# 10. Hive Project

Suppose you are working with a company that manages employee information across different departments. The company has two tables in its database: employees and departments.

**Task 1**: Describe the employees table:

```
CREATE TABLE IF NOT EXISTS employees (
    id INT,
    name STRING,
    age INT,
    department_id INT
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','

INSERT INTO TABLE employees VALUES
(1, 'John Doe', 30, 1),
(2, 'Jane Smith', 25, 2),
(3, 'Bob Johnson', 35, 1),
(4, 'Alice Williams', 28, 2),
(5, 'Michael Brown', 40, 1);
```

**Task 2**: Explain the departments table:

```
CREATE TABLE IF NOT EXISTS departments (
    department_id INT,
    department_name STRING
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
```

INSERT INTO TABLE departments VALUES

(1, 'Engineering'),

(2, 'Marketing'),

(3, 'Sales');

Consider the following scenarios and provide SQL queries to retrieve relevant information:

**Task 3**: Retrieve the details of all employees along with the names of their respective departments.

-- Inner Join Query

SELECT e.id, e.name, e.age, d.department_name

FROM employees e

INNER JOIN departments d ON e.department_id = d.department_id;

**Task 4**: List all employees, including those who haven't been assigned to any department, with the name of their department or 'Unknown' if not assigned.

-- Left Join Query

SELECT e.id, e.name, e.age, COALESCE(d.department_name, 'Unknown') AS department_name

FROM employees e

LEFT JOIN departments d ON e.department_id = d.department_id;

**Task 5**: Display the names of all departments along with the employees working in each department.

-- Right Join Query

SELECT COALESCE(e.id, -1) AS id, COALESCE(e.name, 'Unknown') AS name, COALESCE(e.age, -1) AS age, d.department_name

FROM employees e

RIGHT JOIN departments d ON e.department_id = d.department_id;