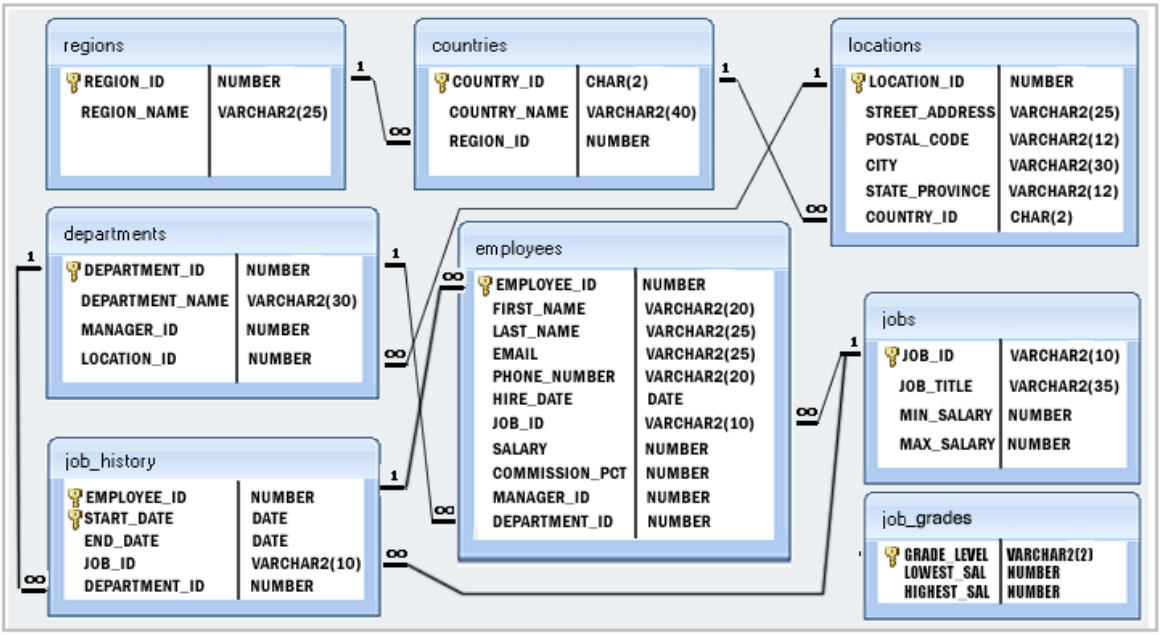
ERD:

**Structure of HR database :**




**Write the following queries:**

1- Write a query to get unique department ID from employee table.1- Write a query to get unique department ID from employee table.
2- Write a query to get all employee details from the employee table order by first name, descending.
3- Write a query to find the names (first_name, last name should be displayed in 1 column), department ID and the name of all the employees.
4- Write a query to get the names (first_name, last_name), salary, PF of all the employees (PF is calculated as 12% of salary).
5- Write a query to display the job history that was done by any employee who is currently drawing more than 10000 of salary.
6- Write a query to get the number of jobs available in the employees table.
7- Write a query to get monthly salary of each and every employee? Bonus: (If you can round 2 decimal places)
8- Write a query to display the names (first_name, last_name) and salary for all employees whose salary is not in the range $10,000 through $15,000 and are in department 30 or 100.
9- Write a query to display the first_name of all employees who have both an "b" and "c" in their first name.
10- Write a query to find the names (first_name, last_name) and salaries of the employees who have a higher salary than the employee whose last_name='Bull'
11- Write a query to find the names (first_name, last_name) of the employees who are managers

## SOLUTIONS

**/* 1- Write a query to get unique department ID from employee table.1- Write a query to get unique department ID from employee table. */**

```
SELECT DISTINCT department_id FROM employees
```

**-- 2- Write a query to get all employee details from the employee table order by first name, descending.**

```
SELECT *
FROM employees
ORDER BY first_name DESC
```

**/* 3- Write a query to find the names (first_name, last name should be displayed in 1 column), department ID and the name of all the employees. */**

```
SELECT first_name || " " || last_name AS full_name, department_id
FROM employees
```

**/* 4- Write a query to get the names (first_name, last_name), salary, PF of all the employees (PF is calculated as 12% of salary). */**

```
SELECT first_name || " " || last_name AS full_name, salary, 0.12*salary
AS PF
FROM employees
```

**/* 5- Write a query to display the job history that was done by any employee who is currently drawing more than 10000 of salary. */**

```
SELECT em.first_name || " " || em.last_name AS full_name,
       em.salary, jh.*
FROM employees AS em
LEFT OUTER JOIN job_history AS jh
ON em.employee_id = jh.employee_id
WHERE em.salary>10000;
```

**-- 6- Write a query to get the number of jobs available in the employees table. (Number of job titles within the company)**

```
SELECT COUNT(DISTINCT job_id)
FROM employees;
```

**-- 7- Write a query to get monthly salary of each and every employee? Bonus: (If you can round 2 decimal places)**

```
SELECT employee_id, ROUND(CAST(salary AS REAL)/12, 2) AS monthly_salary
FROM employees
```

**/* 8- Write a query to display the names (first_name, last_name) and salary for all employees whose salary is not in the range $10,000 through $15,000 and are in department 30 or 100. */**

```
SELECT first_name || " " || last_name AS full_name,
       salary,
       department_id
FROM employees
WHERE (salary NOT BETWEEN 10000 AND 15000)
      AND (department_id IN (30, 100))
```

**-- 9- Write a query to display the first_name of all employees who have both an "b" and "c" in their first name.**

```
SELECT first_name
FROM employees
WHERE first_name LIKE '%b%c%'
```

**/* 10- Write a query to find the names (first_name, last_name) and salaries of the employees who have a higher**
**salary than the employee whose last_name='Bull' */**

**-- Two Solutions one using sub queries and the other by finding the salary for bull and use it in the query (4100)**

**Solution 1:**

```
SELECT first_name || " " || last_name, salary
FROM employees
```

```
WHERE salary>4100
```

**Solution 2:**

```
SELECT first_name || " " || last_name, salary
FROM employees
WHERE salary > (SELECT salary FROM employees WHERE last_name='Bull')
```

**--11- Write a query to find the names (first_name, last_name) of the employees who are managers**
**-- Three Solutions one using sub queries and the other by self join and third find managers list and use it as a fixed value**

**-- Solution 1: self join**

```
SELECT DISTINCT e1.first_name||" "|| e1.last_name AS manager_name
FROM employees e1
JOIN employees e2
ON e2.manager_id= e1.employee_id
ORDER BY manager_name
```

**-- Solution 2: sub query**

```
SELECT first_name || " "|| last_name AS manager_name
FROM employees
WHERE employee_id IN (SELECT DISTINCT manager_id FROM employees)
ORDER BY manager_name
```