The **HR** Entity Relationship Diagram

DEPARTMENTS

department\_id

department\_name

manager\_id

location\_id

LOCATIONS

location\_id

street\_address

postal\_code

city

state\_province

country\_id

COUNTRIES

country\_id

country\_name

region\_id

REGIONS

region\_id

region\_name

EMPLOYEES

employee\_id

first\_name

last\_name

email

phone\_number

hire\_date

job\_id

salary

commission\_pct

manager\_id

department\_id

JOBS  
job\_id

job\_title

min\_salary

max\_salary

JOB\_HISTORY  
employee\_id

start\_date

end\_date

job\_id

department\_id

Write SQL queries to do the following:

**Simple queries**

1. Show the manager for each department, include relevant information.
2. Show all employees with the first name ‘Alexander’.
3. Show all employees belonging to department 170.
4. Show all employees earning less than 10,000 belonging to department 170, ordering the result from the highest to the lowest salary.
5. Show all jobs that pay at least 15,000 salary.
6. List all locations with a street address that has the lucky number “8” in it.
7. List all locations with a post code that ends with “18” or “28” or “98”.
8. List all employees between the ages of 45 to 50 years old.

**Multiple table queries**

1. List employees working in the state province of California.
2. List employees working in countries beginning with the letter A.
3. List all employees that had worked as a "SALES REPRESENTATIVE" previously (not including the current job).
4. Show the salary details for the IT department.
5. List all employees and their manager (must show manager's name)
6. List all employees that work in the same country.

**Aggregate functions**

1. How many employees had been a Stock Clerk previously?
2. How many current Stock Clerks are there?
3. What is the total salary of all employees in the Marketing department?
4. What is the average salary of all the Purchasing Clerk?
5. How many employees are there in Singapore?
6. What is the total salary of each department located in Singapore?
7. What are the departments in Australia that have at least 5 employees?
8. How many employees earn more salary than John Russel?

**Sub-query**

1. Identify the employee with the highest salary.
2. Identify the employee for the job that has the highest salary. Include relevant information.