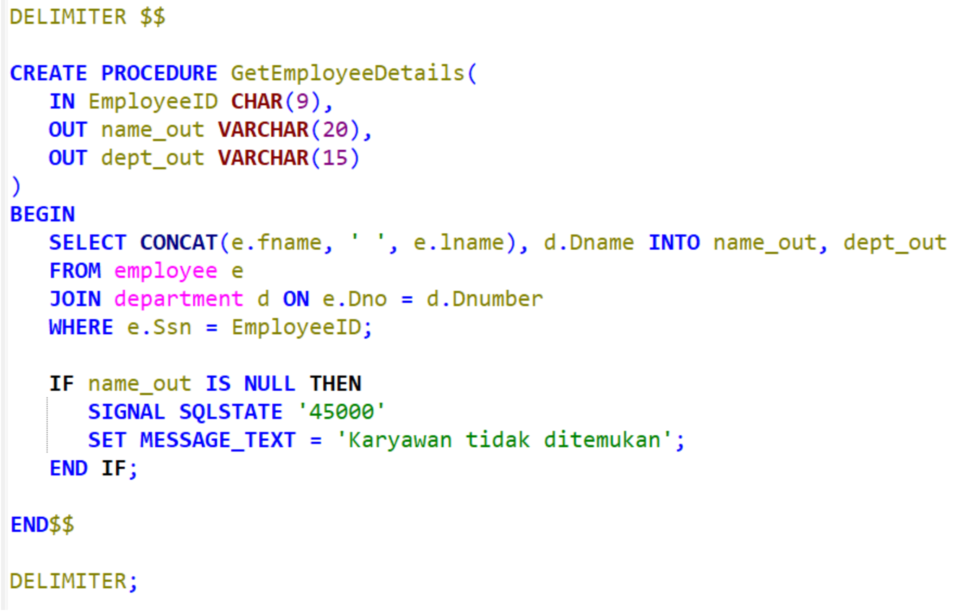
Nama : Indah Nurul Janah

NIM : 24060123120009

Link Source Code : https://github.com/indahjann/Tugas-MBD

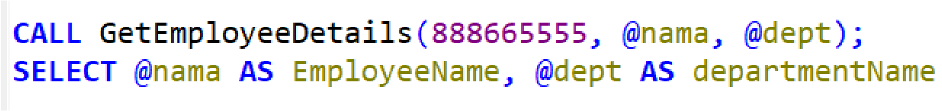
1. Buat Stored Procedure bernama GetEmployeeDetails yang menerima EmployeeID sebagai input dan mengembalikan:
   a. Nama karyawan melalui parameter OUT name_out.
   b. Nama departemen tempat karyawan bekerja melalui parameter OUT dept_out.
   c. Jika karyawan tidak ditemukan, tampilkan pesan error.

Procedure :



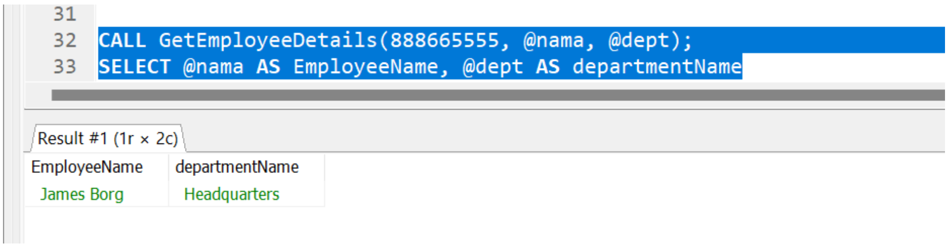
```
DELIMITER $$

CREATE PROCEDURE GetEmployeeDetails(
   IN EmployeeID CHAR(9),
   OUT name_out VARCHAR(20),
   OUT dept_out VARCHAR(15)
)
BEGIN
   SELECT CONCAT(e.fname, ' ', e.lname), d.Dname INTO name_out, dept_out
   FROM employee e
   JOIN department d ON e.Dno = d.Dnumber
   WHERE e.Ssn = EmployeeID;

   IF name_out IS NULL THEN
      SIGNAL SQLSTATE '45000'
      SET MESSAGE_TEXT = 'Karyawan tidak ditemukan';
   END IF;

END$$

DELIMITER;
```

Pemanggilan Procedure :



```
CALL GetEmployeeDetails(888665555, @nama, @dept);
SELECT @nama AS EmployeeName, @dept AS departmentName
```

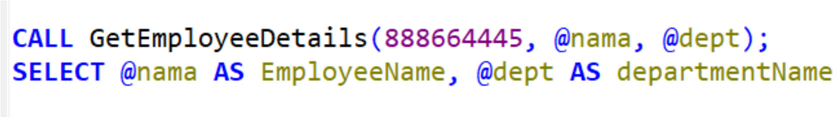
Output :



```
CALL GetEmployeeDetails(888665555, @nama, @dept);
SELECT @nama AS EmployeeName, @dept AS departmentName
```

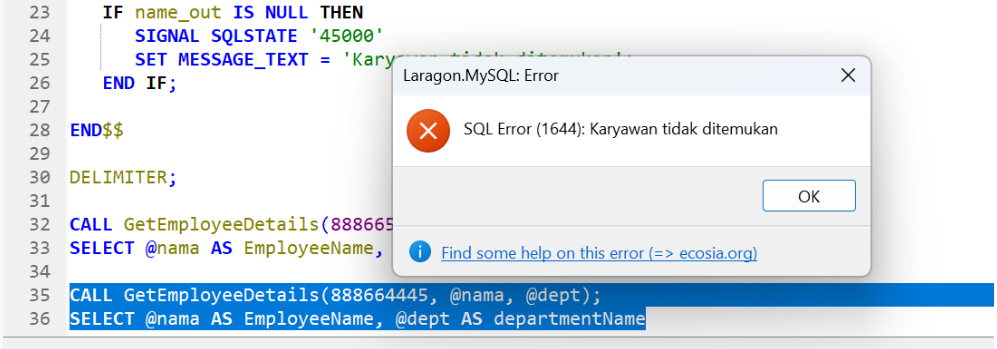
EmployeeName	departmentName
James Borg	Headquarters

Pemanngilan Procedure :



```
CALL GetEmployeeDetails(888664445, @nama, @dept);
SELECT @nama AS EmployeeName, @dept AS departmentName
```

Output :



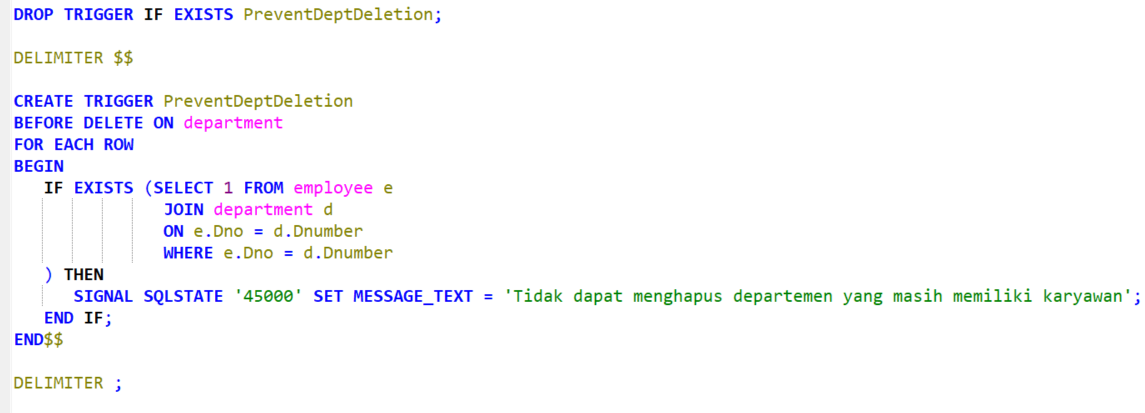
```
    IF name_out IS NULL THEN
        SIGNAL SQLSTATE '45000'
        SET MESSAGE_TEXT = 'Kary
    END IF;

END$$

DELIMITER;

CALL GetEmployeeDetails(888665
SELECT @nama AS EmployeeName,

CALL GetEmployeeDetails(888664445, @nama, @dept);
SELECT @nama AS EmployeeName, @dept AS departmentName
```

Laragon.MySQL: Error

SQL Error (1644): Karyawan tidak ditemukan

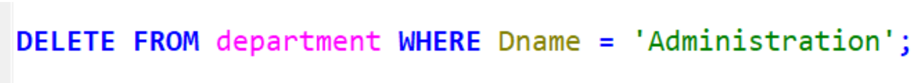
2. Buat Trigger bernama PreventDeptDeletion yang mencegah penghapusan departemen dari tabel department jika masih ada karyawan (employee) yang bekerja di departemen tersebut.

   Trigger :



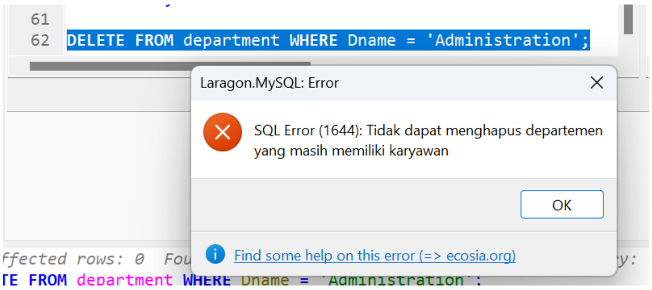
```
DROP TRIGGER IF EXISTS PreventDeptDeletion;

DELIMITER $$

CREATE TRIGGER PreventDeptDeletion
BEFORE DELETE ON department
FOR EACH ROW
BEGIN
    IF EXISTS (SELECT 1 FROM employee e
                JOIN department d
                ON e.Dno = d.Dnumber
                WHERE e.Dno = d.Dnumber
    ) THEN
        SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Tidak dapat menghapus departemen yang masih memiliki karyawan';
    END IF;
END$$

DELIMITER ;
```

   Penggunaan Trigger :



```
DELETE FROM department WHERE Dname = 'Administration';
```

Output :



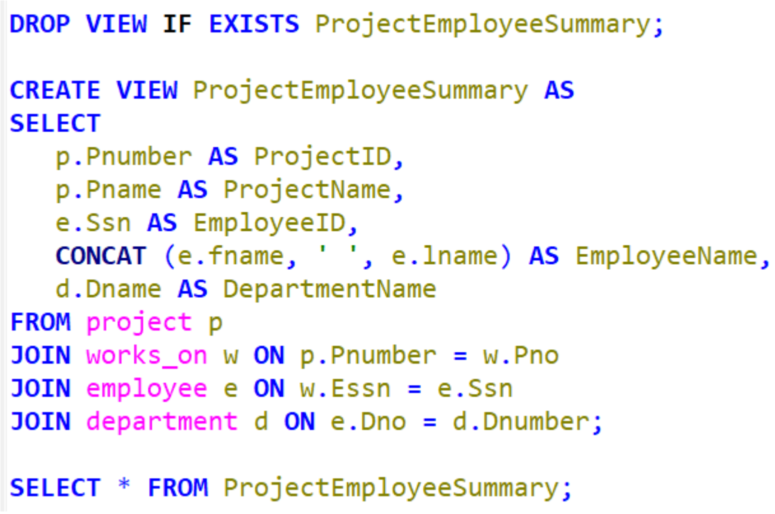
```
DELETE FROM department WHERE Dname = 'Administration';
```

SQL Error (1644): Tidak dapat menghapus departemen yang masih memiliki karyawan

```
ffected rows: 0  Fou
TE FROM department WHERE Dname = 'Administration';
```

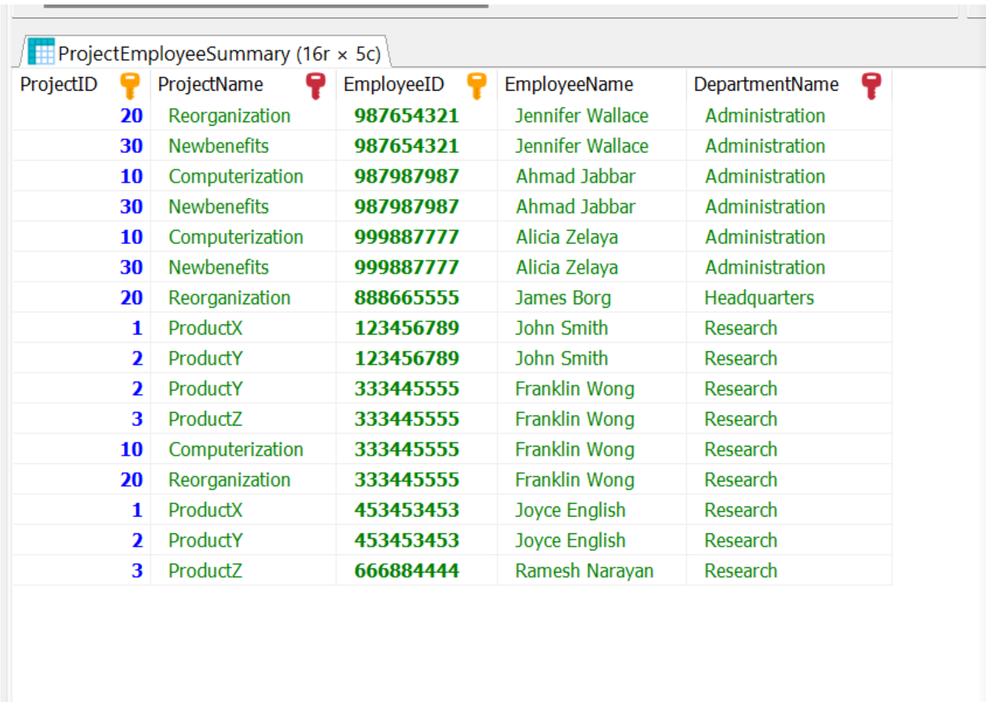
3. Buat View bernama ProjectEmployeeSummary yang menampilkan ringkasan proyek dan karyawan yang bekerja di setiap proyek. View ini menampilkan:
    a. Id project
    b. Nama project
    c. Id employee
    d. Nama employee
    e. Nama departemen

View dan Penggunaannya :



```
DROP VIEW IF EXISTS ProjectEmployeeSummary;

CREATE VIEW ProjectEmployeeSummary AS
SELECT
   p.Pnumber AS ProjectID,
   p.Pname AS ProjectName,
   e.Ssn AS EmployeeID,
   CONCAT (e.fname, ' ', e.lname) AS EmployeeName,
   d.Dname AS DepartmentName
FROM project p
JOIN works_on w ON p.Pnumber = w.Pno
JOIN employee e ON w.Essn = e.Ssn
JOIN department d ON e.Dno = d.Dnumber;

SELECT * FROM ProjectEmployeeSummary;
```

Output :



ProjectEmployeeSummary (16r × 5c)

ProjectID	ProjectName	EmployeeID	EmployeeName	DepartmentName
20	Reorganization	987654321	Jennifer Wallace	Administration
30	Newbenefits	987654321	Jennifer Wallace	Administration
10	Computerization	987987987	Ahmad Jabbar	Administration
30	Newbenefits	987987987	Ahmad Jabbar	Administration
10	Computerization	999887777	Alicia Zelaya	Administration
30	Newbenefits	999887777	Alicia Zelaya	Administration
20	Reorganization	888665555	James Borg	Headquarters
1	ProductX	123456789	John Smith	Research
2	ProductY	123456789	John Smith	Research
2	ProductY	333445555	Franklin Wong	Research
3	ProductZ	333445555	Franklin Wong	Research
10	Computerization	333445555	Franklin Wong	Research
20	Reorganization	333445555	Franklin Wong	Research
1	ProductX	453453453	Joyce English	Research
2	ProductY	453453453	Joyce English	Research
3	ProductZ	666884444	Ramesh Narayan	Research