

# Database Day 4 Assignment

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## 1 Question 1

Update employee by increase bonus to 10% of salary for employee in department Marketing.

```
1 UPDATE employees
2 SET
3   salary = salary * 1.1
4 WHERE
5   dept_no = (
6     SELECT
7       dept_no
8     FROM
9       departments
10    WHERE
11      dept_name = 'Marketing'
12  );
13
14
15 SELECT
16   first_name,
17   salary,
18   dept_no
19 FROM
20   employees
21 WHERE
22   dept_no = (
23     SELECT
24       dept_no
25     FROM
26       departments
27    WHERE
28      dept_name = 'Marketing'
29  );
```

first_name	salary	dept_no
Guoxiang	27500	1
Kazuhito	27500	1
Eben	27500	1
Cristinel	27500	1
Kazuhide	27500	1
Lillian	27500	1
Mayuko	27500	1
Ramzi	27500	1
Shahaf	27500	1
Bojan	27500	1
Suzette	27500	1
Prasadram	27500	1
Yongqiao	27500	1
Divier	27500	1
Domenick	27500	1
Otmar	27500	1
Karsten	27500	1
Jeong	27500	1
Arif	27500	1
Bader	27500	1

Figure 1: Output Result

## 2 Question 2

Delete courses which no students learn it and no employees teach it.

## 4 Question 4

```
1 DELETE FROM courses
2 WHERE
3     course_no NOT IN (
4         SELECT DISTINCT
5             course_no
6         FROM
7             students_course
8     )
9 AND course_no NOT IN (
10     SELECT DISTINCT
11         course_no
12     FROM
13         emp_course
14 );
```

course_no	course_name	course_duration
abc Filter...	abc Filter...	abc Filter...
290	Post Gre	50

Figure 2: Deleted Course

## 3 Question 3

Increase salary by 10% of it for smallest 2 different salaries on employees table.

```
1 UPDATE employees
2 SET
3     salary = salary * 1.1
4 WHERE
5     salary IN (
6         SELECT DISTINCT
7             salary
8         FROM
9             employees
10    WHERE
11        salary IS NOT NULL
12    ORDER BY
13        salary LIMIT 2
14 );
```

salary
abc Filter...
25000
27500

Figure 3: Highest Two Salaries

## 4 Question 4

Design database for these tables and make constraint

**Tables:**

- sales\_office (sales\_office\_num, loc, manger\_id)
- employee (emp\_id, name, sales office\_num)
- property (property\_id, add, city, state, zip, sales\_office\_num)
- owner (owner\_id, name)
- property\_owner (property\_id, owner\_id, percent\_owned)

**Constraints:**

- City must be Cairo or Banha or Alex
- Percent must be from 0 to 100

## 4 Question 4

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- Default city is Cairo
- Location of Office Is UNIQUE
- Employee name must entered and office location and owner name and percent also must entered.
- primary key and foreign key constraints

```
1 CREATE
2 DATABASE SalesDB;
3
4
5 CREATE TABLE
6     sales_office (
7         sales_office_num INT PRIMARY KEY,
8         loc VARCHAR(100) UNIQUE NOT NULL,
9         manger_id INT
10    );
11
12
13 CREATE TABLE
14     employee (
15         emp_id INT PRIMARY KEY,
16         name VARCHAR(100) NOT NULL,
17         sales_office_num INT,
18         FOREIGN KEY (sales_office_num) REFERENCES sales_office
19         ↪ (sales_office_num)
20    );
21
22 CREATE TABLE
23     property (
24         property_id INT PRIMARY KEY,
25         ADD VARCHAR(50),
26         city VARCHAR(30) DEFAULT 'Cairo' CHECK (city IN ('Cairo', 'Banha',
27         ↪ 'Alex')),
28         state VARCHAR(30),
29         zip INT,
30         sales_office_num INT,
31         FOREIGN KEY (sales_office_num) REFERENCES sales_office
32         ↪ (sales_office_num)
33    );
34
35 CREATE TABLE
36     owner (
37         owner_id INT PRIMARY KEY,
38         name VARCHAR(100) NOT NULL
39    );
40
41 CREATE TABLE
```

## 4 Question 4

```
42 property_owner (  
43     property_id INT,  
44     owner_id INT,  
45     percent_owned INT NOT NULL CHECK (percent_owned BETWEEN 0 AND 100),  
46     PRIMARY KEY (property_id, owner_id)  
47 );
```

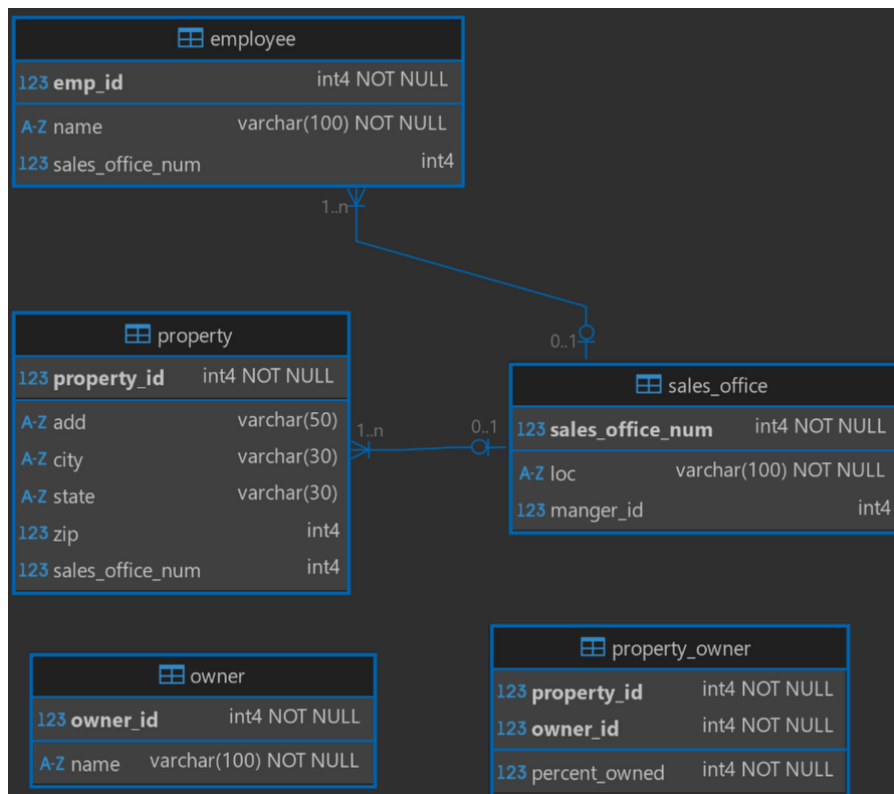


Figure 4: Database Diagram