Information System - Lab work 4

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Database

- employees (emp_no, birth_date, first_name, last_name, gender)
- departments (dept_no, dept_name)
- dept_emp (emp_no, dept_no, from_date, to_date)
- dept_manager (dept_no, emp_no, from_date, to_date)
- titles (emp_no, title, from_date, to_date)
- salaries (emp_no, salary, from_date, to_date)

Requirements

1. Update Development (d005) and Research (d008) into Research and Development (d010).
2. Update Marketing (d001) and Sales (d007) into Marketing and Sales (d011).

Main steps & Explanation

1. Insert new values into "departments".

   ```
   INSERT INTO departments VALUES
   ("d010", "Research and Development"),
   ("d011", "Marketing and Sales");
   ```

   First and foremost, it's necessary that we add the new information of departments (Research and Development(d010) and Marketing and Sales (d011)) to avoid the data conflict in schema.

2. Update information of all employees/managers from original department to new one.

- Update dept_manager:

```
UPDATE IGNORE dept_manager
SET dept_no = 'd010'
WHERE dept_no IN ('d005', 'd008') ;

UPDATE IGNORE dept_manager
SET dept_no = 'd011'
WHERE dept_no IN ('d001','d007') ;
```

- Update dept_emp:

```
UPDATE IGNORE dept_emp
SET dept_no = 'd010'
WHERE dept_no IN ('d005', 'd008') ;

UPDATE IGNORE dept_emp
SET dept_no = 'd011'
WHERE dept_no IN ('d001','d007') ;
```

After the addition of new information to database, the old information (Development (d005) and Research (d008), Marketing (d001) and Sales (d007)) should be updated to the required ones for both dept_manager and dept_emp. Thanks to step 1, the tuples can be updated the new value using queries without conflict.

3. Delete the old unnecessary information.

```
DELETE FROM departments
WHERE dept_no IN ('d005', 'd008','d001','d007');
```

Results

The result of the process below illustrates in Figure 1 as below:

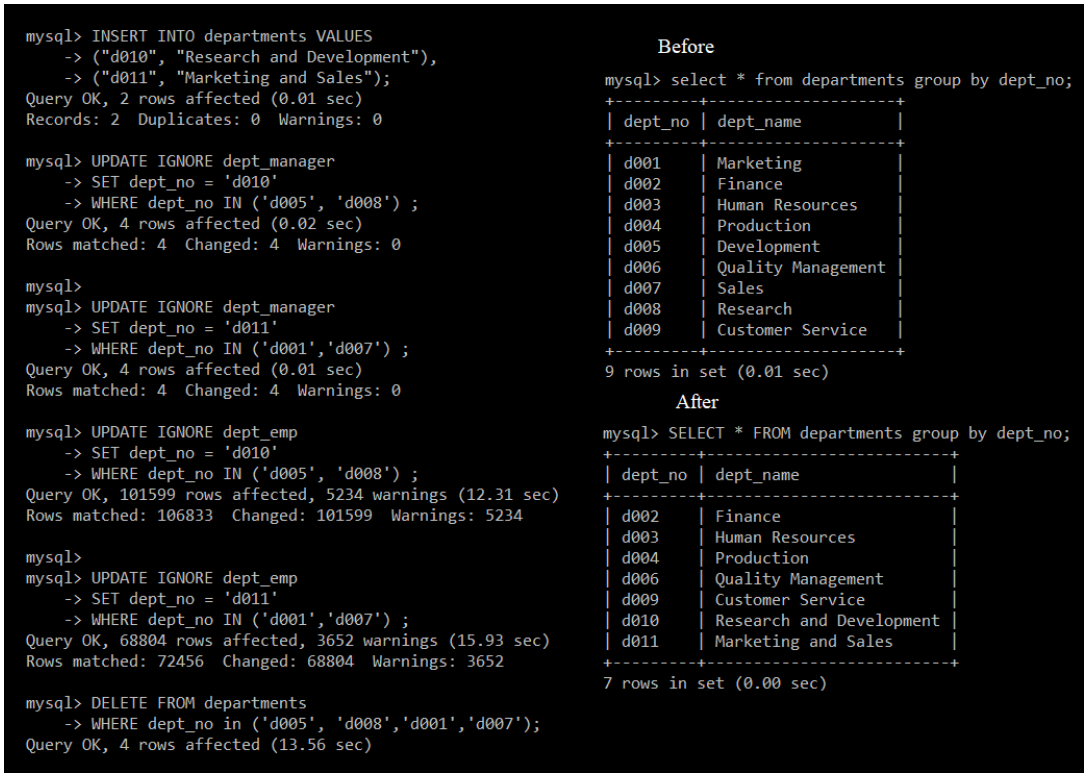

Figure 1: Implementation and results