

DBMS – UE20CS301 Lab

Lab 9

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Sec: F

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1.

Trigger Query:

```
DELIMITER $$
```

```
CREATE TRIGGER before_delete_ticket
```

```
BEFORE DELETE
```

```
ON ticket FOR EACH ROW
```

```
BEGIN
```

```
    DECLARE err_msg varchar(200);
```

```
    SET err_msg = ("cannot insert!! pnr not in paymentinfo");
```

```
    CREATE TABLE IF NOT EXISTS backup (Transaction_id int NOT  
NULL, Bank varchar(20), Card_no varchar(255), Price float, PNR  
varchar(255));
```

```
    IF old.PNR IN paymentinfo.PNR THEN
```

```
        INSERT INTO backup VALUES (SELECT * FROM paymentinfo WHERE  
paymentinfo.PNR = old.PNR);
```

```
    ELSE
```

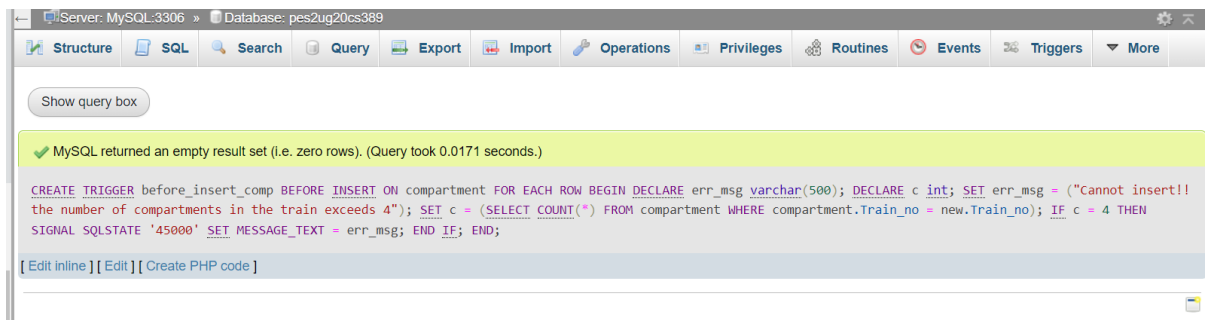
```
        SIGNAL SQLSTATE '45000'
```

```
        SET MESSAGE_TEXT = err_msg;
```

```
    END IF;
```

```
END $$
```

```
DELIMITER ;
```



Original table values:

Compartment table:

Compartment_number	Type	Capacity	Availability	Train_no
F01	I Class	16	6	62621
S01	II Class	30	4	62621
S02	II Class	30	6	62621
G01	III Class	60	10	62621
G02	III Class	60	12	62621
F01	I Class	16	15	62620
F02	I Class	16	0	62620
F01	I Class	16	0	25261
S01	II Class	30	15	25261
G01	III Class	60	33	25261
G02	III Class	60	45	25261
F01	I Class	16	0	25260
S01	II Class	30	15	25260
S02	II Class	30	17	25260
F01	I Class	16	5	58451
G01	III Class	60	40	58451
F01	I Class	16	4	58450
S01	II Class	30	5	58450
S02	II Class	30	3	58450
G01	III Class	60	2	58450

Insert query:

a. Negative test case:


INSERT INTO compartment VALUES ('G02', 'III Class', 60, 9, 62621);

Delimiter: ; ☐ Show this query here again ☐ Retain query box ☐ Rollback when finished ☒ Enable foreign key checks Go

Error

SQL query: [Copy](#)

```
INSERT INTO compartment VALUES ('G02', 'III Class', 60, 9, 62621);
```

MySQL said: 

#1644 - Cannot insert!! the number of compartments in the train exceeds 4

b. Positive test case:

INSERT INTO compartment VALUES ('F02', 'I Class', 16, 4, 58451);

Server: MySQL:3306 » Database: pes2ug20cs389

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers More

Show query box

✓ 1 row inserted. (Query took 0.0061 seconds.)

```
INSERT INTO compartment VALUES ('F02', 'I Class', 16, 4, 58451);
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

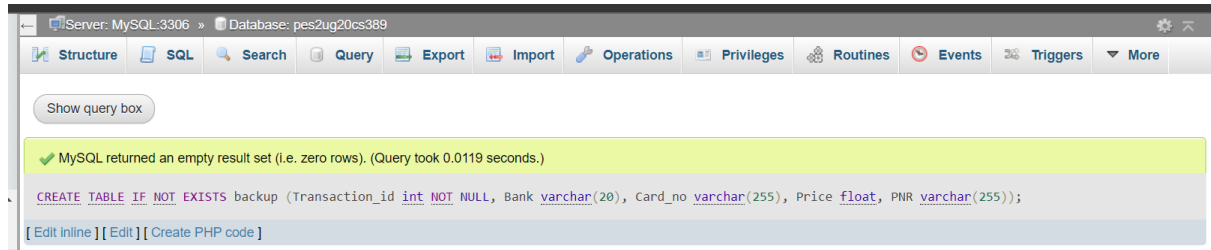
Modified table after insert:

Server: MySQL:3306 » Database: pes2ug20cs389 » Table: compartment					
Browse	Structure	SQL	Search	Insert	Export
Compartment_number	Type	Capacity	Availability	Train_no	
S02	II Class	30	6	62621	
G01	III Class	60	10	62621	
G02	III Class	60	12	62621	
F01	I Class	16	15	62620	
F02	I Class	16	0	62620	
F01	I Class	16	0	25261	
S01	II Class	30	15	25261	
G01	III Class	60	33	25261	
G02	III Class	60	45	25261	
F01	I Class	16	0	25260	
S01	II Class	30	15	25260	
S02	II Class	30	17	25260	
F01	I Class	16	5	58451	
G01	III Class	60	40	58451	
F01	I Class	16	4	58450	
S01	II Class	30	5	58450	
S02	II Class	30	3	58450	
G01	III Class	60	2	58450	
F02	I Class	16	4	58451	

2.

Create backup table query:

```
CREATE TABLE IF NOT EXISTS backup (Transaction_id int NOT NULL,  
Bank varchar(20), Card_no varchar(255), Price float, PNR  
varchar(255));
```



Trigger query:

```
DELIMITER $$  
  
CREATE TRIGGER before_delete_ticket  
BEFORE DELETE  
ON ticket FOR EACH ROW  
BEGIN  
  
    DECLARE err_msg varchar(200);  
  
    SET err_msg = ("cannot insert!! pnr not in paymentinfo");  
  
    IF old.PNR IN (SELECT PNR FROM paymentinfo WHERE  
paymentinfo.PNR = old.PNR) THEN  
  
        INSERT INTO backup (SELECT * FROM paymentinfo WHERE  
paymentinfo.PNR = old.PNR);  
  
    ELSE  
  
        SIGNAL SQLSTATE '45000'  
  
        SET MESSAGE_TEXT = err_msg;  
  
    END IF;  
  
END $$  
  
DELIMITER ;
```

Server: MySQL:3306 » Database: pes2ug20cs389

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers More

Show query box

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0120 seconds.)

```
CREATE TRIGGER before_delete_ticket BEFORE DELETE ON ticket FOR EACH ROW BEGIN DECLARE err_msg varchar(200); SET err_msg = ("cannot insert!! pnr not in paymentinfo"); IF old.PNR IN (SELECT PNR FROM paymentinfo WHERE paymentinfo.PNR = old.PNR) THEN INSERT INTO backup (SELECT * FROM paymentinfo WHERE paymentinfo.PNR = old.PNR); ELSE SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = err_msg; END IF; END;
```

[Edit inline] [Edit] [Create PHP code]

Original table values:

Paymentinfo table:

☐ Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

Transaction_id	Bank	Card_no	Price	PNR
146445	HDFC	1234325465675789	806.4	PNR006
342344	IOB	5623568276587429	2389.2	PNR001
531343	SBI	8953274872387834	1298.7	PNR004
576768	ICICI	7563564537687986	558.72	PNR007
676756	CANARA BANK	7367562354828783	2382.6	PNR002
746745	KOTAK	2545643654365765	957	PNR008
978098	INDIAN BANK	9887325842587643	2213.2	PNR005
978776	UNION BANK	1154978597435874	913.9	PNR003

Ticket table:

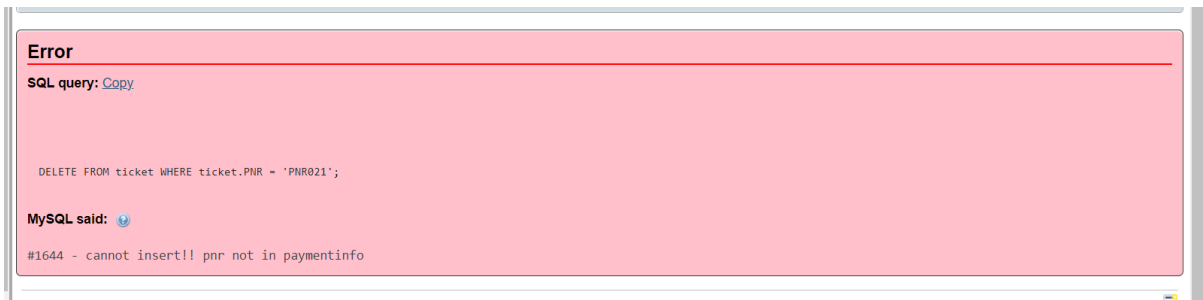
+ Options

PNR	Train_no	Travel_date	Departure	Arrival	Departure_time	Arrival_time	User_ID	Train_type	Compartment_type	Compartment_number
PNR003	25261	2022-10-01	Chennai	Mangaluru	18:00:00	07:30:00	ADM_003	Mail	III Class	G02
PNR004	25260	2022-10-15	Mangaluru	Chennai	19:15:00	08:00:00	ADM_003	Mail	II Class	S02
PNR005	58451	2022-10-03	Bengaluru	Mangaluru	06:00:00	14:00:00	USR_002	Fast	III Class	G01
PNR006	58450	2033-10-04	Mangaluru	Bengaluru	08:00:00	10:15:00	USR_002	Fast	II Class	S01
PNR007	62621	2022-10-07	Bangarpet	Chennai	18:00:00	20:30:00	ADM_002	Superfast	II Class	S01
PNR010	25260	2022-10-19	Mangaluru	Kannur	19:15:00	23:15:00	USR_007	Mail	II Class	S01
PNR014	25260	2022-10-17	Kannur	Palakkad	23:15:00	04:30:00	USR_010	Mail	II Class	S01
PNR015	25260	2022-10-05	Palakkad	Chennai	04:30:00	08:00:00	USR_012	Mail	II Class	S01
PNR001	62621	2022-10-07	Bengaluru	Chennai	16:00:00	20:30:00	ADM_001	Superfast	I Class	F01
PNR002	62620	2022-10-14	Chennai	Bengaluru	08:00:00	12:25:00	ADM_001	Superfast	I Class	F02
PNR008	62620	2022-10-02	Chennai	Bangarpet	08:00:00	09:00:00	ADM_002	Superfast	I Class	F01
PNR011	62621	2022-10-22	Katapadi	Chennai	19:00:00	20:30:00	USR_008	Superfast	I Class	F01
PNR012	58451	2022-10-11	Subramanya	Mangaluru	11:00:00	14:00:00	USR_009	Fast	I Class	F01
PNR021	62621	2021-10-22	Bengaluru	Chennai	16:00:00	20:30:00	ADM_001	Superfast	I Class	F01
PNR022	62621	2022-10-06	Bengaluru	Chennai	16:00:00	20:30:00	USR_008	Superfast	I Class	F01

Delete query:

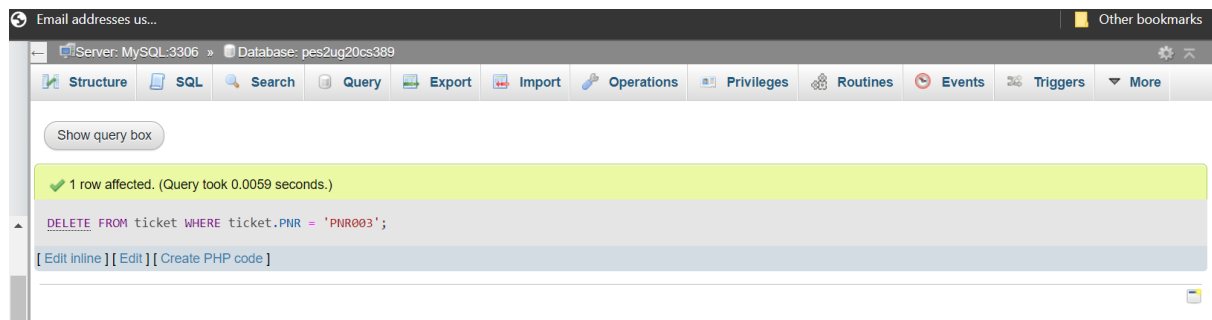
a. Negative test case:

DELETE FROM ticket WHERE ticket.PNR = 'PNR021';



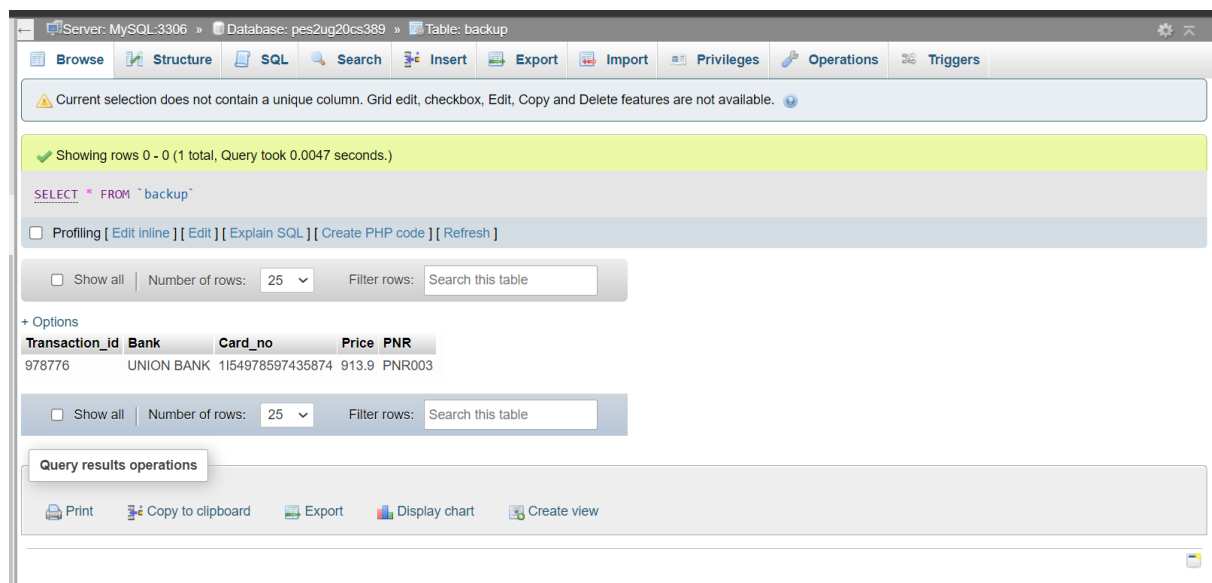
b. Positive test case:

DELETE FROM ticket WHERE ticket.PNR = 'PNR003';



Modified table values after delete:

Backup table:



Ticket table:

PNR	Train_no	Travel_date	Departure	Arrival	Departure_time	Arrival_time	User_ID	Train_type	Compartment_type	Compartment_number
PNR004	25260	2022-10-15	Mangaluru	Chennai	19:15:00	08:00:00	ADM_003	Mail	II Class	S02
PNR005	58451	2022-10-03	Bengaluru	Mangaluru	06:00:00	14:00:00	USR_002	Fast	III Class	G01
PNR006	58450	2023-10-04	Mangaluru	Bengaluru	08:00:00	10:15:00	USR_002	Fast	II Class	S01
PNR007	62621	2022-10-07	Bangarpet	Chennai	18:00:00	20:30:00	ADM_002	Superfast	II Class	S01
PNR010	25260	2022-10-19	Mangaluru	Kannur	19:15:00	23:15:00	USR_007	Mail	II Class	S01
PNR014	25260	2022-10-17	Kannur	Palakkad	23:15:00	04:30:00	USR_010	Mail	II Class	S01
PNR015	25260	2022-10-05	Palakkad	Chennai	04:30:00	08:00:00	USR_012	Mail	II Class	S01
PNR001	62621	2022-10-07	Bengaluru	Chennai	16:00:00	20:30:00	ADM_001	Superfast	I Class	F01
PNR002	62620	2022-10-14	Chennai	Bengaluru	08:00:00	12:25:00	ADM_001	Superfast	I Class	F02
PNR008	62620	2022-10-02	Chennai	Bangarpet	08:00:00	09:00:00	ADM_002	Superfast	I Class	F01
PNR011	62621	2022-10-22	Katapadi	Chennai	19:00:00	20:30:00	USR_008	Superfast	I Class	F01
PNR012	58451	2022-10-11	Subramanya	Mangaluru	11:00:00	14:00:00	USR_009	Fast	I Class	F01
PNR021	62621	2021-10-22	Bengaluru	Chennai	16:00:00	20:30:00	ADM_001	Superfast	I Class	F01
PNR022	62621	2022-10-06	Bengaluru	Chennai	16:00:00	20:30:00	USR_008	Superfast	I Class	F01