

DBMS TRANSACTION STORED_PROC

ROLL NO:-19BCS120

Q1)Write two stored Procedures relevant to your database.?

ANS)

Query:-

```
CREATE PROCEDURE patients
AS
BEGIN
SELECT * FROM iiit.dbo.T1_patient
END
GO

EXEC patients
```

OUTPUT:-

The screenshot displays the SQL Server Enterprise Manager interface. The top pane shows the SQL script for creating and executing a stored procedure named 'patients'. The script is as follows:

```
CREATE PROCEDURE patients
AS
BEGIN
SELECT * FROM iiit.dbo.T1_patient
END
GO

EXEC patients
```

The bottom pane shows the results of the query execution, displaying a table with 20 rows. The columns are patient_id, p_address, p_phone, disease, p_name, and entrydate. The data is as follows:

	patient_id	p_address	p_phone	disease	p_name	entrydate
1	1	ADAJAN	1234567890	TYPHOID	VINOD	NULL
2	2	ADAJAN	1234567890	TYPHOID	BINOD	NULL
3	3	ADAJAN	1234567890	COVID	JAY	NULL
4	4	ADAJAN	1234567890	TYPHOID	NAMAN	NULL
5	5	ADAJAN	1234567890	FOOD POISON	AMAN	NULL
6	6	ADAJAN	1234567890	DENGUE	VIRAT	NULL
7	7	ADAJAN	1234567890	TYPHOID	MANAN	NULL
8	8	ADAJAN	1234567130	TYPHOID	MANAV	NULL
9	9	ADAJAN	1234563130	TYPHOID	MANAV	NULL
10	10	ADAJAN	1222567890	DENGUE	JAYESH	NULL
11	11	ADAJAN	233456789	PNEUMONIA	OM	NULL
12	12	ADAJAN	1123456789	SURGERY	TOM	NULL
13	13	ADAJAN	1223567890	ASTHMA	BIPUL	NULL
14	14	ADAJAN	999956789	FRACTURE	SOURAB	NULL
15	15	ADAJAN	965656789	TYPHOID	JAYNIT	NULL
16	16	ADAJAN	233456789	PNEUMONIA	LOY	2021-02-19
17	17	ADAJAN	123456789	ASTHMA	TROY	2021-02-19
18	18	ADAJAN	93456789	FRACTURE	LAMAR	2021-02-19
19	19	ADAJAN	233456789	NAUSEA	JUSTIN	2021-02-19
20	20	ADAJAN	233456789	DENGUE	DILJIT	2021-02-19

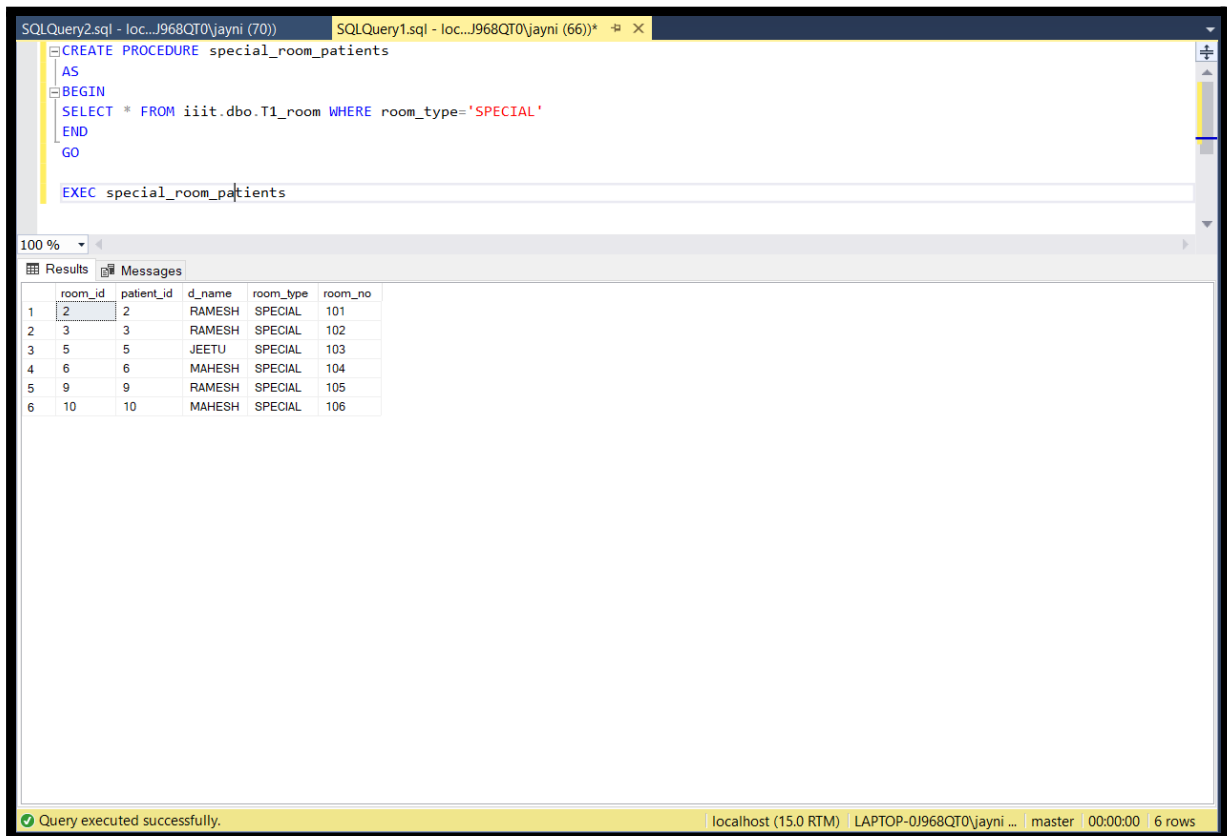
The status bar at the bottom indicates that the query was executed successfully, and the results are displayed on localhost (15.0 RTM) with 20 rows.

QUERY:-

```
CREATE PROCEDURE special_room_patients
AS
BEGIN
SELECT * FROM iiit.dbo.T1_room WHERE room_type='SPECIAL'
END
GO

EXEC special_room_patients
```

OUTPUT:-



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

```
CREATE PROCEDURE special_room_patients
AS
BEGIN
SELECT * FROM iiit.dbo.T1_room WHERE room_type='SPECIAL'
END
GO

EXEC special_room_patients
```

The bottom pane shows the 'Results' tab with a table containing 6 rows of data:

	room_id	patient_id	d_name	room_type	room_no
1	2	2	RAMESH	SPECIAL	101
2	3	3	RAMESH	SPECIAL	102
3	5	5	JEETU	SPECIAL	103
4	6	6	MAHESH	SPECIAL	104
5	9	9	RAMESH	SPECIAL	105
6	10	10	MAHESH	SPECIAL	106

The status bar at the bottom indicates: 'Query executed successfully. | localhost (15.0 RTM) | LAPTOP-0J968QT0\jayni ... | master | 00:00:00 | 6 rows'.

Q2)Write a transaction to illustrate atomicity (related to your database)?

ANS)

QUERY:-

```
BEGIN TRAN
```

```
INSERT INTO iiit.dbo.T1_patient
```

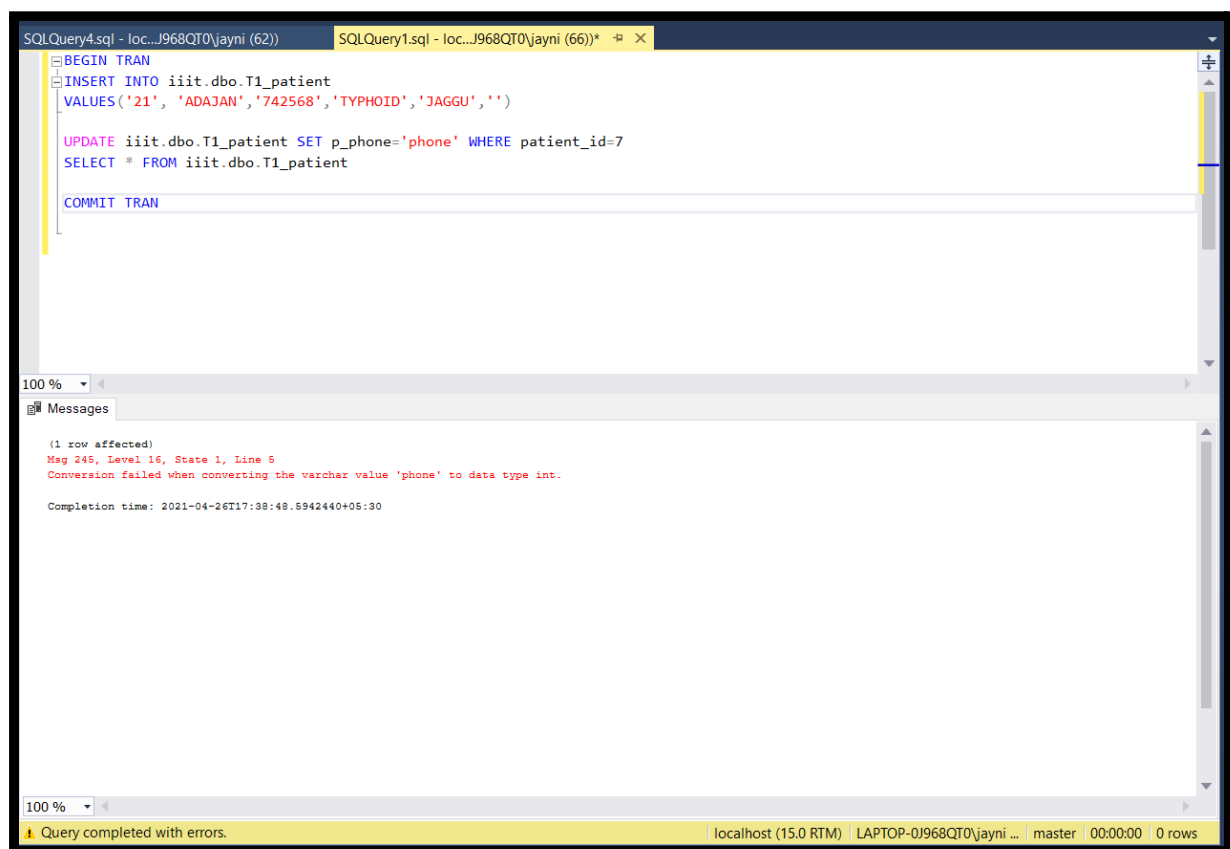
```
VALUES('21', 'ADAJAN','742568','TYPHOID','JAGGU','')
```

```
UPDATE iiit.dbo.T1_patient SET p_phone='phone' WHERE patient_id=7
```

```
SELECT * FROM iiit.dbo.T1_patient
```

```
COMMIT TRAN
```

OUTPUT:-



SQLQuery4.sql - loc...J968QT0\jayni (62)) × SQLQuery1.sql - loc...J968QT0\jayni (66))*

```
/****** Script for SelectTopNRows command from SSMS *****/  
SELECT TOP (1000) [patient_id]  
    , [p_address]  
    , [p_phone]  
    , [disease]  
    , [p_name]  
    , [entrydate]  
FROM [iiit].[dbo].[T1_patient]
```

100 %

Results Messages

	patient_id	p_address	p_phone	disease	p_name	entrydate
1	1	ADAJAN	1234567890	TYPHOID	VINOD	NULL
2	2	ADAJAN	1234567890	TYPHOID	BINOD	NULL
3	3	ADAJAN	1234567890	COVID	JAY	NULL
4	4	ADAJAN	1234567890	TYPHOID	NAMAN	NULL
5	5	ADAJAN	1234567890	FOOD POISON	AMAN	NULL
6	6	ADAJAN	1234567890	DENGUE	VIRAT	NULL
7	7	ADAJAN	1234567890	TYPHOID	MANAN	NULL
8	8	ADAJAN	1234567130	TYPHOID	MANAV	NULL
9	9	ADAJAN	1234563130	TYPHOID	MANAV	NULL
10	10	ADAJAN	1222567890	DENGUE	JAYESH	NULL
11	11	ADAJAN	233456789	PNEUMONIA	OM	NULL
12	12	ADAJAN	1123456789	SURGERY	TOM	NULL
13	13	ADAJAN	1223567890	ASTHMA	BIPUL	NULL
14	14	ADAJAN	999956789	FRACTURE	SOURAB	NULL
15	15	ADAJAN	965656789	TYPHOID	JAYNIT	NULL
16	16	ADAJAN	233456789	PNEUMONIA	LOY	2021-02-19
17	17	ADAJAN	123456789	ASTHMA	TROY	2021-02-19
18	18	ADAJAN	93456789	FRACTURE	LAMAR	2021-02-19
19	19	ADAJAN	233456789	NAUSEA	JUSTIN	2021-02-19
20	20	ADAJAN	233456789	DENGUE	DILJIT	2021-02-19

Query executed successfully. | localhost (15.0 RTM) | LAPTOP-0J968QT0\jayni ... | iiit | 00:00:00 | 20 rows

So we can see from the above output that all the transactions are rolled back as there was a type error in the transactions.

Q3)Write a transaction to illustrate isolation level. It can be on commit or uncommit read (related to your database)?

ANS)

QUERY:-

Window1:-

```
BEGIN TRAN
UPDATE iiit.dbo.T1_patient SET p_phone='000000' WHERE
patient_id=7
SELECT * FROM iiit.dbo.T1_patient
```

COMMIT TRAN

Window2:-

```
SET TRANSACTION ISOLATION LEVEL READ
UNCOMMITTED
BEGIN TRAN
Select * from iiit.dbo.T1_patient
WHERE patient_id=7
```

OUTPUT:-

The screenshot displays the SQL Server Enterprise Manager interface. At the top, there are two tabs: 'SQLQuery5.sql - loc...J968QT0\jayni (56)*' and 'SQLQuery1.sql - loc...J968QT0\jayni (66)*'. The active window shows a SQL script with the following content:

```
BEGIN TRAN
UPDATE iiit.dbo.T1_patient SET p_phone='000000' WHERE patient_id=7
SELECT * FROM iiit.dbo.T1_patient
COMMIT TRAN
```

Below the script editor, the 'Results' tab is selected, showing a grid of 20 rows. The columns are: patient_id, p_address, p_phone, disease, p_name, and entrydate. The data is as follows:

patient_id	p_address	p_phone	disease	p_name	entrydate
1	ADAJAN	1234567890	TYPHOID	VINOD	NULL
2	ADAJAN	1234567890	TYPHOID	BINOD	NULL
3	ADAJAN	1234567890	COVID	JAY	NULL
4	ADAJAN	1234567890	TYPHOID	NAMAN	NULL
5	ADAJAN	1234567890	FOOD POISON	AMAN	NULL
6	ADAJAN	1234567890	DENGUE	VIRAT	NULL
7	ADAJAN	0	TYPHOID	MANAN	NULL
8	ADAJAN	1234567130	TYPHOID	MANAV	NULL
9	ADAJAN	1234563130	TYPHOID	MANAV	NULL
10	ADAJAN	1222567890	DENGUE	JAYESH	NULL
11	ADAJAN	233456789	PNEUMONIA	OM	NULL
12	ADAJAN	1123456789	SURGERY	TOM	NULL
13	ADAJAN	1223567890	ASTHMA	BIPUL	NULL
14	ADAJAN	999956789	FRACTURE	SOURAB	NULL
15	ADAJAN	965656789	TYPHOID	JAYNIT	NULL
16	ADAJAN	233456789	PNEUMONIA	LOY	2021-02-19
17	ADAJAN	123456789	ASTHMA	TROY	2021-02-19
18	ADAJAN	93456789	FRACTURE	LAMAR	2021-02-19
19	ADAJAN	233456789	NAUSEA	JUSTIN	2021-02-19
20	ADAJAN	233456789	DENGUE	DILIT	2021-02-19

At the bottom of the window, a status bar indicates 'Query executed successfully.' and 'localhost (15.0 RTM) | LAPTOP-0J968QT0\jayni ... | master | 00:00:00 | 20 rows'.

SQLQuery5.sql - loc...J968QT0\jayni (56))* SQLQuery1.sql - loc...J968QT0\jayni (66))*

SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED

BEGIN TRAN

Select * from iiit.dbo.T1_patient

WHERE patient_id=7

100 %

Results

Messages

	patient_id	p_address	p_phone	disease	p_name	entrydate
1	7	ADAJAN	0	TYPHOID	MANAN	NULL

✔ Query executed successfully.

localhost (15.0 RTM) LAPTOP-0J968QT0\jayni ... master 00:00:00 1 rows