

CIS 552: Database Design – Homework 3

Database “stored procedure” using SQL/PSM:

In this exercise we learnt the syntax and implementation of writing stored procedures. I have learned how to create a MySQL procedure called `insert_employee` that takes a several input parameters, including an employee's first name, middle initial, last name, social security number, birth date, address, sex, salary, supervisor's social security number, and department number. This procedure was written in MySQL and implemented in the IDE JetBrains DataGrip. I have also learned that procedures are like function, and stored procedure implementation can have input or output argument. The use of stored procedures can be advantageous in terms of time and effort savings by enabling the storage of lengthy SQL scripts that can be accessed by other queries through the CALL keyword at any given time.

Creating a Stored Procedure:

```
1  CREATE PROCEDURE insert_employee(  
2  IN Fname VARCHAR(15),  
3  IN Minit CHAR,  
4  IN Lname VARCHAR(15),  
5  IN Ssn CHAR(9),  
6  IN Bdate DATE,  
7  IN Address VARCHAR(30),  
8  IN Sex CHAR,  
9  IN Salary DECIMAL(10, 2),  
10 IN Super_ssn CHAR(9),  
11 IN Dno INT  
12 )  
13  
14 BEGIN  
15     INSERT INTO EMPLOYEE VALUES (Fname, Minit, Lname, Ssn, Bdate, Address, Sex, Salary, Super_ssn, Dno);  
16 END;  
17
```

Calling Stored Procedure:

Once the procedure was created, we proceeded to call the routine to generate an entry into the EMPLOYEE table. Specifically, we inserted an employee named 'Narendra' along with the relevant details using the input arguments required for the procedure call.

```

call insert_employee(
  Fname: 'Narendra',
  Minit: 'D',
  Lname: 'Modi',
  Ssn: '123454321',
  Bdate: '1950-09-17',
  Address: '7, Lok Kalyan Marg, New Delhi',
  Sex: 'M',
  Salary: '280000',
  Super_ssn: '432151234',
  Dno: '1'
);

```

Result:

We can see from the below table that new employee has been added along with all the details.

	Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno
1	Narendra	D	Modi	123454321	1950-09-17	7, Lok Kalyan Marg, New Delhi	M	280000.00	432151234	1
2	John	E	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000.00	333445555	5
3	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000.00	888665555	5
4	Sam	S	Snedden	444444401	1977-07-31	987 Windy St, Milwaukee, WI	M	48000.00	123456789	7
5	Chris	A	Carter	444444402	1960-03-21	565 Jordan, Milwaukee, WI	F	43000.00	123456789	7
6	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000.00	333445555	5
7	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555	5
8	James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000.00	<null>	1
9	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000.00	888665555	4
10	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000.00	987654321	4
11	Alicia	J	Zelaya	999887777	1968-01-19	3321 Castle, Spring, TX	F	25000.00	987654321	4