# DATABASE MANAGEMENT SYSTEM UE19CS301

### **ASSIGNMENT-03**

#### COURIER MANAGEMENT SYSTEM

DATE: TEAM DETAILS TEAM NUMBER-04

NAME	SRN		
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#### **SIMPLE OUERIES**

- Name of all the route tracers.
  - ➤ select username from C\_USER,C\_ROLE where C\_USER.roleid = C\_ROLE.Roleid and rolename = 'ROUTE TRACER';

```
courier_db=# select username from C_USER,C_ROLE where C_USER.roleid = C_ROLE.Roleid and rolename = 'ROUTE TRACER';
username
-------
jimjulietejam
(1 row)
```

- Name and description of the courier sent by a customer.
  - ➤ select Couriername, Courierdescription from COURIER, CUSTOMER where COURIER.customer id = CUSTOMER.customer Id and fname = 'Helen';

- List the deliveries done on same day.
  - ➤ select \* from DELIVERY where delivery type = 'Same Day Delivery';

courier_db=# sel deliverycusid		ELIVERY where delivery_type = 'Same delivery_description	Day Delivery';   delivery_date	delivery_type
Helen2448 alice7912 taylor1892 chris9932 (4 rows)	43 45	Zepo delivery to MS HANNAH Chocolate delivery to MS ALICE Vegetables delivery to MR TAYLOR Fruits delivery to MR CHRIS	2021-08-23   2021-09-02   2021-09-08   2021-09-24	Same Day Delivery Same Day Delivery Same Day Delivery Same Day Delivery

❖ Select customers of maharashtra

> select customer\_ID,fname from CUSTOMER where customer\_address LIKE '%Maharashtra%':

- list the couriers sent by Jake
  - ➤ select couriername,Fname from COURIER,CUSTOMER where CUSTOMER.customer ID = COURIER.customer id and Fname = 'Jake';

#### **COMPLEX QUERIES**

- ❖ Find minimum and maximum courier IDs in courier table.
  - > select max(CourierID) as highest, min(CourierID) as least from COURIER;

- Select the parameters from the tables role and login that have even numbered role id
  - ➤ SELECT \* FROM C\_ROLE as role01 INNER JOIN C\_LOGIN as user01 ON role01.RoleID=user01.roleid WHERE (role01.RoleID %2)= 0;

```
courier_db=# SELECT * FROM C_ROLE as role01
courier_db-# INNERD JOIN C_LOGINA as user01
courier_db-# INNERD JOIN C_LOGINA as user01
courier_db-# INNERD JOIN C_LOGINA as user01
courier_db-# WHERE (role01.Role1D %2)= 0;
roled | rolename | userid | loginid | loginusername | userpassword | userid | roleid |

2 | BILLING AGENT | Person who generates the bill and alters it | 268 | swajohn | JohnMeston | Westjohn|923 | 268 | 2
6 | SCHEDULE DUITLATOR | Prepares a schedule for the courier and makes sure that it is adhered | 864 | lulisa | LisaParker | Lisali$2821 | 864 | 6
4 | TRACKER AGENT | Tracks the courier until it reaches the customer | 1 tracks the courier until it reaches the customer | 888 | joshyjoshua | Joseph Joshua | joshua$1878 | 888 | 4
8 | ROUTE TRACER | Finds the optimum route between the courier system and the customer location | 546 | pb#julle | Juliette Hannigan | Juli*ette | 546 | 8
(4 rows)
```

- ♦ Deliveries that had their courier delivered in September
  - > SELECT \* FROM DELIVERY WHERE to char(delivery date, 'MM')='09';

```
courier db=# SELECT * FROM DELIVERY
courier_db-# WHERE
courier_db-# to_char(delivery_date,'MM')='09';
deliverycusid | deliveryid | delivery_d
                                                         delivery_description
                                                                                                                                     delivery_type
                                                                                                     | delivery_date |
                                              Chocolate delivery to MS ALICE
Fruits delivery to MR TOM
Vegetables delivery to MR TAYLOR
Clothes delivery to MR ROBIN
 alice7912
                                                                                                        2021-09-02
                                                                                                                                  Same Day Delivery
                                                                                                                                 Next Day Delivery
Same Day Delivery
Next Day Delivery
Next Day Delivery
Same Day Delivery
 tom7281
                                       44
                                                                                                        2021-09-08
 taylor1892
                                       45
                                                                                                        2021-09-08
 robin8733
                                       46
                                                                                                        2021-09-16
                                              Chocolate Delivery to MS HELEN
Fruits delivery to MR CHRIS
 helly9238
                                                                                                        2021-09-17
 chris9932
                                                                                                        2021-09-24
(6 rows)
```

- ❖ Display the username and the mail id of the user that have the product of userid and role id greater than 1000
  - > SELECT username AS user\_name ,useremail AS user\_email\_id FROM C USER WHERE userID\*roleid>1000;

- ❖ Use LEFT OUTER JOIN on tables role and login
  - ➤ SELECT \* FROM C\_ROLE LEFT OUTER JOIN C\_LOGIN ON C\_ROLE.RoleID=C\_LOGIN.roleid;

id	rolename	roledescription	userid	loginid	loginusername	userpassword	userid	roleid
3	PACKAGE CHECKER	Person who checks the quality and efficiency of the courier to be delivered	258	alexerrol	Alexicalvert	AlexCalv@24	258	1
	BILLING AGENT	Person who generates the bill and alters it	268	swajohn	JohnWeston	Westjohn!923	268	
	ADMINISTRATOR	manages the entire working of the system efficiently	235	macmary	MaryWhite	mariami#7112	235	
	SCHEDULE INITIATOR	Prepares a schedule for the courier and makes sure that it is adhered	864	lulisa	LisaParker	lisali\$2821	864	
4	TRACKER AGENT	Tracks the courier until it reaches the customer	888	joshyjoshua	Joseph Joshua	joshua%1878	888	
	CRITIC	Accounts to the entire performance of the team and states pros and cons of the stratergies applied	937	aweava	Ava Winters	vani^ava	937	
		Plans the entire blueprint of the courier until it reaches the customer	762	bossbeth	Beth Summers	beth&ilie	762	
8	ROUTE TRACER	Finds the optimum route between the courier system and the customer location	546	pb&julie	Juliette Hannigan	Juli*ette	546	

#### **NESTED QUERIES**

- ❖ Display the names and the customerID of the customer with the courier named "Chocolate courier"
  - > select fname, lname, customer\_ID from customer as cus where exists (select cus.customer\_ID from customer cus, courier cr where cus.customer\_ID = cr.customer id and cr.couriername = 'Chocolate courier');

```
courier db=# select fname, lname, customer_ID
courier_db-# rfom customer as cus
courier_db-# where exists ( select cus.customer_ID
courier_db(# rfom customer cus, courier cr
courier_db(# where cus.customer_ID = cr.customer_id
courier_db(# where cus.customer_ID = cr.customer_id
courier_db(# and cr.couriername = 'Chocolate courier');
fname | lname | customer_id

Hannah | Dawson | Helen2448

Jake | Rainfold | Jake2336

Alice | Autumn | alice7912

Tom | Sawyer | tom7281

Taylor | Longfield | taylor1892

Robin | Hood | robin8733

Helen | Wright | helly9238

Chris | Hemisworth | chris9932

(8 rows)
```

- ❖ List all the customer details whose delivery was received on the next day
  - > select fname, customer\_id, customer\_mobile, customer\_email from customer as cus where exists (select deliveryID from delivery d where d.deliverycusid = cus.customer\_id and delivery\_type = 'Next Day Delivery');



List the customer names whose deliveries were obtained in the month of August.

 $\triangleright$ 

➤ select fname, lname, customer\_id from customer cus where exists( select deliveryID from delivery d where d.deliverycusid = cus.customer\_id and delivery date <= '2021-09-01' and delivery date >= '2021-08-01');

```
courier db=# select fname, lname, customer_id from customer cus where exists( select deliveryID from delivery d where d.deliverycusid = cus.customer_id and delivery_date <= '2021-09-01' and delivery_date >= '20
```

- ❖ Display the usernames of the users with the roles "SCHEDULE INITIATOR" or "BILLING AGENT".
  - > select username from c\_user where roleid in( select roleid from c\_role where rolename = 'SCHEDULE INITIATOR' or rolename = 'BILLING AGENT');

```
courier_db=# select username
courier_db-# from c_user
courier_db-# where roleid in( select roleid
courier_db(# from c_role
courier_db(# from c_role
courier_db(# where rolename = 'SCHEDULE INITIATOR' or rolename = 'BILLING AGENT');
username
------
hogjohn
livilisa
(2 rows)
```

- ❖ List of all the users with exactly 1 role.
  - > select username, roleid from c\_user cu where( select count(roleid) from c\_role cr where cu.userid = cr.userid) =1;

```
courier db=# select username, roleid
courier_db-# from c_user cu
courier_db-# where( select count(roleid)
courier_db(# from c_role cr
courier_db(# where cu.userid = cr.userid) =1;
                   roleid
    username
 crabeealex
 hogjohn
                            2
 hueremary
                            1
 livilisa
                            6
 brewjoseph
                            4
 aureliava
                            5
 beckybeth
 jimjulietejam |
                            8
 (8 rows)
```

#### MULTIPLE USERS WITH DIFFERENT ACCESS PRIVILEGES

- ➤ CREATE USERS
  - create user user01 with password 'abcd' createdb;
  - create user user02 with password 'bcde' createdb;
  - o create user user03 with password 'cdef' createdb;
  - o create user user04 with password 'defg' createdb;
  - o create user user05 with password 'efgh' createdb;

```
courier_db=# create user user01 with password 'abcd' createdb;
CREATE ROLE
COURIER_db=# create user user02 with password 'bcde' createdb;
CREATE ROLE
COURIER_db=# create user user03 with password 'deff' createdb;
CREATE ROLE
COURIER_db=# create user user04 with password 'defg' createdb;
CREATE ROLE
COURIER_db=# create user user04 with password 'defg' createdb;
CREATE ROLE
COURIER_db=# create user user05 with password 'efgh' createdb;
CREATE ROLE
```

#### ➤ PRIVILEGES GIVEN TO EACH USER

- o grant select on COURIER to user01;
- o grant select on C LOGIN to user01;
- grant select(userID) on C\_USER to user02;
- o grant select(RoleID) on C ROLE to user02;
- grant select(customer ID) on CUSTOMER to user02;
- o grant select(loginID) on C LOGIN to user02;
- grant select(PermissionID) on PERMISSION to user02;
- o grant select(ManagerID) on MANAGER to user02;
- o grant select(DeliveryID) on DELIVERY to user02;
- o grant select, delete, update on PERMISSION to user03;
- o grant select, insert on MANAGER to user04;
- o grant all on all tables in schema public to user05;

```
courier_db=# grant select on COURIER to user01;
GRANT
courier_db=# grant select on C_LOGIN to user01;
GRANT
courier_db=# grant select(userID) on C_USER to user02;
GRANT
courier_db=# grant select(RoleID) on C_ROLE to user02;
GRANT
courier_db=# grant select(customer_ID) on CUSTOMER to user02;
GRANT
courier_db=# grant select(loginID) on C_LOGIN to user02;
GRANT
courier_db=# grant select(loginID) on C_LOGIN to user02;
GRANT
courier_db=# grant select(PermissionID) on PERMISSION to user02;
GRANT
courier_db=# grant select(ManagerID) on MANAGER to user02;
GRANT
courier_db=# grant select(DeliveryID) on DELIVERY to user02;
GRANT
courier_db=# grant select(DeliveryID) on DELIVERY to user03;
GRANT
courier_db=# grant insert on MANAGER to user04;
GRANT
courier_db=# grant insert on MANAGER to user04;
GRANT
courier_db=# grant all on all tables in schema public to user05;
GRANT
```

#### ➤ USER 01 ACCESS

```
PS C:\Users\User\Desktop\dbms_lab\dbms_assignment> psql courier_db user01
Password for user user01:
psql (12.8)
WARNING: Console code page (437) differs from Windows code page (1252)
8-bit characters might not work correctly. See psql reference
page "Notes for Windows users" for details.
Type "help" for help.

courier_db=> select * from courier;
```

```
courier discovered courier contains the electronic goods process of the courier contains the three picked fineers and plants above the courier cruits courier contains vegetables (courier contains vegetables courier contains vegetables (courier contains vegetables (courier discovered courier) courier contains vegetables (courier cont
```

#### ➤ USER 02 ACCESS

```
PS C:\Users\User\Desktop\dbms_lab\dbms_assignment> psql courier_db user02
Password for user user02:
psql (12.8)
WARNING: Console code page (437) differs from Windows code page (1252)
8-bit characters might not work correctly. See psql reference
page "Notes for Windows users" for details.

Type "help" for help.

courier db=>
```

```
courier_db=> select userID from c_user;
userid
------
258
268
235
864
888
937
762
546
(8 rows)
```

```
courier_db=> select RoleID from C_ROLE;
roleid
------
1
2
3
4
5
6
7
8
(8 rows)
Activate Windows
```

```
courier_db=> select LoginID from C_LOGIN;
loginid
-------
alexerrol
swajohn
macmary
lulisa
joshyjoshua
aweava
bossbeth
pb&julie
(8 rows)
```

```
courier_db=> select username from C_USER;
ERROR: permission denied for table c_user
courier_db=>
```

#### ➤ USER 03 ACCESS

```
PS C:\Users\User\Desktop\dbms_lab\dbms_assignment> psql courier_db user03
Password for user user03:
psql (12.8)
WARNING: Console code page (437) differs from Windows code page (1252)
8-bit characters might not work correctly. See psql reference
page "Notes for Windows users" for details.

Type "help" for help.

courier_db=>
```

```
courier_db=> select * from PERMISSION;
permissionid | permissionmodule | permissionname

11 | Payment module | Paytz

12 | SMR Notification module | Chatbotz

13 | Email Notification module | Mailzzz

14 | Delivery module | delizap

15 | Billing module | killBill

16 | Rate Monitor Module | Starzzz

17 | Service analysis Module | Buzzery

18 | Schedule Module | Notifier
```

```
courier_db=> select PermissionID from PERMISSION;
permissionid

11
12
13
14
15
16
17
18
(8 rows)
```

```
courier db=> DELETE FROM PERMISSION WHERE PermissionID=15;
DELETE 1
courier_db=> DELETE FROM PERMISSION WHERE PermissionID=13;
DELETE 1
courier_db=> SELECT * FROM PERMISSION;
 permissionid |
                   permissionmodule
                                                permissionname
             11 | Payment module
12 | SMS Notification module
                                                 Paytz
Chatbotz
             14 | Delivery module
16 | Rate Monitor Module
17 | Service analysis Module
                                                 delizap
                                                 Starzzz
                                                 Buzzery
                  Schedule Module
                                                 Notifier
(6 rows)
```

```
courier_db-> UPDATE PERMISSION
courier_db-> SET Permissionname='PayTZzZ'
courier_db-> WHERE PermissionID=11;
UPDATE 1
courier_db-> SELECT * FROM PERMISSION;
permissionid | permissionmodule |
                                                  permissionmodule
                                                                                                                                 permissionname
                                  12 SWS Notification module Chatbotz
14 Delivery module delizap
16 Rate Monitor Module Starzzz
17 Service analysis Module Buzzery
18 Schedule Module Notifier
11 Payment module PayTZZZ
 (6 rows)
```

```
courier db=> SELECT * FROM MANAGER;
ERROR: permission denied for table manager
courier_db=> DELETE FROM CUSTOMER WHERE customer_id='Helen2448';
ERROR: permission denied for table customer
courier_db=> UPDATE MANAGER
courier_db-> SET ManagerID=12
courier_db-> WHERE ManagerID=11;
ERROR: permission denied for table manager
```

#### ➤ USER 04 ACCESS

```
PS C:\User\User\Desktop\dbms_lab\dbms_assignment> psql courier_db user04
Password for user user04:
psql (12.8)
MARKING: Concol
psql (12.8) WARNING: Console code page (437) differs from Windows code page (1252) 8-bit characters might not work correctly. See psql reference page "Notes for Windows users" for details.
Type "help" for help.
```

```
ourier_db=> select * from MANAGER
ourier_db-> ;
nanagerid | manager_name |
                                                                                                                                                   | manager_phoneno |
                                                                                   manager_addr
         31 | Alex Calvert | 40/44, corporation Shopping Comple, 1st Floot, R A Puram Chennai Tamil Nadu 600028 | 6127977399
                                                                                                                                                                        | alexcalvert2635@gmail.com
courier_db-> INSERT INTO MAWAGER VALUES(32,'John Weston','Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, MAharashtra, 400066 ','7471491095','johnweston2298@yahoo.com');
INSERT 0 1
courier_db-> select * from MAWAGER;
managerid | manager_name | manager_addr | manager_phoneno | manager_email
                Alex Calvert
John Weston
Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, MWharashtra, 40
```

#### ➤ USER 05 ACCESS

```
PS C:\Users\User\Desktop\dbms_lab\dbms_assignment> psql courier_db user05
Password for user user05:
psql (12.8)
WARNING: Console code page (437) differs from Windows code page (1252)
8-bit characters might not work correctly. See psql reference
page "Notes for Windows users" for details.
Type "help" for help.
courier db=>
```

	mname	t * from Cust lname		customer_mobile	customer_email	!	custor	mer_address		customer_password
Hannah   Jake   Alice   Tom   Taylor   Robin   Helen   Chris	Cuss Green Bright	Dawson Rainfold Autumn Sawyer Longfield Hood Wright Hemisworth	Helen2448 Jake2386 alice7912 tom7281 taylor1892 robin8733 helly9238 chris9932	9673918831 9953916935 8978232387 6328393499 9837284039 7829384673 9727938364 7489323743	jakerainfold3279@yahoo.com aliceautumn2168@gmail.com tomsawyer3872@yahoo.com taylorcuss0392@yahoo.com greenhood932@yahoo.com helenwright5839@yahoo.com	56-1-581, Nallakunta Opposite Blue Lotus I Kumdazh Rd, Tiruvantl D 13/6, Punjabi Bast 176/3 , Srinagar, Ja	Hyderabad,Telangar Restaurant, Near Pe napuram, Kerala,283 i, Chandigarh,Punja mmu and Kashmir, 23 , Main Kasturba Rd	eeling, Darjeling, West Bengal 3822 ab 238746 32891 , Borivali (east),Mumbai, MAha	738279	Hannah@38 rainFold%24 Alice#26 cRuise! tayLor\$ robIn^ &height *83chris
	b=> selec	t * from Mana er_name	ager;		manager_addr		manager_phoneno	manager_email		
3					1st Floot, R A Puram Chennai a Rd, Borivali (east),Mumbai,		6127977399 7471491095	alexcalvert2635@gmail.com johnweston2298@yahoo.com		
2 rows)									Activate Wii	ndows

```
courier db=> SELECT * FROM PERMISSION;
permissionid |
                   permissionmodule
                                        permissionname
           11
               Payment module
                                          Paytz
           12
                SMS Notification module
                                          Chatbotz
           14
                Delivery module
                                          delizap
                Rate Monitor Module
           16
                                          Starzzz
                                          Buzzery
           17
                Service analysis Module
               Schedule Module
                                          Notifier
           18
(6 rows)
```

```
courier_db=> INSERT INTO PERMISSION VALUES(13, 'Email Notification module', 'Mailzzz');
courier_db=> SELECT * FROM PERMISSION;
permissionid | permissionmodule
                        permissionmodule
                                                       permissionname
                    SMS Notification module
Delivery module
Rate Monitor Module
                                                         Chatbotz
              12 |
14 |
                                                          delizap
              16
                                                          Starzzz
                                                         Buzzery
Notifier
                    Service analysis Module
                    Schedule Module
              11
13
                    Payment module
Email Notification module
                                                         PayTZzZ
Mailzzz
(7 rows)
```

courier_db=> SELECT * FROM MA managerid   manager_name		manager_phoneno	manager_email					
	0/44,corporation Shopping Comple, 1st Floot, R A Puram Chennai Tamil Nadu 600028   agatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, Myharashtra, 400066		alexcalvert2635@gmail.com johnweston2298@yahoo.com					
(2 rows)								
courier_db=> UPDATE MANAGER	faluria calurati							
	courier_db-> SET manager_name='Alexis Calvert' courier_db-> WHERE managerid=31;							
courier_db=> SELECT * FROM MA								
managerid   manager_name	manager_addr	manager_phoneno	manager_email					
	Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, MAharashtra, 400066 40/44,corporation Shopping Comple, 1st Floot, R A Puram Chennai Tamil Nadu 600028	7471491095 6127977399	johnweston2298@yahoo.com alexcalvert2635@gmail.com					
(2 rows)								

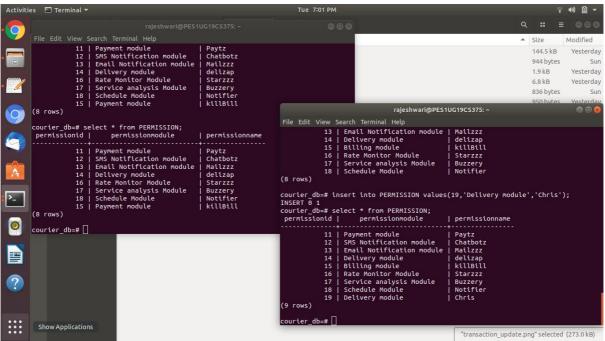
```
courier_db-> DELETE
courier_db-> FROM MANAGER
courier_db-> WHERE managerid=31;
DELETE 1

courier_db-> SELECT * FROM MANAGER;
managerid | manager_name | manager_addr | manager_phoneno | manager_email

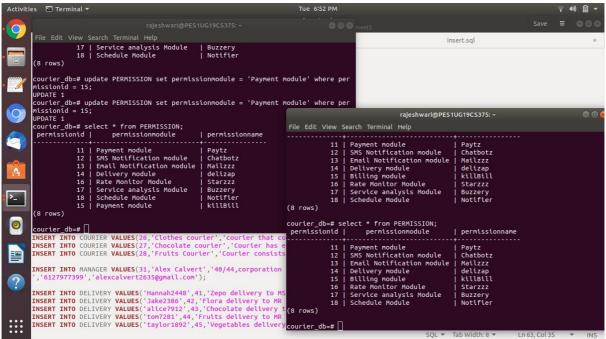
32 | John Weston | Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, MAharashtra, 400066 | 7471491095 | johnweston2298@yahoo.com
(1 row)
```

## INITIATE CONCURRENT TRANSACTIONS AND DEMONSTRATE THE CONCURRENCY CONTROL FOR THE CONFLICTING ACTIONS.

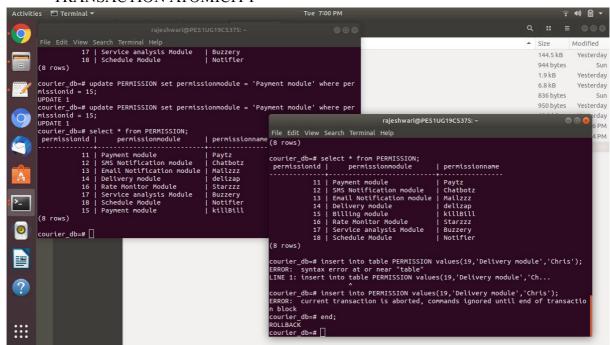
#### > TRANSACTION INSERT



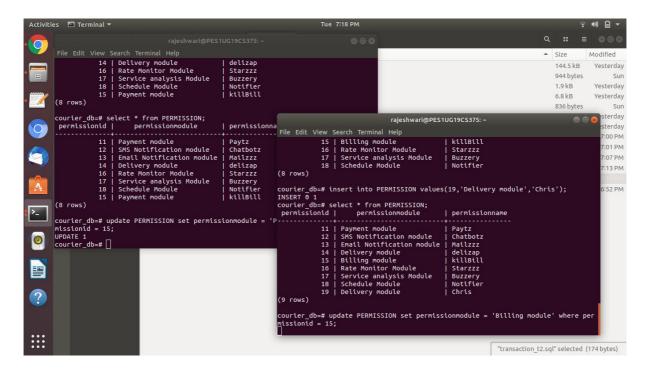
#### > TRANSACTION UPDATE

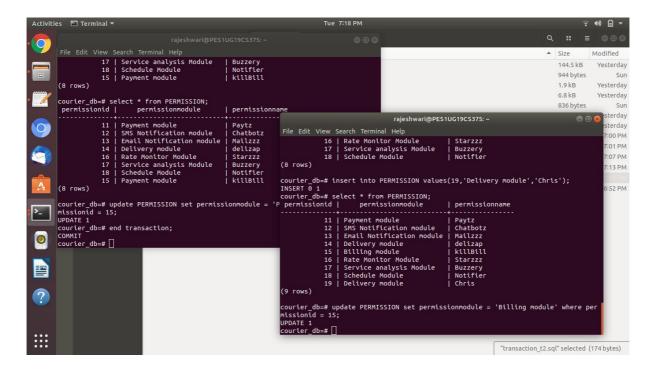


#### > TRANSACTION ATOMICITY

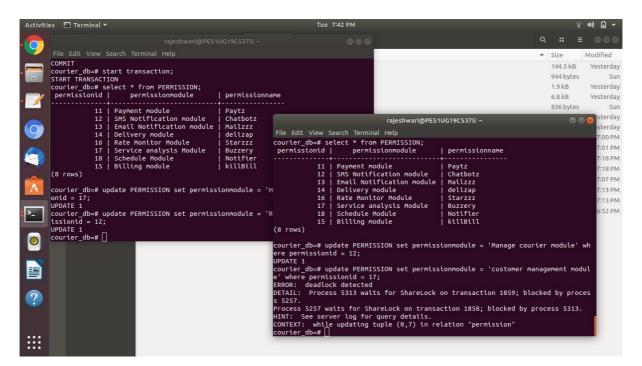


#### > LOCK IN TRANSACTION





#### > DEADLOCK IN TRANSACTION



NAME	CONTRIBUTION	NO OF HOURS
RAMYA C	<ul> <li>→ COMPLEX QUERIES</li> <li>→ MULTIPLE USERS WITH DIFFERENT ACCESS PRIVILEGES.</li> <li>→ REPORT</li> </ul>	2
RAJESHWARI R	<ul> <li>→ SIMPLE QUERIES</li> <li>→ INITIATE CONCURRENT TRANSACTIONS AND         DEMONSTRATE THE CONCURRENCY CONTROL FOR THE         CONFLICTING ACTIONS.</li> </ul>	2
RUCHITHA V R	→ NESTED QUERIES	2