

DBMS Lab Assignment 7

Team 4

21-04-2021

B M Kalpajeet

19BCS117

- 1) Write two stored Procedures relevant to your database.

Using no parameters:

```
CREATE PROCEDURE ResearchProjects
```

```
AS
```

```
SELECT * FROM T4_Research_Projects
```

```
GO;
```

```
EXEC ResearchProjects;
```

Output:

EXEC ResearchProjects

100 %

Results Messages

	Project_ID	Area_of_Research	Project_Name
1	P-AI-18	NLP	Sentiment analysis
2	P-BT-88	Bio	Downstream processing
3	P-CS-36	Algo	NP complete
4	P-EC-27	VLSI	FPGAs
5	P-M-50	PDE	Soln of non linear PDE

Using one parameter

```
CREATE PROCEDURE SelectFaculty @Dept nvarchar(10)
```

```
AS
```

```
SELECT Faculty_ID, FirstName, LastName FROM T4_Faculty WHERE Department_Name =  
@Dept;
```

```
EXEC SelectFaculty @Dept = 'AI'
```

EXEC SelectFaculty @Dept = 'AI'

100 %

Results Messages

	Faculty_ID	FirstName	LastName
1	100	Virat	Kohli
2	104	Ajinkya	Rahane
3	119	Bhuv	Kumar

```
EXEC SelectFaculty @Dept = 'ECE'
```

EXEC SelectFaculty @Dept = 'ECE'

100 %

Results Messages

	Faculty_ID	FirstName	LastName
1	105	Shubhman	Gill
2	106	Harleen	Deol
3	117	Rishabh	Pant

Using two (multiple) parameters

```
CREATE PROCEDURE SelectHeadFaculty @Dept nvarchar(10), @Head bit
```

```
AS
```

```
SELECT * FROM T4_Faculty WHERE Department_Name = @Dept AND HOD = @Head;
```

```
EXEC SelectHeadFaculty @Dept = 'CSE', @Head=1
```

EXEC SelectHeadFaculty @Dept = 'CSE', @Head=1

100 %

Results Messages

	Faculty_ID	Department_Name	HOD	FirstName	LastName	Phone
1	102	CSE	1	Mahendra Singh	Dhoni	70781

```
EXEC SelectHeadFaculty @Dept = 'CSE', @Head=0
```

EXEC SelectHeadFaculty @Dept = 'CSE', @Head=0

100 %

Results Messages

	Faculty_ID	Department_Name	HOD	FirstName	LastName	Phone
1	101	CSE	0	Rohit	Sharma	30487
2	103	CSE	0	Mithali	Raj	5059

EXEC SelectHeadFaculty @Dept = 'MATH', @Head=1

EXEC SelectHeadFaculty @Dept = 'MATH', @Head=1

100 %

Results Messages

	Faculty_ID	Department_Name	HOD	FirstName	LastName	Phone
1	112	MATH	1	Che	Pujara	80806

2) Write a transaction to illustrate atomicity (related to your database)

USE University

GO

BEGIN TRANSACTION

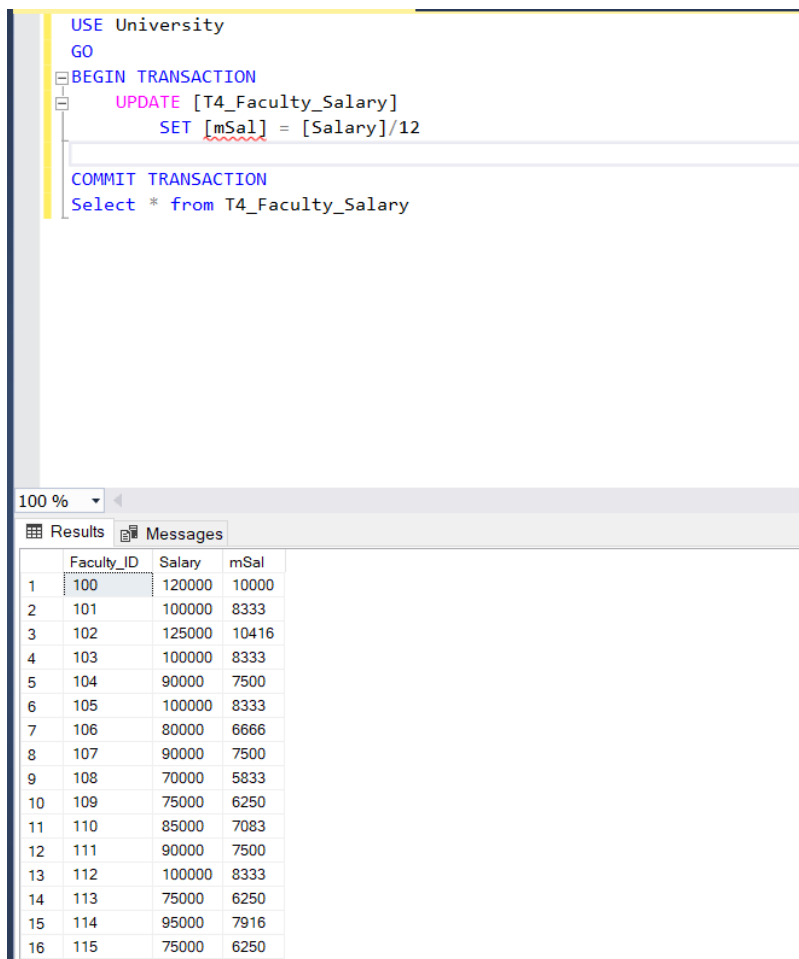
UPDATE T4_Faculty_Salary

SET [mSal] = [Salary]/12

COMMIT TRANSACTION

Select * from T4_Faculty_Salary

OUTPUT:



The screenshot displays a SQL Server Enterprise Manager interface. The top pane shows a query window with the following T-SQL code:

```
USE University
GO
BEGIN TRANSACTION
    UPDATE [T4_Faculty_Salary]
    SET [mSal] = [Salary]/12
COMMIT TRANSACTION
Select * from T4_Faculty_Salary
```

The bottom pane shows the 'Results' tab with a table containing 16 rows of data. The columns are Faculty_ID, Salary, and mSal. The data is as follows:

	Faculty_ID	Salary	mSal
1	100	120000	10000
2	101	100000	8333
3	102	125000	10416
4	103	100000	8333
5	104	90000	7500
6	105	100000	8333
7	106	80000	6666
8	107	90000	7500
9	108	70000	5833
10	109	75000	6250
11	110	85000	7083
12	111	90000	7500
13	112	100000	8333
14	113	75000	6250
15	114	95000	7916
16	115	75000	6250

3)Write a transaction to illustrate isolation level. It can be on commit or uncommit read (related to your database)

USE University;

GO

BEGIN TRANSACTION

UPDATE T4_Faculty set FirstName='Gopi' where Faculty_ID=100;

```
USE University;
GO

BEGIN TRANSACTION
UPDATE T4_Faculty set FirstName='Gopi' where Faculty_ID=100;
```

00 %

Messages

(1 row affected)

Completion time: 2021-04-30T17:21:13.9392642+05:30

USE University

GO

SET TRANSACTION ISOLATION LEVEL READ COMMITTED

GO

BEGIN TRANSACTION

SELECT * FROM T4_Faculty

```

USE University
GO

SET TRANSACTION ISOLATION LEVEL READ COMMITTED
GO
BEGIN TRANSACTION
SELECT * FROM T4_Faculty

```

100 %

Results

Messages

	Faculty_ID	Department_Name	HOD	FirstName	LastName	Phone
1	100	AI	1	Gopi	Kohli	51188
2	101	CSE	0	Rohit	Sharma	30487
3	102	CSE	1	Mahendra Singh	Dhoni	70781
4	103	CSE	0	Mithali	Raj	5059
5	104	AI	0	Ajinkya	Rahane	60688
6	105	ECE	1	Shubhman	Gill	70895
7	106	ECE	0	Harleen	Deol	66666
8	107	BT	1	Jasprit	Bumrah	99999
9	108	BT	0	Ekta	Bisht	54545
10	109	AERO	0	Hardik	Pandya	23232
11	110	AERO	1	Ravi	Ashwin	11116
12	111	ME	1	Ravindra	Jadeja	33890
13	112	MATH	1	Che	Pujara	80806
14	113	ME	0	Kuldeep	Yadav	93947
15	114	CVE	1	Smriti	Mandhana	11112
16	115	CVE	0	Md	Siraj	99998
17	116	CVE	0	Yuz	Chahal	11117

Query executed successfully.