DBMS LAB ASSIGNMENT-7

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Group:5

1)Write two stored Procedures relevant to your database. **Query1**:

```
CREATE PROCEDURE Regional_phn_no
AS
SELECT * FROM T5_studentinfo WHERE ph_no LIKE '[9]%'
GO

EXEC Regional_phn_no;
```

OUTPUT:

```
CREATE PROCEDURE Regional_phn_no
AS
SELECT * FROM T5_studentinfo WHERE ph_no LIKE '[9]%'
GO

EXEC Regional_phn_no;
```

100 %

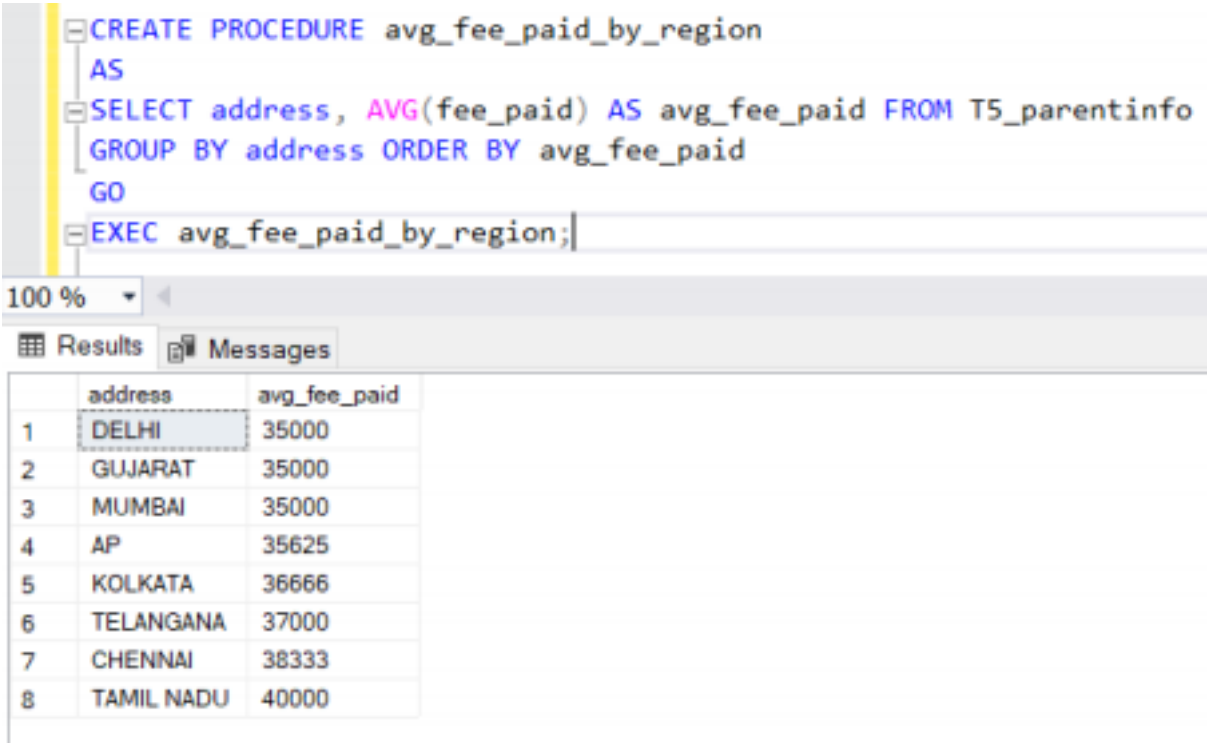
Results | Messages

	student_id	first_name	last_name	email_id	ph_no	study_year	DOB	age
1	19BCS131	HRITHIK	ROSHAN	19bcs131@iitdwd.ac.in	9876543210	2	2001-12-02	20
2	19BCS132	JOHN	ST	19bcs132@iitdwd.ac.in	9987654033	2	2002-06-16	19
3	19BCS133	AKSHAY	KHANNA	19bcs133@iitdwd.ac.in	9887604321	2	2001-03-03	20
4	19BCS134	SHAHRUKH	KHAN	19bcs134@iitdwd.ac.in	9054321998	2	2002-11-01	19
5	19BCS135	SHILPA	SHETTY	19bcs135@iitdwd.ac.in	9908766548	2	2002-06-16	19
6	19BCS136	RANI	MUKHERJEE	19bcs136@iitdwd.ac.in	9776055943	2	2001-08-17	20
7	19BCS139	KRITHI	SHETTY	19bcs139@iitdwd.ac.in	9077654892	2	2001-10-08	20
8	19BCS140	ANUSHKA	SHARMA	19bcs140@iitdwd.ac.in	9665894362	2	2001-10-08	20
9	19BCS141	ANUSHKA	SHETTY	19bcs141@iitdwd.ac.in	9887065432	2	2002-10-06	19
10	19BCS142	SREERAM	KESHVA	19bcs142@iitdwd.ac.in	9507763210	2	2001-11-08	20
11	19BCS144	COUSHIK	SAI	19bcs144@iitdwd.ac.in	9440996234	2	2001-09-19	20
12	19BCS145	KRITHIKA	KUMAR	19bcs145@iitdwd.ac.in	9079054670	2	2002-10-27	19
13	19BCS147	SWAROOP	GHATTAMANENI	19bcs147@iitdwd.ac.in	9008796654	2	2001-02-23	20
14	19BCS148	NIKHIL	KUMAR	19bcs148@iitdwd.ac.in	9778054398	2	2001-11-12	20
15	19BCS151	SURIYA	KHILLADI	19bcs151@iitdwd.ac.in	9075428944	2	2002-07-25	19
16	19BCS180	PRATHEEKA	SINGH	19bcs180@iitdwd.ac.in	9024538589	3	2002-03-21	19

Query2:

```
CREATE PROCEDURE avg_fee_paid_by_region
AS
SELECT address, AVG(fee_paid) AS avg_fee_paid FROM T5_parentinfo
GROUP BY address ORDER BY avg_fee_paid
GO
EXEC avg_fee_paid_by_region;
```

OUTPUT:



```
CREATE PROCEDURE avg_fee_paid_by_region
AS
SELECT address, AVG(fee_paid) AS avg_fee_paid FROM T5_parentinfo
GROUP BY address ORDER BY avg_fee_paid
GO
EXEC avg_fee_paid_by_region;
```

100 %

Results | Messages

	address	avg_fee_paid
1	DELHI	35000
2	GUJARAT	35000
3	MUMBAI	35000
4	AP	35625
5	KOLKATA	36666
6	TELANGANA	37000
7	CHENNAI	38333
8	TAMIL NADU	40000

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

Query:

```
BEGIN TRAN Transaction_grades
UPDATE T5_grades SET marks='92' where course_id='cs201' and
student_id='19BCS133' INSERT INTO T5_grades VALUES ('90','A','CS201','19BCS190')
COMMIT
SELECT * FROM T5_grades
```

OUTPUT:

```
BEGIN TRAN Transaction_grades
UPDATE T5_grades SET marks='92' where course_id='cs201' and student_id='19BCS133'
INSERT INTO T5_grades VALUES ('90','A','CS201','19BCS190')
COMMIT
SELECT * FROM T5_grades
```

110 %

Results | Messages

	marks	grade	course_id	student_id
1	92	A-	CS201	19BCS133
2	85	A-	CS201	19BCS138
3	89	A	CS201	19BCS140
4	91	A	CS201	19BCS141
5	84	A-	CS201	19BCS142
6	90	A	CS201	19BCS190
7	90	A	CS210	19BCS123
8	69	B	CS210	19BCS130
9	59	C	CS210	19BCS132
10	93	A	CS210	19BCS134
11	78	B-	CS210	19BCS135
12	88	A	CS210	19BCS139
13	92	A	CS210	19BCS140
14	55	C	CS210	19BCS142
15	67	B	CS210	19BCS143
16	65	B	CS210	19BCS145
17	90	A	CS210	19BCS190
18	89	A	CS211	19BCS123
19	77	B-	CS211	19BCS144

Now, let us we will insert wrong information in the T5_grades table to fail the insertion deliberately.

```
BEGIN TRAN Transaction_grades
UPDATE T5_grades SET marks='70' where course_id='cs201' and student_id='19BCS133'
INSERT INTO T5_grades VALUES ('A','CS201','19BCS190')
COMMIT
SELECT * FROM T5_grades
```

110 %

Messages

```
Msg 213, Level 16, State 1, Line 20
Column name or number of supplied values does not match table definition.

Completion time: 2021-04-30T19:41:29.9091305+05:30
```

```
BEGIN TRAN Transaction_grades
UPDATE T5_grades SET marks='70' where course_id='cs201' and student_id='19BCS133'
INSERT INTO T5_grades VALUES ('A','CS201','19BCS190')
COMMIT
SELECT * FROM T5_grades
```

110 %

Results | Messages

	marks	grade	course_id	student_id
1	92	A-	CS201	19BCS133
2	85	A-	CS201	19BCS138
3	89	A	CS201	19BCS140
4	91	A	CS201	19BCS141
5	84	A-	CS201	19BCS142
6	90	A	CS201	19BCS190
7	90	A	CS210	19BCS123
8	69	B	CS210	19BCS130
9	59	C	CS210	19BCS132
10	85	A	CS210	19BCS134
11	78	B-	CS210	19BCS135
12	88	A	CS210	19BCS139
13	92	A	CS210	19BCS140
14	55	C	CS210	19BCS142
15	67	B	CS210	19BCS143
16	65	B	CS210	19BCS145
17	90	A	CS210	19BCS190
18	89	A	CS211	19BCS123
19	77	B-	CS211	19BCS144

Here, we can clearly see that the transaction got rolled back as error have been occurred in insert operation. And thus, update have not been worked due to atomic property and the previous values of the table are displayed.

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

Query:

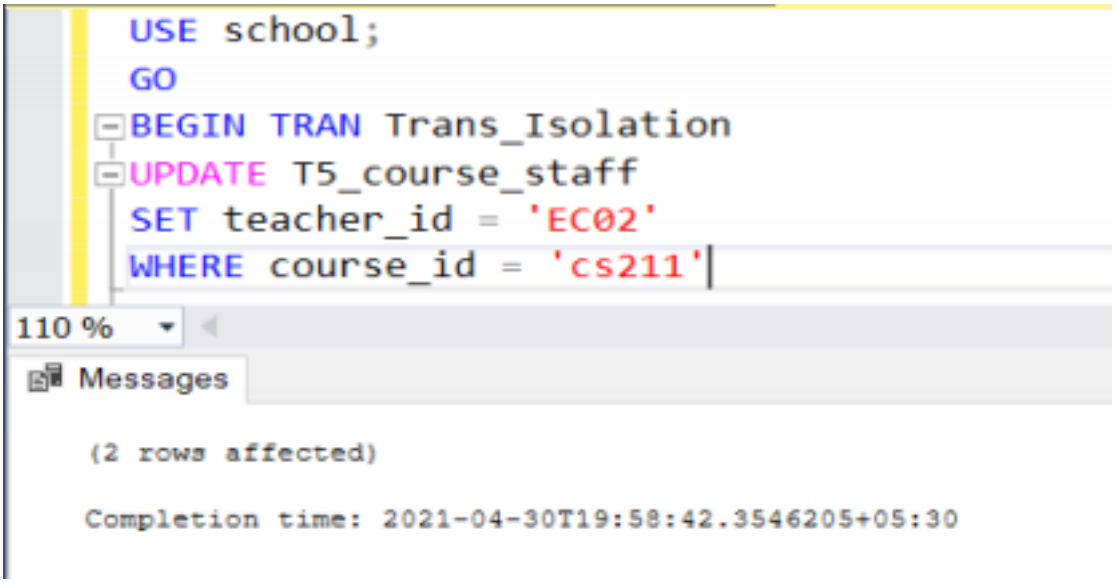
Window1:

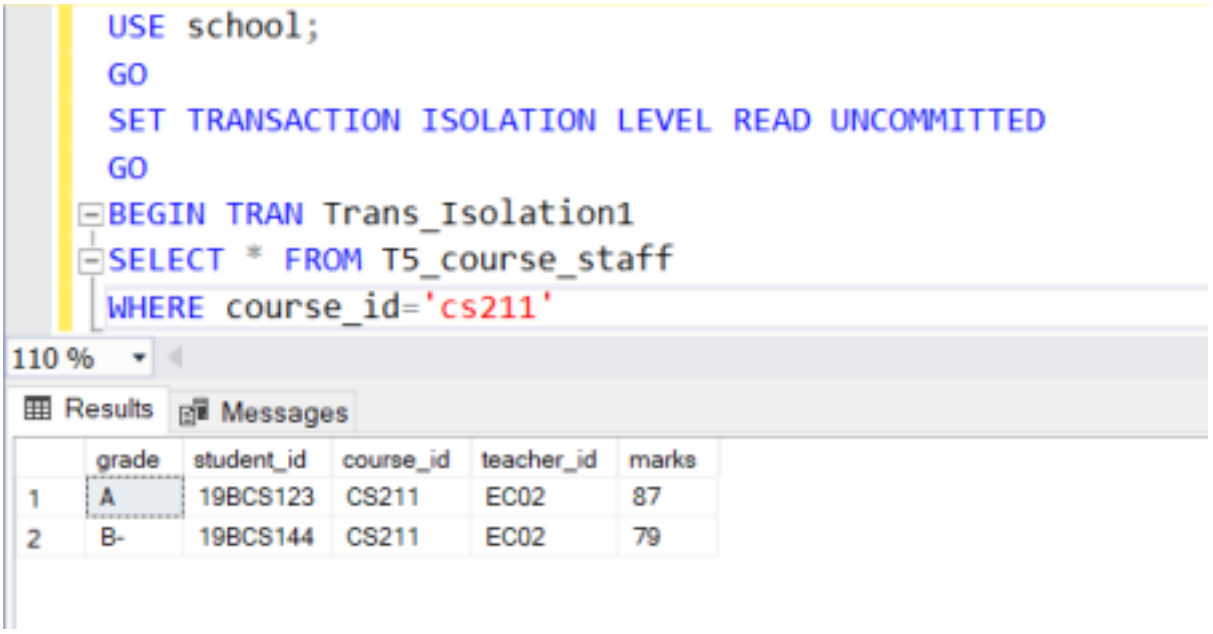
```
USE school;
GO
BEGIN TRAN Trans_Isolation
UPDATE T5_course_staff
SET teacher_id = 'EC02'
WHERE course_id = 'cs211'
```

Window2:

```
USE school;
GO
SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED
GO
BEGIN TRAN Trans_Isolation1
SELECT * FROM T5_course_staff
WHERE course_id='cs211'
```

OUTPUT:





- When we set the isolation level to read uncommitted, we will be able to see the teacher_id set to 'EC02', called Dirty Read.