Simon Abhijet Biswas

CSE370: Database Systems

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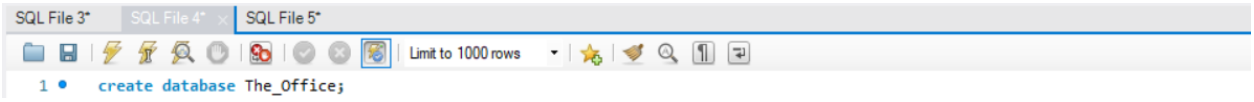
Brac University

Lab 04: Database Challenge 01

- **Create and use the database “The_Office”**

create database The_Office;

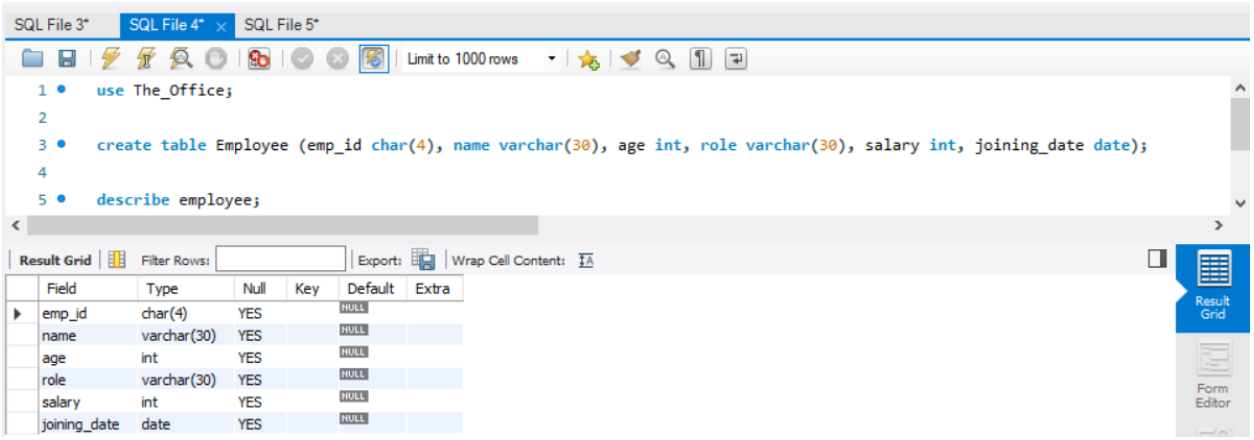


- **Create Employee tables**

use The_Office;

create table Employee (emp_id char(4), name varchar(30), age int, role varchar(30), salary int, joining_date date);

describe table employee;



- **Insert Data into the Tables**

use The_Office;

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E001', 'Michael Scott', 40, 'Manager', 100000, '1999-09-20');

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E002', 'Jim Harper', 30, 'Sales Executive', 60000, '2004-09-30');

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E003', 'Pam Beesly', 28, 'Receptionist', 25000, '2003-09-30');

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E004', 'Angela Martin', '33', 'Accountant', 65000, '2005-09-28');

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E005', 'Dwight Shrute', 32, 'Assistant Manager', 60000, '2003-09-30');

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E006', 'Kelly Kapoor', 29, 'Marketing Executive', 45000, '2003-09-30');

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E007', 'Andrew Bernard', 30, 'Sales Executive', 50000, '2007-05-10');

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E008', 'Kevin Malone', 28, 'Accountant', 60000, '2004-10-30');

SQL File 3* | SQL File 4* | SQL File 5*

Limit to 1000 rows

```
use The_Office;

insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E001', 'Michael Scott', 40, 'Manager',  100000, '1999-09-20');
insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E002',  'Jim Harper', 30, 'Sales Executive', 60000, '2004-09-30');
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value ('E007',  'Andrew Bernard', 30, 'Sales Executive', 50000, '2007-05-10');
insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E008',  'Kevin Malone', 28, 'Accountant', 60000, '2004-10-30');
insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E009',  'Toby Flender', 35, 'HR Manager', 70000, '2004-09-30');
insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E010',  'Phyllis Vance', 40, 'Sales Executive', 61000, '1999-09-20');
insert into employee (emp_id, name, age, role, salary, joining_date)
value ('E011',  'Creed Bratton', 50, 'Sales Executive', 80000, '1980-06-01');
```

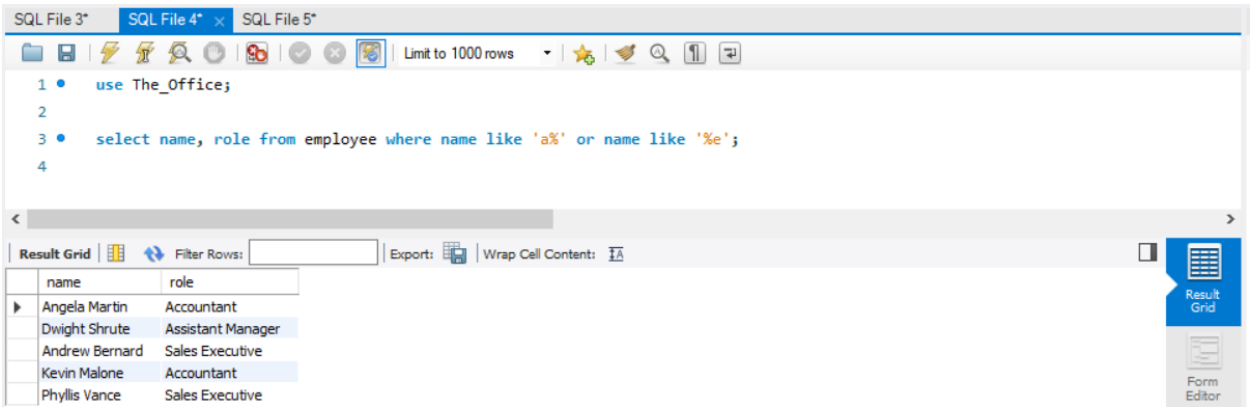
Employee Table:

emp_id	name	age	role	salary	joining_date
E001	Michael Scott	40	Manager	100000	1999-09-20
E002	Jim Harper	30	Sales Executive	60000	2004-09-30
E003	Pam Beesly	28	Receptionist	25000	2003-09-30
E004	Angela Martin	33	Accountant	65000	2005-09-28
E005	Dwight Shrute	32	Assistant Manager	60000	2003-09-30
E006	Kelly Kapoor	29	Marketing Executive	45000	2003-09-30
E007	Andrew Bernard	30	Sales Executive	50000	2007-05-10
E008	Kevin Malone	28	Accountant	60000	2004-10-30
E009	Toby Flender	35	HR Manager	70000	2004-09-30
E010	Phyllis Vance	40	Sales Executive	61000	1999-09-20
E011	Creed Bratton	50	Sales Executive	80000	1980-06-01

- **Find the Name and Role of Employees whose Name starts with “a” or ends with “e”**

use The_Office;

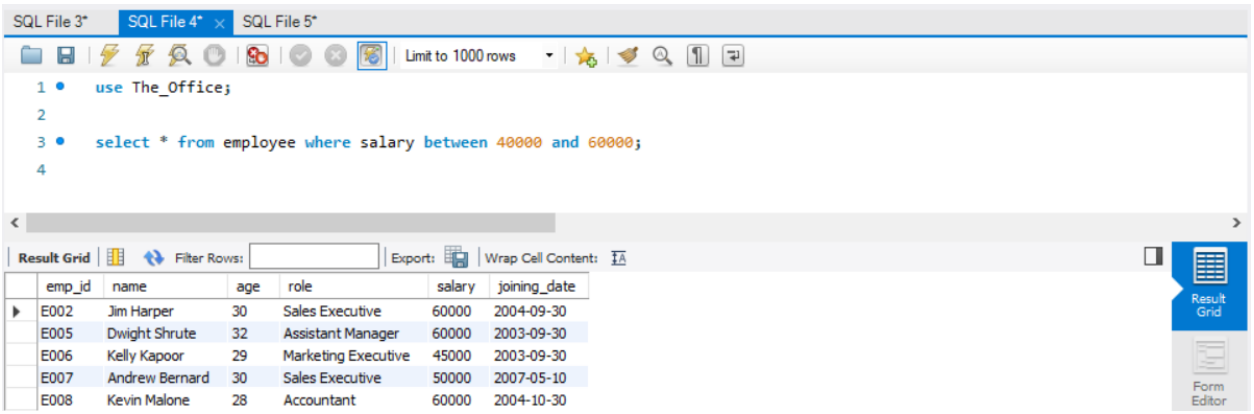
select name, role from employee where name like 'a%' or name like '%e';



- **Find the details of Employees who have Salary between 40000 and 60000**

use The_Office;

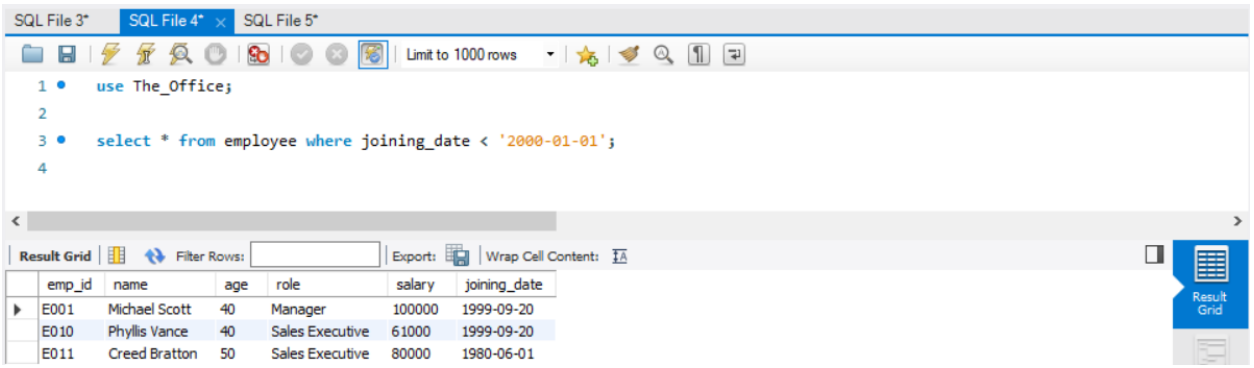
*select * from employee where salary between 40000 and 60000;*



- **Find the details of Employees who have joined before the Year 2000**

use The_Office;

*select * from employee where joining_date < '2000-01-01';*

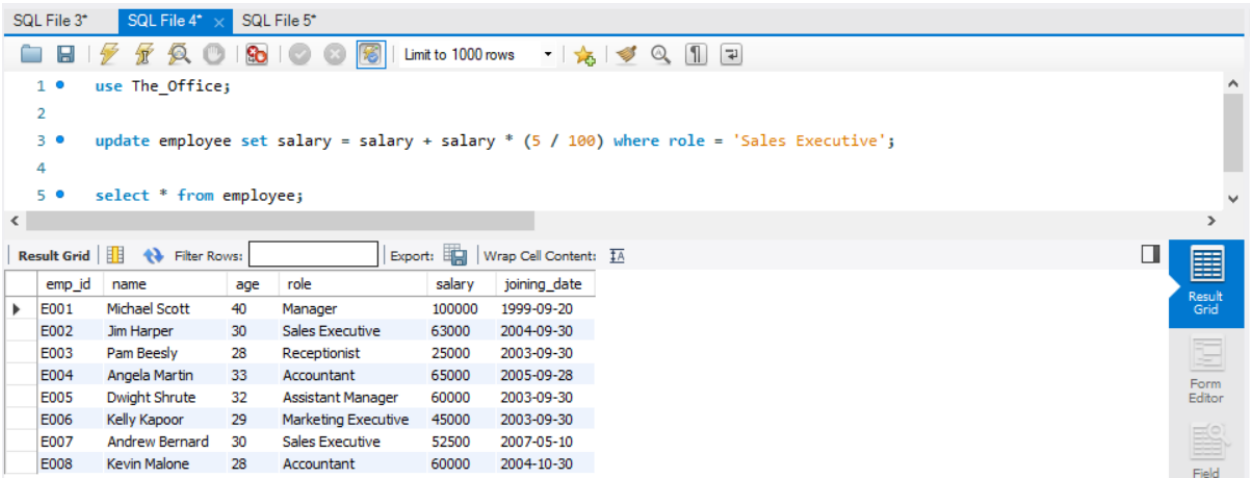


- **There will be 5% raise in Salary for all Sales executives, as they have done an excellent job last year. Update the table with the new raised Salary. Check if the Salary was updated.**

use The_Office;

*update employee set salary = salary + salary * (5 / 100) where role = 'Sales Executive';*

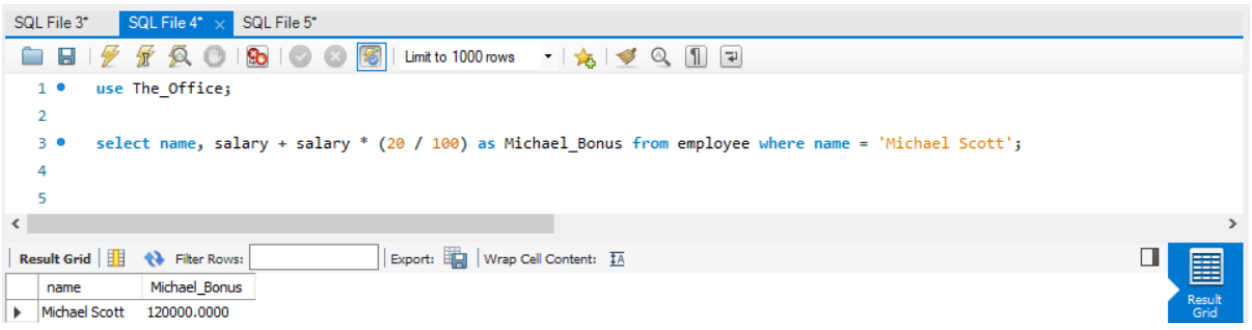
*select * from employee;*



- **Michael Scott will get a bonus of 20% on his salary for excellent leadership initiatives in last year. Calculate his bonus and use alias ("Michael_Bonus") for the column header**

use The_Office;

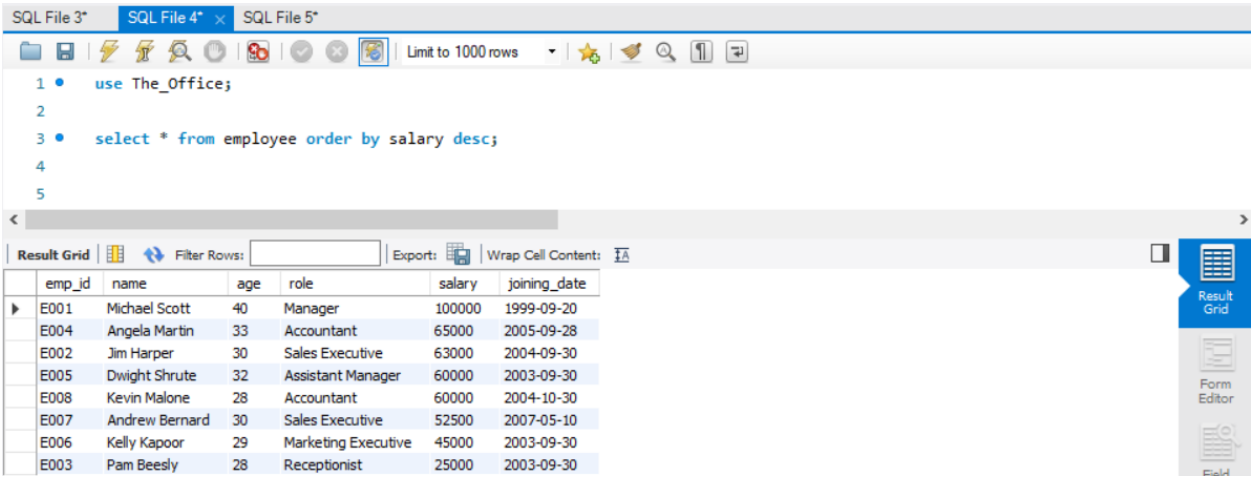
*select name, salary + salary * (20 / 100) as Michael_Bonus from employee where name = 'Michael Scott';*



- **Show the details of all Employees according to their Salary sorted from higher to lower**

use The_Office;

*select * from employee order by salary desc;*

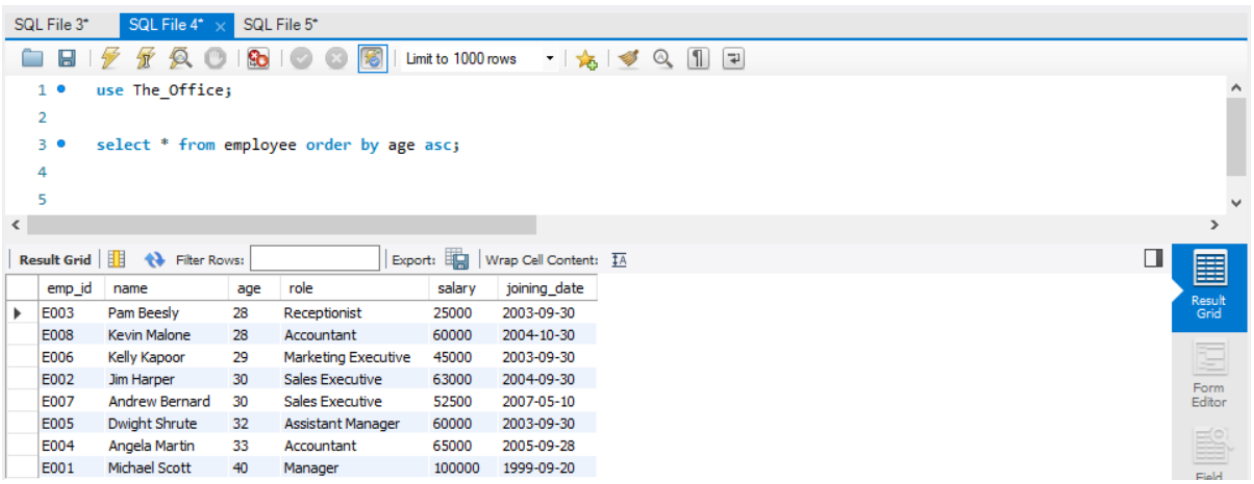


emp_id	name	age	role	salary	joining_date
E001	Michael Scott	40	Manager	100000	1999-09-20
E004	Angela Martin	33	Accountant	65000	2005-09-28
E002	Jim Harper	30	Sales Executive	63000	2004-09-30
E005	Dwight Shrute	32	Assistant Manager	60000	2003-09-30
E008	Kevin Malone	28	Accountant	60000	2004-10-30
E007	Andrew Bernard	30	Sales Executive	52500	2007-05-10
E006	Kelly Kapoor	29	Marketing Executive	45000	2003-09-30
E003	Pam Beesly	28	Receptionist	25000	2003-09-30

- **Show the details of all Employees according to their Age sorted from lower to higher**

use The_Office;

*select * from employee order by age asc;*

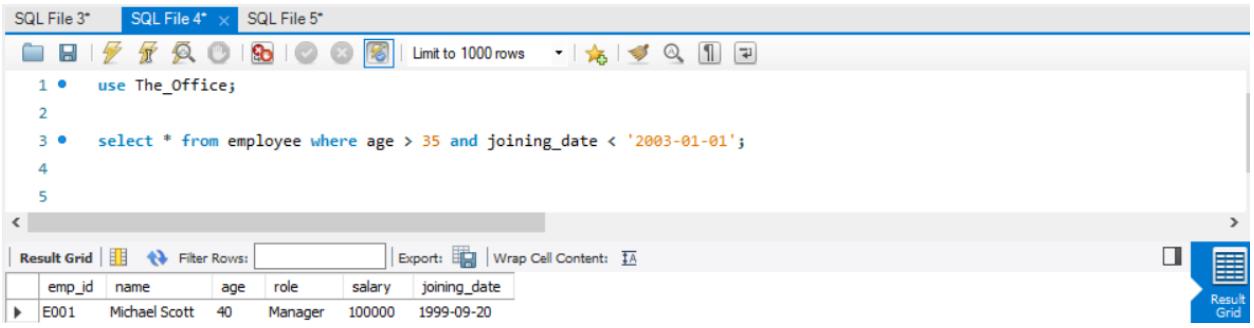


emp_id	name	age	role	salary	joining_date
E003	Pam Beesly	28	Receptionist	25000	2003-09-30
E008	Kevin Malone	28	Accountant	60000	2004-10-30
E006	Kelly Kapoor	29	Marketing Executive	45000	2003-09-30
E002	Jim Harper	30	Sales Executive	63000	2004-09-30
E007	Andrew Bernard	30	Sales Executive	52500	2007-05-10
E005	Dwight Shrute	32	Assistant Manager	60000	2003-09-30
E004	Angela Martin	33	Accountant	65000	2005-09-28
E001	Michael Scott	40	Manager	100000	1999-09-20

- **Show details of Employees whose age is more than 35 and who joined before 2003**

use The_Office;

*select * from employee where age > 35 and joining_date < '2003-01-01';*

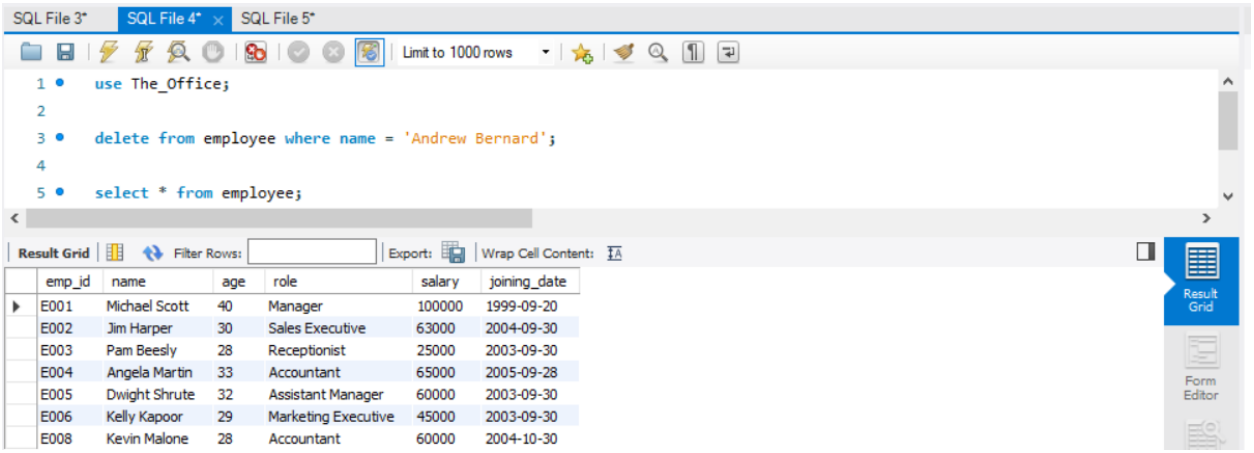


- **Turns out Andrew Bernard has been lying about his Age, he is actually 80 years old. So he should retire. Delete him from the table**

use The_Office;

delete from employee where name = 'Andrew Bernard';

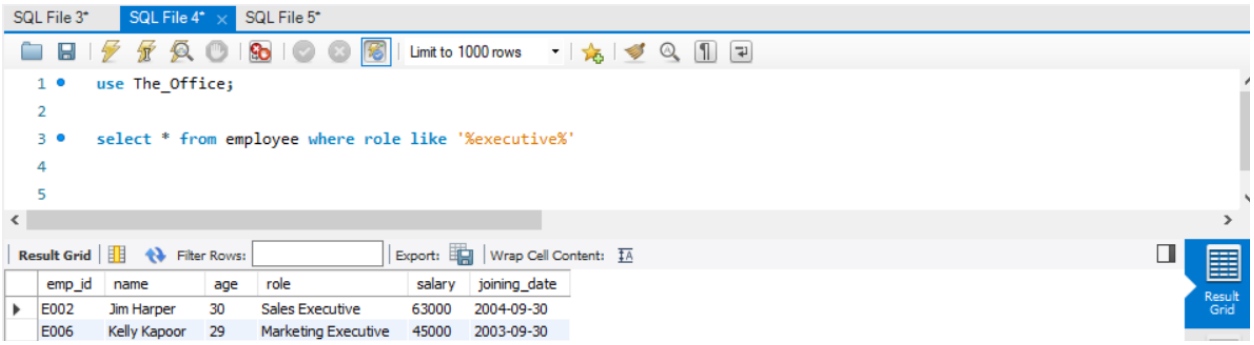
*select * from employee;*



- **Find the details of Employees who have the word “executive” in their Role**

use The_Office;

*select * from employee where role like '%executive%';*

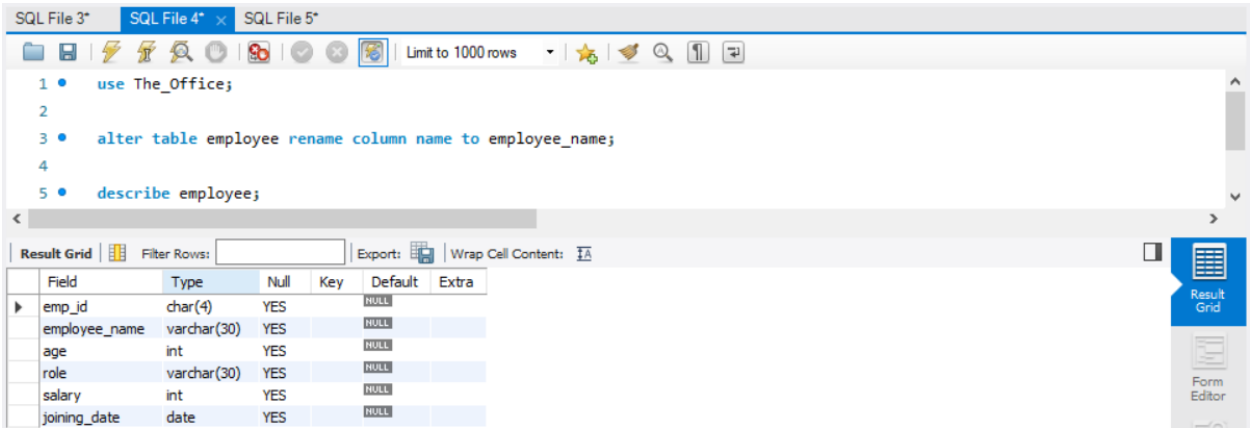


- **Change the attribute “Name” to “Employee_Name”**

use The_Office;

alter table employee rename column name to employee_name;

describe employee;

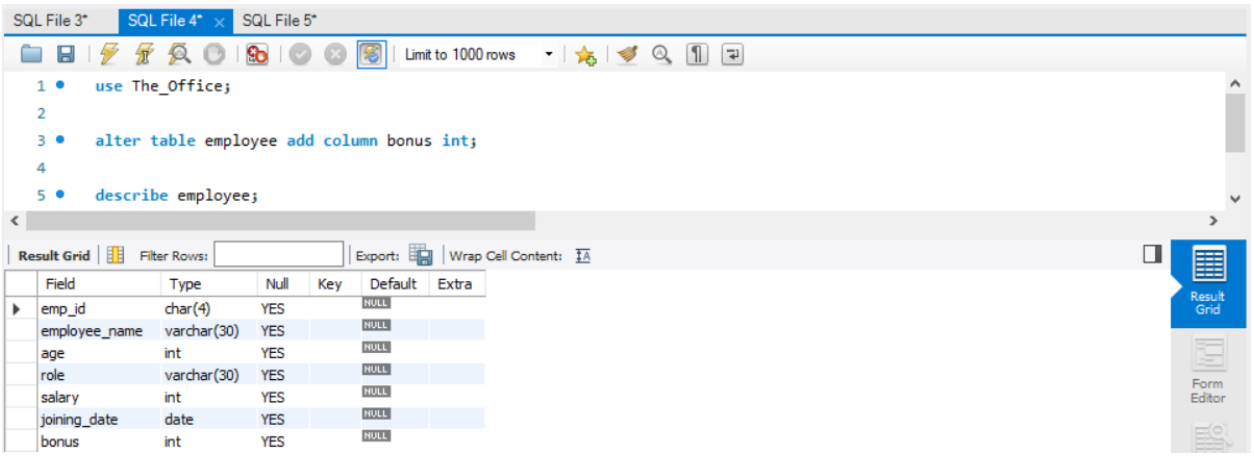


- **Add attribute “Bonus” to the employee table**

use The_Office;

alter table employee add column bonus int;

describe employee;

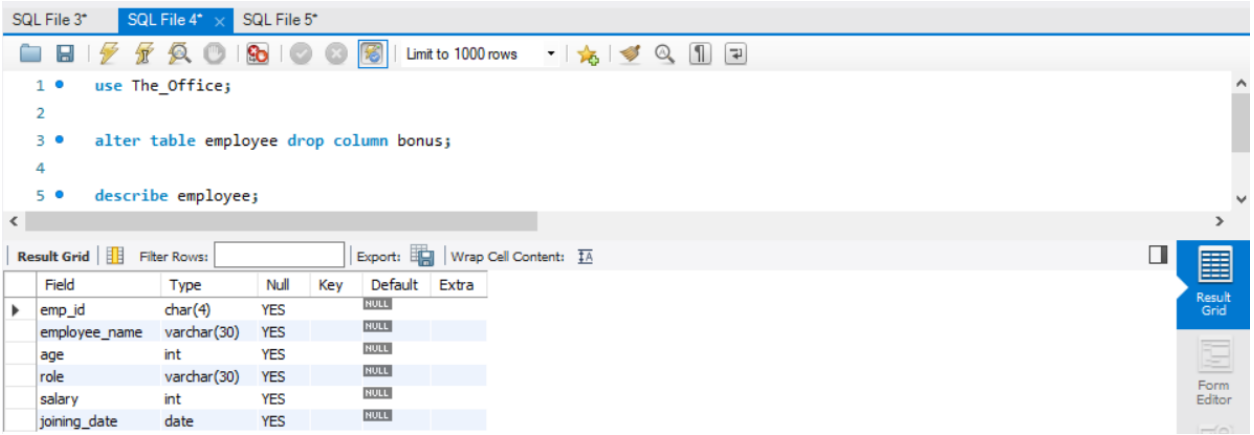


- **Delete attribute “Bonus” from the table**

use The_Office;

alter table employee drop column bonus;

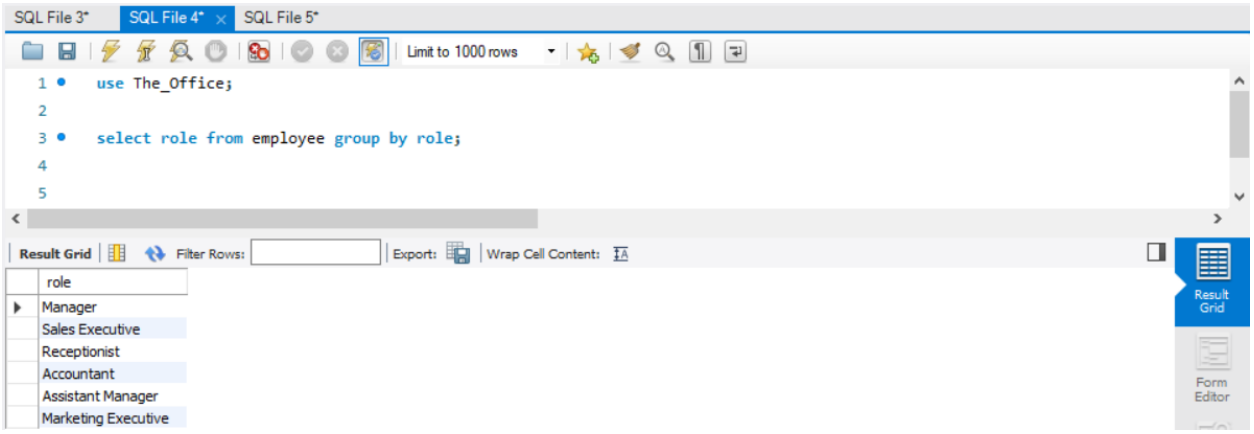
describe employee;



- **List the Names of different job Roles in the office. There should not be any repetition in your list**

use The_Office;

select role from employee group by role;



Thank You