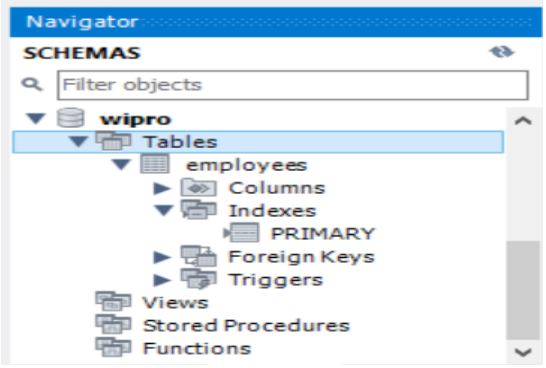
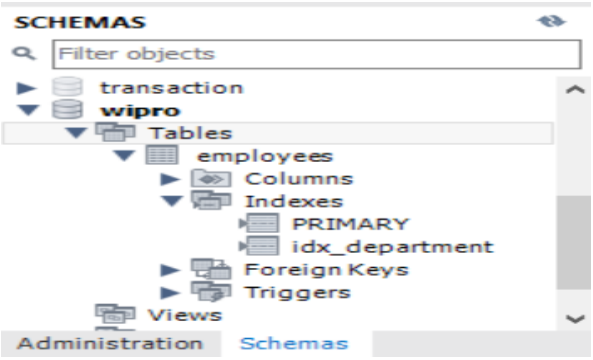
Assignment 5 :- Demonstrate the creation of an index on a table and discuss how it improves query performance. Use a DROP INDEX statement to remove the index and analyze the impact on query execution.

Queries :-

Database structure without having Index :-

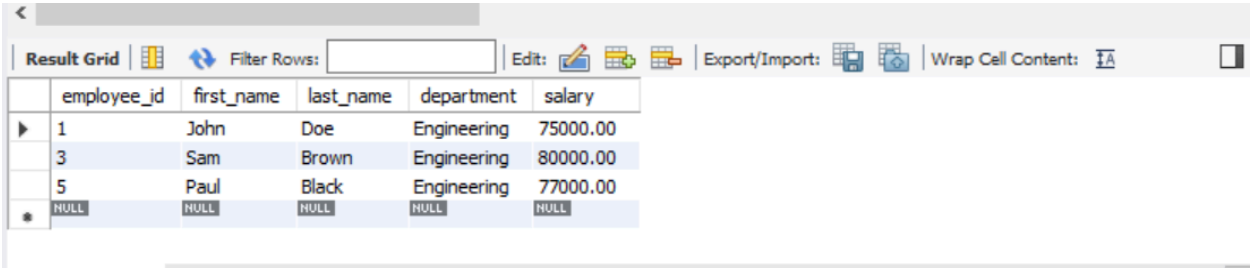


Database structure with having Index :-



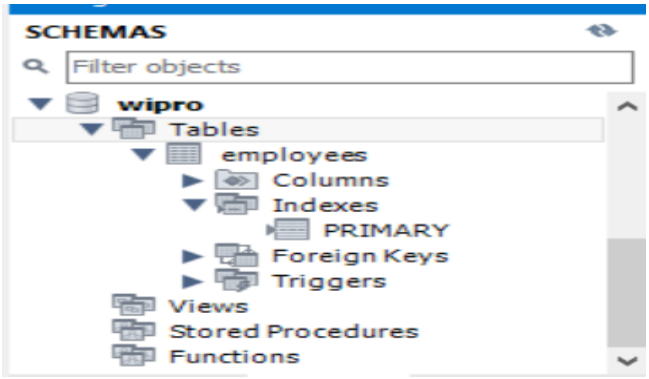

```
create database wipro;
use wipro;
CREATE TABLE employees (
    employee_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    department VARCHAR(50),
    salary DECIMAL(10, 2)
);
```

```
INSERT INTO employees (employee_id, first_name, last_name, department, salary)
VALUES
(1, 'John', 'Doe', 'Engineering', 75000),
(2, 'Jane', 'Smith', 'HR', 65000),
(3, 'Sam', 'Brown', 'Engineering', 80000),
(4, 'Sue', 'Green', 'Marketing', 72000),
(5, 'Paul', 'Black', 'Engineering', 77000);

CREATE INDEX idx_department ON employees(department);

SELECT * FROM employees WHERE department = 'Engineering';
```

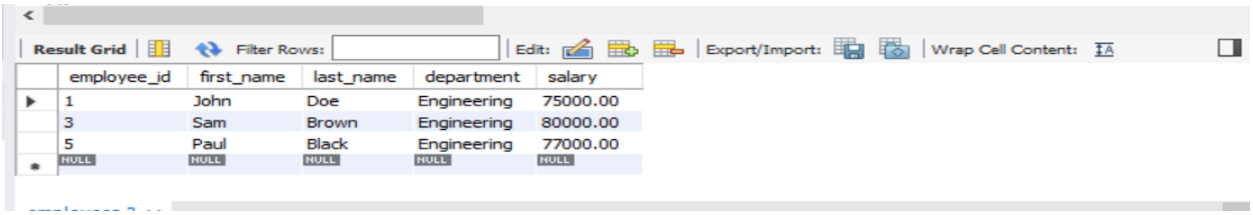


employee_id	first_name	last_name	department	salary
1	John	Doe	Engineering	75000.00
3	Sam	Brown	Engineering	80000.00
5	Paul	Black	Engineering	77000.00
NULL	NULL	NULL	NULL	NULL

```
DROP INDEX idx_department ON employees;
```




```
SELECT * FROM employees WHERE department = 'Engineering';
```



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