

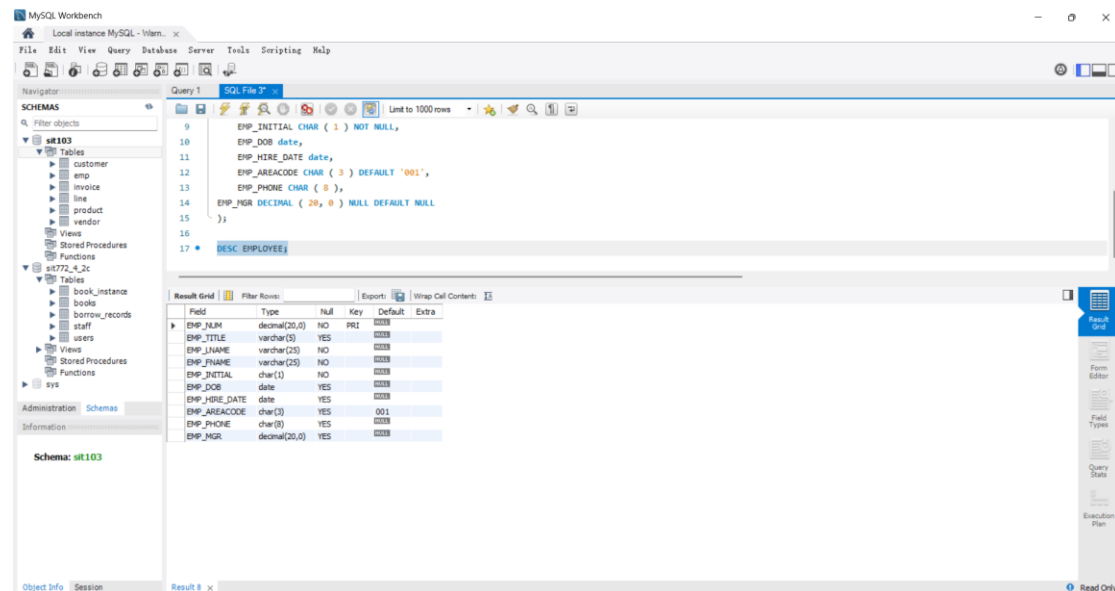
Task

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

(i) your SQL statement to create the EMPLOYEE table, and

```
DROP TABLE
IF
    EXISTS EMPLOYEE;
CREATE TABLE EMPLOYEE (
    EMP_NUM DECIMAL ( 20, 0 ) PRIMARY KEY,
    EMP_TITLE VARCHAR ( 5 ),
    EMP_LNAME VARCHAR ( 25 ) NOT NULL,
    EMP_FNAME VARCHAR ( 25 ) NOT NULL,
    EMP_INITIAL CHAR ( 1 ) NOT NULL,
    EMP_DOB date,
    EMP_HIRE_DATE date,
    EMP_AREACODE CHAR ( 3 ) DEFAULT '001',
    EMP_PHONE CHAR ( 8 ),
    EMP_MGR DECIMAL ( 20, 0 ) NULL DEFAULT NULL
);
```

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

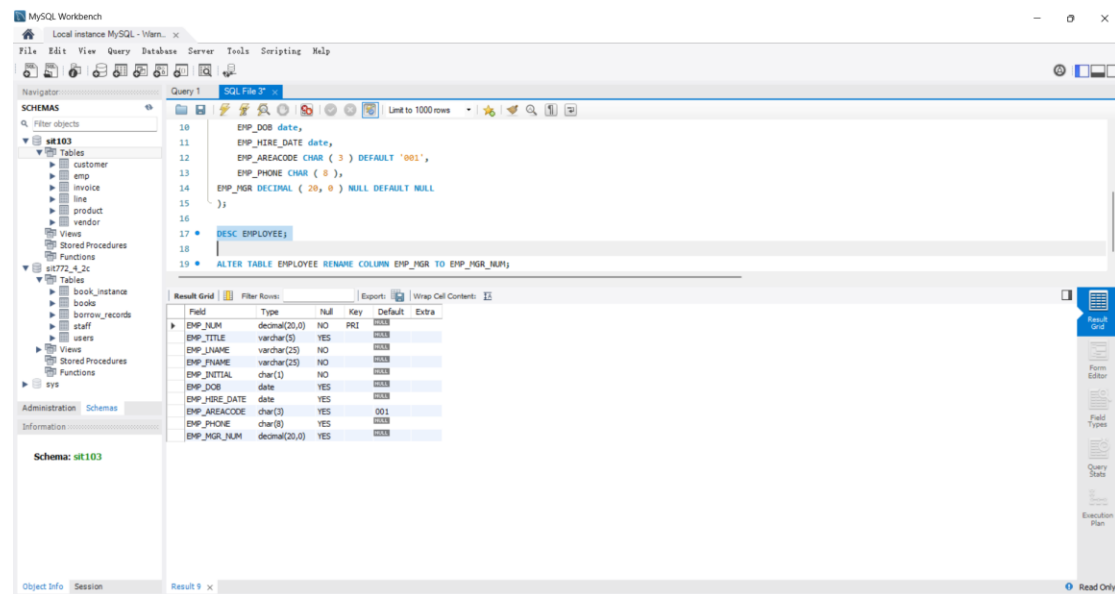


2. Write an SQL statement to change the column name 'EMP_MGR' to 'EMP_MGR_NUM'. [Hint: ALTER TABLE to rename column, discussed in the class].

(i) your SQL statement to alter the EMPLOYEE table, and

```
ALTER TABLE EMPLOYEE RENAME COLUMN EMP_MGR TO EMP_MGR_NUM;
```

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

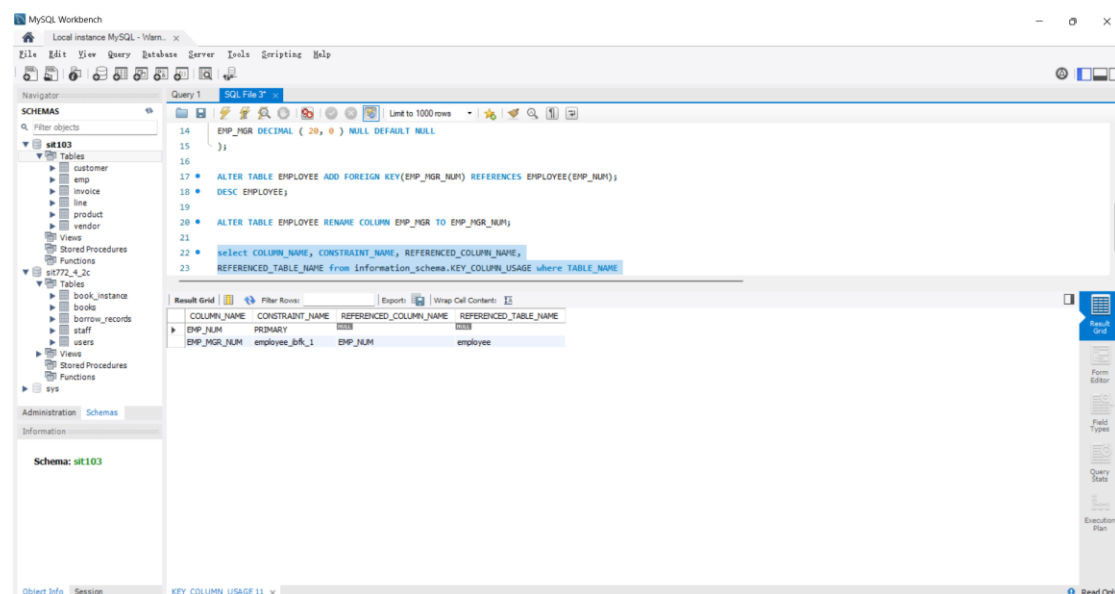


3. Write an SQL statement to ADD FOREIGN KEY CONSTRAINT to EMP_MGR_NUM to reference to EMP_NUM (self-reference). This column indicates who is the manager (EMP_NUM of the manager) of an employee. [Hint: ALTER TABLE to add constraint, discussed in the class]

(i) your SQL statement to add the FOREIGN CONSTRAINT, and

ALTER TABLE EMPLOYEE ADD FOREIGN KEY(EMP_MGR_NUM) REFERENCES EMPLOYEE(EMP_NUM);

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



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

(i) your SQL statements to insert the above records in the EMPLOYEE table, and

```
INSERT INTO EMPLOYEE VALUES(100,'Mr.', 'Kolmycz' , 'George' , 'D' , '1942-06-15', '1985-03-15', '615', '324-5456', NULL);
```

```
INSERT INTO EMPLOYEE VALUES(101,'Ms.' , 'Lewis' , 'Rhonda' , 'G' , '1965-03-19', '1986-04-25', '615', '324-4472', 100);
```

```
INSERT INTO EMPLOYEE VALUES(102,'Mr.' , 'Vandam' , 'Rhett' , 'N' , '1958-11-14', '1990-12-20', '901', '675-8993', 100);
```

```
INSERT INTO EMPLOYEE VALUES(103,'Ms.' , 'Jones' , 'Anne' , 'M' , '1974-10-16', '1994-08-28', '615', '898-3456', 100);
```

```
INSERT INTO EMPLOYEE VALUES(105,'Mr.' , 'Williams' , 'Robert' , 'D' , '1975-03-14', '1998-11-08', '615', '890-3220', NULL);
```

```
INSERT INTO EMPLOYEE VALUES(104,'Mr.' , 'Lange' , 'John' , 'P' , '1971-11-08', '1994-10-20', '901', '504-4430', 105);
```

```
INSERT INTO EMPLOYEE VALUES(106,'Mrs.' , 'Smith' , 'Jeanine' , 'K' , '1968-02-12', '1989-01-05', '615', '324-7883', 105);
```

```
INSERT INTO EMPLOYEE VALUES(107,'Mr.' , 'Diante' , 'Jorge' , 'D' , '1974-08-21', '1994-07-02', '615', '890-4567', 105);
```

```
INSERT INTO EMPLOYEE VALUES(108,'Mr.' , 'Wiesenbach', 'Paul' , 'R' , '1966-02-14', '1992-11-18', '615', '897-4358', NULL);
```

```
INSERT INTO EMPLOYEE VALUES(109,'Mr.' , 'Smith' , 'George' , 'K' , '1961-06-18', '1989-04-14', '901', '504-3339', 108);
```

```
INSERT INTO EMPLOYEE VALUES(110,'Mrs.' , 'Genkazi' , 'Leighla' , 'W' , '1970-05-19', '1990-12-01', '901', '569-0093', 108);
```

```
INSERT INTO EMPLOYEE VALUES(111,'Mr.' , 'Washington', 'Rupert' , 'E' , '1966-01-03', '1993-06-21', '615', '890-4925', 105);
```

```
INSERT INTO EMPLOYEE VALUES(112,'Mr.' , 'Johnson' , 'Edward' , 'E' , '1961-05-14', '1983-12-01', '615', '898-4387', 100);
```

```
INSERT INTO EMPLOYEE VALUES(113,'Ms.' , 'Smythe' , 'Melanie' , 'P' , '1970-09-15', '1999-05-11', '615', '324-9006', 105);
```

```
INSERT INTO EMPLOYEE VALUES(114,'Ms.' , 'Brandon' , 'Marie' , 'G' , '1956-11-02', '1979-11-15', '901', '882-0845', 108);
```

```
INSERT INTO EMPLOYEE VALUES(115,'Mrs.' , 'Saranda' , 'Hermine' , 'R' , '1972-07-25', '1993-04-23', '615', '324-5505', 105);
```

```
INSERT INTO EMPLOYEE VALUES(116,'Mr.' , 'Smith' , 'George' , 'A' , '1965-11-08', '1988-12-10', '615', '890-2984', 108);
```

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

EMP_NUM	EMP_TITLE	EMP_LNAME	EMP_FNAME	EMP_INITIAL	EMP_DOB	EMP_HIRE_DATE	EMP_ARCOCODE	EMP_PHONE	EMP_MGR_NUM
100	Mr.	Kolmycz	George	D	1942-06-15	1985-03-15	615	324-5456	100
101	Ms.	Lewis	Rhonda	G	1965-03-19	1986-04-25	615	324-4472	100
102	Mr.	Vandam	Rhett	N	1958-11-14	1990-12-20	901	675-6993	100
103	Ms.	Jones	Anne	M	1974-10-36	1994-08-28	615	898-3456	100
104	Mr.	Lange	John	P	1971-11-08	1994-10-20	901	504-4430	105
105	Mr.	Williams	Robert	D	1975-03-14	1998-11-08	615	890-3220	108
106	Ms.	Smith	Jeanene	K	1968-02-12	1989-01-05	615	324-7883	105
107	Mr.	Dante	Jorge	D	1974-08-21	1994-07-02	615	890-4567	105
108	Mr.	Wiesenbach	Paul	R	1966-02-14	1992-11-18	615	897-4358	108
109	Mr.	Smith	George	K	1961-06-18	1989-04-14	901	504-3339	108
110	Ms.	Gerkaas	Lenita	W	1970-05-19	1990-12-01	901	905-0993	108
111	Mr.	Washington	Rupert	E	1966-01-03	1993-06-21	615	890-4625	105
112	Mr.	Johnson	Edward	E	1961-05-14	1983-12-01	615	898-4387	100
113	Ms.	Smythe	Melanie	P	1970-09-15	1999-05-11	615	324-9006	105
114	Ms.	Brandon	Marie	G	1956-11-02	1979-11-15	901	882-0845	108
115	Ms.	Saranda	Hermine	R	1972-07-25	1993-04-23	615	324-5505	105
116	Mr.	Smith	George	A	1965-11-08	1988-12-10	615	890-2884	108

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

(i) your SQL statement to update the manager num, and

UPDATE EMPLOYEE SET EMP_MGR_NUM = 100 WHERE EMP_NUM = 108;

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

EMP_NUM	EMP_TITLE	EMP_LNAME	EMP_FNAME	EMP_INITIAL	EMP_DOB	EMP_HIRE_DATE	EMP_ARCOCODE	EMP_PHONE	EMP_MGR_NUM
108	Mr.	Wiesenbach	Paul	R	1966-02-14	1992-11-18	615	897-4358	100

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

(i) your SQL statement to delete records, and

DELETE FROM EMPLOYEE WHERE EMP_MGR_NUM = 108;

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

The screenshot shows the MySQL Workbench interface. The SQL Editor contains the following queries:

```
22 * select COLUMN_NAME, CONSTRAINT_NAME, REFERENCED_COLUMN_NAME,  
23 REFERENCED_TABLE_NAME from Information_schema.KEY_COLUMN_USAGE where TABLE_NAME  
24 = 'EMPLOYEE';  
25  
26 * SELECT * FROM EMPLOYEE;  
27  
28 * UPDATE EMPLOYEE SET EMP_MGR_NUM = 100 WHERE EMP_NUM = 108;  
29 * SELECT * FROM EMPLOYEE WHERE EMP_NUM = 108;  
30  
31 * DELETE FROM EMPLOYEE WHERE EMP_MGR_NUM = 108;
```

The Result Grid shows the following data:

EMP_NUM	EMP_TITLE	EMP_LNAME	EMP_FNAME	EMP_INITIAL	EMP_DOS	EMP_HIRE_DATE	EMP_AREACODE	EMP_PHONE	EMP_MGR_NUM
100	Mr.	Kolmycz	George	D	1942-06-15	1985-03-15	615	324-5456	100
101	Ms.	Lewis	Rhonda	G	1965-03-19	1986-04-25	615	324-4472	100
102	Mr.	Vandam	Rhett	N	1958-11-14	1990-12-20	901	675-8993	100
103	Ms.	Jones	Anne	M	1974-10-16	1994-08-28	615	898-3456	100
104	Mr.	Lange	John	P	1971-11-08	1994-10-20	901	504-4430	105
105	Mr.	Williams	Robert	D	1975-03-14	1998-11-08	615	890-3220	100
106	Mrs.	Smith	Jeanne	K	1968-02-12	1989-01-05	615	324-7883	105
107	Mr.	Dante	Jorge	D	1974-08-21	1994-07-02	615	890-4567	105
108	Mr.	Wiesenbach	Paul	R	1966-02-14	1992-11-18	615	897-4358	100
111	Mr.	Washington	Rupert	E	1966-01-03	1993-06-21	615	890-4925	105
112	Mr.	Johnson	Edward	E	1961-05-14	1983-12-01	615	898-4387	100
113	Ms.	Smythe	Melanie	P	1970-09-15	1989-05-11	615	324-9006	105
115	Mrs.	Saranda	Hermine	R	1972-07-25	1993-04-23	615	324-5505	105