start_date),
        jobs.job_title
FROM
        job_history
                NATURAL JOIN
        staff,
        jobs
WHERE
        staff.staff_id = job_history.staff_id
                AND job_history.job_id = jobs.job_id

| first_name | last_name | DATEDIFF(job_history.end_date, job_history.start_date) | job_title |
|------------|-----------|-------------------------------------------------------|-----------|
| Jonathon | Taylor | 282 | Sales Representative |

1 row(s) returned

**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. (2 marks)**

```sql
SELECT
        supervisors.first_name,
        supervisors.last_name,
        job_title,
        COUNT(staff.staff_id) AS number_of_staff_supervised
FROM
        staff supervisors
                INNER JOIN
        staff ON supervisors.staff_id = staff.supervisor_id
                INNER JOIN
        jobs ON supervisors.job_id = jobs.job_id
GROUP BY supervisors.staff_id
HAVING number_of_staff_supervised > 4;
```

| first_name | last_name | job_title | number_of_staff_supervised |
|---|---|---|---|
| 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 row(s) returned

**Print department names of departments that currently have neither a manager nor any staff. (2 marks)**

SELECT

      department_name

FROM

      departments

WHERE

      department_id NOT IN (SELECT

              departments.department_id

          FROM

              departments,

              staff

          WHERE

              staff.department_id = departments.department_id)

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

16 row(s) returned

**Which region has the most locations? Print the region name, as well as the total number of locations in that region. (2 marks)**

SELECT
      regions.region_name, COUNT(regions.region_name)
FROM
      (locations
      NATURAL JOIN countries),
      regions
WHERE
      countries.region_id = regions.region_id
GROUP BY region_name
ORDER BY COUNT(regions.region_name) DESC
LIMIT 1

| region_name | COUNT(regions.region_name) |
|---|---|
| Europe | 9 |

1 row(s) returned

**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. (2 marks)**

```
SELECT
        staff.first_name,
        staff.last_name,
        jobs.job_title,
        (staff.salary + (staff.salary * commission_pct) - max_salary) AS exceeding_salary
FROM
        staff
                NATURAL JOIN
        jobs
WHERE
        staff.job_id = jobs.job_id
                AND staff.commission_pct IS NOT NULL
                AND staff.salary + (staff.salary * commission_pct) > max_salary
ORDER BY exceeding_salary DESC
```

| first_name | last_name | job_title | exceeding_salary |
|---|---|---|---|
| Lisa | Ozer | Sales Representative | 23670.0000 |
| Ellen | Abel | Sales Representative | 22920.0000 |
| Janette | King | Sales Representative | 14920.0000 |
| Clara | Vishnev | Sales Representative | 11170.0000 |
| Peter | Tucker | Sales Representative | 9920.0000 |
| Patrick | Sully | Sales Representative | 8170.0000 |
| Allan | McEwen | Sales Representative | 1420.0000 |

7 row(s) returned

**List the cities, country names and region names for cities outside the United States of America and Europe where no staff work. (3 marks)**

```
SELECT
        city, country_name, region_name
FROM
        locations
NATURAL JOIN
        countries
NATURAL JOIN
        regions
WHERE
        location_id NOT IN (SELECT
                        location_id
                FROM
                        staff
                                NATURAL JOIN
                        departments
                                NATURAL JOIN
                        locations)
        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 row(s) returned*

**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. (3 marks)**

SELECT
        job_title, end_date, first_name, last_name
FROM
        job_history
                NATURAL JOIN
        departments,
        jobs,
        staff
WHERE
        YEAR(end_date) = '2006'
                AND manager_id != 100
                AND jobs.job_id = job_history.job_id
                AND manager_id = staff.staff_id

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

2 row(s) returned

**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 3 INFO20003 A2-S1-2018 average value of maximum salaries for all positions they held in the past prior to their current position. (3 marks)**

SELECT
        first_name, last_name, salary
FROM
        job_history,
        jobs,
        staff
WHERE
        staff.staff_id = job_history.staff_id
                AND job_history.job_id = jobs.job_id
GROUP BY job_history.staff_id
HAVING salary < AVG(max_salary)

| first_name | last_name | salary |
|------------|-----------|----------|
| Jonathon | Tavlor | 86000.00 |
| Jennifer | Whalen | 44000.00 |

2 row(s) returned