

1. Steps & Explanation

- I Insert a new record into the department table with dept_no='d010' and dept_name='Research and Development' We need this new row in the database to have a department called 'Research and Development' so as to be able to update employees in the Development and Research department to our newly created department.
- II Insert a new record into the department table with dept_no='d011' and dept_name='Marketing and Sales' We need this new row in the database to have a department called 'Marketing and Sales' so as to be able to update employees in the Marketing and Sales department to our newly created department.
- III We need to identify the tables that uses the dept_no and update the dept_no. The tables in this case are dept_emp and dept_manager.
- IV We need to update the dept_no 'd005' and 'd008' to 'd010' like wise we need to update dept_no 'd001' and 'd007' to 'd011'. These operation should be performed on the dept_emp and dept_manager tables.
- V When updating we need to use the 'IGNORE' keyword after the update. The reason to use this keyword is because if there is a conflict with the primary key you won't be able to replace the department. Using this keyword helps delete the record and replaces it with the new record.

2. SQL commands and output

- INSERTING INTO DEPARTMENTS

```
INSERT INTO departments(dept_no,dept_name) VALUES ('d010','Research
and Development');
Query OK, 1 row affected (0.08 sec)
```

```
INSERT INTO departments(dept_no,dept_name) VALUES ('d011','Marketing
and Sales');
Query OK, 1 row affected (0.06 sec)
```

- UPDATING DEPARTMENT IN DEPT_EMP

```
UPDATE IGNORE dept_emp SET dept_no='d010' WHERE dept_no='d005';
Query OK, 85707 rows affected (21.11 sec)
Rows matched: 85707 Changed: 85707 Warnings: 0
```

```
UPDATE IGNORE dept_emp SET dept_no='d010' WHERE dept_no='d008';  
Query OK, 15892 rows affected, 5234 warnings (6.35 sec)  
Rows matched: 21126 Changed: 15892 Warnings: 5234
```

```
UPDATE IGNORE dept_emp SET dept_no='d011' WHERE dept_no='d001'  
OR dept_no='d007';  
Query OK, 68804 rows affected, 3652 warnings (12.34 sec)  
Rows matched: 72456 Changed: 68804 Warnings: 3652
```

- UPDATING DEPARTMENT IN DEPT_MANAGER

```
UPDATE IGNORE dept_manager SET dept_no='d010' WHERE dept_no='d005'  
OR dept_no='d008';  
Query OK, 4 rows affected (0.16 sec)  
Rows matched: 4 Changed: 4 Warnings: 0
```

```
UPDATE IGNORE dept_manager SET dept_no='d011' WHERE dept_no='d001'  
OR dept_no='d007';  
Query OK, 4 rows affected (0.08 sec)  
Rows matched: 4 Changed: 4 Warnings: 0
```

- DELETING FROM DEPARTMENT DELETE FROM departments
WHERE dept_no='d001' OR dept_no='d005' OR dept_no='d007'
OR dept_no='d008';
Query OK, 4 rows affected (0.38 sec)