

SIT103/SIT772: Database Fundamentals



7.1P: DDL and other DML Statements

Overview

In this task, you will learn how to use DDL and DML (other than `SELECT`) statements.

First, please delete `EMPLOYEE` and `EMP` tables if they exist in your database.

```
DROP TABLE IF EXISTS EMPLOYEE;
```

```
DROP TABLE IF EXISTS EMP;
```

Tasks to do

1. Write an SQL statement create the `EMPLOYEE` table with the following attributes and constraints.

<code>EMP_NUM (PK)</code>	number,
<code>EMP_TITLE</code>	Characters of length up to 5,
<code>EMP_LNAME</code>	Characters of length up to 25 (can't be NULL),
<code>EMP_FNAME</code>	Characters of length up to 25 (can't be NULL),
<code>EMP_INITIAL</code>	Only one character, (can't be NULL)
<code>EMP_DOB</code>	Date,
<code>EMP_HIRE_DATE</code>	Date,
<code>EMP_AREACODE</code>	Characters of length 3 (default value of '001')
<code>EMP_PHONE</code>	Characters of length 8,
<code>EMP_MGR</code>	number

As your answer to this question, please include (i) your SQL statement to create the `EMPLOYEE` table, and (ii) a screenshot of the result of the following SQL statement

```
DESC EMPLOYEE;
```

2. Write an SQL statement to change the column name '`EMP_MGR`' to '`EMP_MGR_NUM`'. [*Hint: ALTER TABLE to rename column, discussed in the class*].

As your answer to this question, please include (i) your SQL statement to alter the `EMPLOYEE` table, and

(ii) a screenshot of the result of the following SQL statement:

```
DESC EMPLOYEE;
```

3. Write an SQL statement to ADD FOREIGN KEY CONSTRAINT to EMP_MGR_NUM to reference to EMP_NUM (**self-reference**). This column indicates who is the manager (EMP_NUM of the manager) of an employee. [Hint: ALTER TABLE to add constraint, discussed in the class]

As your answer to this question, please include (i) your SQL statement to add the FOREIGN CONSTRAINT, and (ii) a screenshot of the result of the following SQL statement:

```
select          COLUMN_NAME,          CONSTRAINT_NAME,          REFERENCED_COLUMN_NAME,
REFERENCED_TABLE_NAME from information_schema.KEY_COLUMN_USAGE where TABLE_NAME
= 'EMPLOYEE';
```

Note that the above SQL gives the constraints associated with the EMPLOYEE table.

4. Write SQL statements to insert the following records in the EMPLOYEE TABLE.

EMP_NUM	EMP_TITLE	EMP_LNAME	EMP_FNAME	EMP_INIT	EMP_DOB	EMP_HIRE_DATE	EMP_AREACODE	EMP_PHONE	EMP_MGR_NUM
100	Mr.	Kolmycz	George	D	15-JUN-1942	15-MAR-1985	615	324-5456	NULL
101	Ms.	Lewis	Rhonda	G	19-MAR-1965	25-APR-1986	615	324-4472	100
102	Mr.	Vandam	Rhett	NULL	14-NOV-1958	20-DEC-1990	901	675-8993	100
103	Ms.	Jones	Anne	M	16-OCT-1974	28-AUG-1994	615	898-3456	100
104	Mr.	Lange	John	P	08-NOV-1971	20-OCT-1994	901	504-4430	105
105	Mr.	Williams	Robert	D	14-MAR-1975	08-NOV-1998	615	890-3220	NULL
106	Mrs.	Smith	Jeanine	K	12-FEB-1968	05-JAN-1989	615	324-7883	105
107	Mr.	Diante	Jorge	D	21-AUG-1974	02-JUL-1994	615	890-4567	105
108	Mr.	Wiesenbach	Paul	R	14-FEB-1966	18-NOV-1992	615	897-4358	NULL
109	Mr.	Smith	George	K	18-JUN-1961	14-APR-1989	901	504-3339	108
110	Mrs.	Genkazi	Leighla	W	19-MAY-1970	01-DEC-1990	901	569-0093	108
111	Mr.	Washington	Rupert	E	03-JAN-1966	21-JUN-1993	615	890-4925	105
112	Mr.	Johnson	Edward	E	14-MAY-1961	01-DEC-1983	615	898-4387	100
113	Ms.	Smythe	Melanie	P	15-SEP-1970	11-MAY-1999	615	324-9006	105
114	Ms.	Brandon	Marie	G	02-NOV-1956	15-NOV-1979	901	882-0845	108
115	Mrs.	Saranda	Hermine	R	25-JUL-1972	23-APR-1993	615	324-5505	105
116	Mr.	Smith	George	A	08-NOV-1965	10-DEC-1988	615	890-2984	108

As your answer to this question, please include (i) your SQL statements to insert the above records in the EMPLOYEE table, and (ii) a screenshot of the result of the following SQL statement:

```
SELECT * FROM EMPLOYEE;
```

5. Write an SQL statement to set the manager of Paul Wiesenbach (EMP_NUM = 108) as George Kolmycz (EMP_NUM = 100).

As your answer to this question, please include (i) your SQL statement to update the manager num, and (ii) a screenshot of the result of the following SQL statement:

```
SELECT * FROM EMPLOYEE WHERE EMP_NUM = 108;
```

6. Write an SQL statement to delete records of all employees managed by Paul Wiesenbach (EMP_NUM = 108).

As your answer to this question, please include (i) your SQL statement to delete records, and (ii) a screenshot of the result of the following SQL statement:

```
SELECT * FROM EMPLOYEE;
```

Submission Requirements:

Submit one PDF/WORD file with answers to all above six questions as requested in each question.

Submission Due

The due for each task has been stated via its OnTrack task information dashboard.