In [1]:
```
#pip install ipython-sql # 1)Load the Extension, 2)Check SQL Cell
```

In [3]:
```
%load_ext sql
%sql sqlite://
```

In [4]:
```
%%sql

-- Create a table
CREATE TABLE employees (
    employee_id INT PRIMARY KEY,
    first_name TEXT,
    last_name TEXT,
    department TEXT,
    salary INT
);

-- Insert sample data
INSERT INTO employees (employee_id, first_name, last_name, department,
VALUES
    (1, 'John', 'Doe', 'HR', 5),
    (2, 'Jane', 'Williams', 'Finance', 6),
    (3, 'Alice', 'Johnson', 'IT', 5),
    (4, 'John', 'Brown', 'IT', 2),
    (5, 'John', 'Brown', 'HR', 6),
    (6, 'Eve', 'Williams', 'Finance', 8);
```

```
 * sqlite://
Done.
Done.
```

Out[4]:
```
[]
```

In [5]:
```
%%sql

SELECT department, AVG(salary) as avg_salary
FROM employees
WHERE salary > 5
GROUP BY department;
```

```
 * sqlite://
Done.
```

Out[5]:

| department | avg_salary |
|---|---|
| Finance | 7.0 |
| HR | 6.0 |

```
Steps
1) From
2) Where Salary >5

                HR = 6
                Finance = 6
                Finance = 8

3) Group by departments

                HR = 6
                Finance = 6+8 = 14

4) Select
                HR 6/1
                Finance = 14/2 =  7
```

In [7]:
```
%%sql

SELECT department, AVG(salary) as avg_salary
FROM employees
GROUP BY department
HAVING AVG(salary) > 5;
```

```
 * sqlite://
Done.
```

Out[7]:

| department | avg_salary |
|---|---|
| Finance | 7.0 |
| HR | 5.5 |

In [ ]:
```
Steps
1) From
2) Group by departments
                HR=5+6 = 11
                Finance=6+8 =14
                IT=5+2 =7

3) Having
                HR= 11/2 = 5.5
                Finance=6+8=14/2 =7
                IT= 7/2 = 3.5 ------ not filtered


4) Select
                HR 5.5
                Finance 7
```

In [ ]: