

# DATABASE MANAGEMENT

## SYSTEM UE19CS301

### ASSIGNMENT-03

#### *COURIER MANAGEMENT SYSTEM*

DATE:

TEAM DETAILS

TEAM NUMBER-04

NAME	SRN
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### SIMPLE QUERIES

❖ 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';

```
courier_db=# select Couriername,Courierdescription from COURIER,CUSTOMER where COURIER.customer_id = CUSTOMER.customer_Id and fname = 'Helen';
 couriername | courierdescription
-----
Chocolate courier | Courier has exquisite variety of chocolates
(1 row)
```

❖ List the deliveries done on same day.

➤ select \* from DELIVERY where delivery\_type = 'Same Day Delivery';

```
courier_db=# select * from DELIVERY where delivery_type = 'Same Day Delivery';
 deliverycusid | deliveryid | delivery_description | delivery_date | delivery_type
-----
Helen2448      | 41         | Zepo delivery to MS HANNAH | 2021-08-23    | Same Day Delivery
alice7912      | 43         | Chocolate delivery to MS ALICE | 2021-09-02    | Same Day Delivery
taylor1892     | 45         | Vegetables delivery to MR TAYLOR | 2021-09-08    | Same Day Delivery
chris9932      | 48         | Fruits delivery to MR CHRIS | 2021-09-24    | Same Day Delivery
(4 rows)
```

❖ Select customers of maharashtra

- select customer\_ID, fname from CUSTOMER where customer\_address LIKE '%Maharashtra%';

```
courier_db=# select customer_ID, fname from CUSTOMER where customer_address LIKE '%Maharashtra%';
customer_id | fname
-----+-----
Helen2448   | Hannah
(1 row)
```

- ❖ list the couriers sent by Jake

- select couriername, Fname from COURIER, CUSTOMER where CUSTOMER.customer\_ID = COURIER.customer\_id and Fname = 'Jake';

```
courier_db=# select couriername, Fname from COURIER, CUSTOMER where CUSTOMER.customer_ID = COURIER.customer_id and Fname = 'Jake';
couriername | fname
-----+-----
Flora courier | Jake
(1 row)
```

### COMPLEX QUERIES

- ❖ Find minimum and maximum courier IDs in courier table.

- select max(CourierID) as highest, min(CourierID) as least from COURIER;

```
courier_db=# select max(CourierID) as highest,
courier_db=# min(CourierID) as least
courier_db=# from COURIER;
highest | least
-----+-----
28      | 21
(1 row)
```

- ❖ 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=# INNER JOIN C_LOGIN as user01
courier_db=# ON role01.RoleID=user01.roleid
courier_db=# WHERE (role01.RoleID %2)= 0;
```

roleid	rolename	roledescription	userid	loginid	loginusername	userpassword	userid	roleid
2	BILLING AGENT	Person who generates the bill and alters it	268	swajohn	JohnWeston	Westjohn1923	268	2
6	SCHEDULE INITIATOR	Prepares a schedule for the courier and makes sure that it is adhered	864	lulisa	LisaParker	lisa1\$2821	864	6
4	TRACKER AGENT	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&julie	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_description	delivery_date	delivery_type
alice7912	43	Chocolate delivery to MS ALICE	2021-09-02	Same Day Delivery
tom7281	44	Fruits delivery to MR TOM	2021-09-08	Next Day Delivery
taylor1892	45	Vegetables delivery to MR TAYLOR	2021-09-08	Same Day Delivery
robin8733	46	Clothes delivery to MR ROBIN	2021-09-16	Next Day Delivery
helly9238	47	Chocolate Delivery to MS HELEN	2021-09-17	Next Day Delivery
chris9932	48	Fruits delivery to MR CHRIS	2021-09-24	Same Day Delivery

(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;

```
courier_db=# SELECT username as user_name
courier_db=# ,useremail as user_email_id
courier_db=# from C_USER
courier_db=# where userID*roleid>1000;
 user_name |      user_email_id
-----|-----
 livilisa  | lisaparker559@gmail.com
 brewjoseph | josephjoshua326@yahoo.com
 aureliava | avawinters2534@yahoo.com
 beckybeth | bethsummers290@gmail.com
 jimjulietejam | juliettehannigan3892@gmail.com
(5 rows)
```

- ❖ 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;

```
courier_db=# SELECT * FROM C_ROLE LEFT OUTER JOIN C_LOGIN ON C_ROLE.RoleID=C_LOGIN.roleid;
roleid | rolename | roleid | loginid | loginusername | userpassword | userid | roleid
-----|-----|-----|-----|-----|-----|-----|-----
 3 | PACKAGE CHECKER | 258 | alexerrol | Alexicalvert | AlexCalv@24 | 258 | 3
 1 | BILLING AGENT | 268 | swajohn | JohnMeston | WestJohn1923 | 268 | 2
 2 | ADMINISTRATOR | 235 | macmary | MaryWhite | mariani#7112 | 235 | 1
 6 | SCHEDULE INITIATOR | 864 | julisa | LisaParker | lisali52021 | 864 | 6
 4 | TRACKER AGENT | 888 | joshyjoshua | Joseph Joshua | joshua#1878 | 888 | 4
 5 | CRITIC | 937 | aweava | Ava Winters | vani^ava | 937 | 5
 7 | PLAN AGENT | 762 | bossbeth | Beth Summers | beth&illie | 762 | 7
 8 | ROUTE TRACER | 546 | pb&julie | Juliette Hannigan | Juli*ette | 546 | 8
(8 rows)
```

## 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=# from customer as cus
courier_db=# where exists ( select cus.customer_ID
courier_db=# from customer cus, courier cr
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 | Jake2386
 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');

```
courier_db=# 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');
 fname | customer_id | customer_mobile | customer_email
-----|-----|-----|-----
 Helen | helly9238 | 9727938364 | helenuwight1983@yahoo.com
 Jake | Jake2386 | 9953916935 | jakerainfo13279@yahoo.com
 Tom | tom7281 | 6328393498 | tomsawyer307@yahoo.com
 Robin | robin8733 | 7829384673 | greenhood8932@yahoo.com
(4 rows)
```

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

➤

- 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 >= '2021-08-01');
fname | lname | customer_id
-----+-----+-----
Jake   | Rainfold | Jake2386
Hannah | Dawson | Helen2448
(2 rows)
```

- ❖ 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=# 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;
username | roleid
-----+-----
crabeealex | 3
hogjohn | 2
hueremary | 1
livilisa | 6
brewjoseph | 4
aureliava | 5
beckybeth | 7
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;
- create user user03 with password 'cdef' createdb;
- create user user04 with password 'defg' createdb;
- 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 'cdef' 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

- grant select on COURIER to user01;
- grant select on C\_LOGIN to user01;
- grant select(userID) on C\_USER to user02;
- grant select(RoleID) on C\_ROLE to user02;
- grant select(customer\_ID) on CUSTOMER to user02;
- grant select(loginID) on C\_LOGIN to user02;
- grant select(PermissionID) on PERMISSION to user02;
- grant select(ManagerID) on MANAGER to user02;
- grant select(DeliveryID) on DELIVERY to user02;
- grant select,delete,update on PERMISSION to user03;
- grant select,insert on MANAGER to user04;
- 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(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,delete,update on PERMISSION to user03;
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_db-> select * from courier;
courierid | couriername | courierdescription | customer_id
-----|-----|-----|-----
21 | Zepo courier | Courier contains the electronic goods | Helen2448
22 | Flora courier | The courier contains the best picked flowers and plants | Jake2386
23 | Chocolate courier | Courier has exquisite variety of chocolates | alice7912
24 | Fruits Courier | Courier consists of fruits | tom7281
25 | Vegetables courier | Courier contains vegetables | Taylor1092
26 | Clothes courier | courier that contains cloths | robin8733
27 | Chocolate courier | Courier has exquisite variety of chocolates | helly9238
28 | Fruits Courier | Courier consists of fruits | chris9932
(8 rows)
```

```
courier_db-> select courierid from courier;
```

```
-----
courierid
-----
21
22
23
24
25
26
27
28
(8 rows)
```

```
courier_db-> select * from c_login;
```

```
-----
loginid | loginusername | userpassword | userid | roleid
-----|-----|-----|-----|-----
alexerrol | Alexcalvert | Alexcalv024 | 258 | 3
swajohn | JohnWeston | Westjohn1923 | 268 | 2
macmory | MaryWhite | mariam17112 | 235 | 1
julie | LisaParker | lisali5221 | 864 | 6
joshyjoshua | Joseph Joshua | joshua81878 | 888 | 4
aweava | Ava Winters | vani*ava | 937 | 5
bossbeth | Beth Summers | beth&llie | 762 | 7
pb&julie | Juliette Hamigan | Juli*ette | 546 | 8
(8 rows)
```

```
courier_db-> select * from delivery;
ERROR: permission denied for table delivery
```

Activate Windows  
Go to Settings to activate Windows.

## ➤ 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  
Go to Settings to 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=>
```

Activa

### ➤ 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 | SMS 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
(8 rows)
```

```
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 | Paytz
12 | SMS Notification module | Chatbotz
14 | Delivery module | delizap
16 | Rate Monitor Module | Starzzz
17 | Service analysis Module | Buzzery
18 | 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 | permissionname
-----+-----+-----
12 | SMS 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:\Users\User\Desktop\dbms_lab\dbms_assignment> psql courier_db user04
Password for user user04:
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 MANAGER
courier_db-> ;
managerid | manager_name | manager_addr | manager_phoneno | manager_email
-----+-----+-----+-----+-----
31 | Alex Calvert | 40/44,corporation Shopping Comple, 1st Floot, R A Puram Chennai Tamil Nadu 600028 | 6127977399 | alexcalvert2635@gmail.com
(1 row)

courier_db-> INSERT INTO MANAGER 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 MANAGER;
managerid | manager_name | manager_addr | manager_phoneno | manager_email
-----+-----+-----+-----+-----
31 | Alex Calvert | 40/44,corporation Shopping Comple, 1st Floot, R A Puram Chennai Tamil Nadu 600028 | 6127977399 | alexcalvert2635@gmail.com
32 | John Weston | Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, Maharashtra, 400066 | 7471491095 | johnweston2298@yahoo.com
(2 rows)

```

## ➤ 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=>

```



```
courier_db=> select * from Customer;
```

fname	mname	lname	customer_id	customer_mobile	customer_email	customer_address	customer_password
Hannah	Melen	Dawson	Helen2448	9673918831	hannahdawson3872@gmail.com	46/44,corporation Shopping Kasturba, 1st Floor, Lonavala Pune Maharashtra 629028	Hannah@38
Jake	Mering	Rainfold	Jake2386	9953916935	jakerainfold3279@yahoo.com	56-1-581, Nallakunta,Hyderabad,Telangana,198101	rainfold@24
Alice	Green	Autumn	alice7912	8978232387	aliceautumn216@gmail.com	Opposite Blue Lotus Restaurant, Near Peeiling, Darjeeling, West Bengal-738279	Alice@26
Tom	Cruise	Sawyer	tom7281	6328292490	tom-sawyer3872@yahoo.com	Kudadath Rd, Thiruvananthapuram, Kerala,283822	cruise1
Taylor	Cuss	Longfield	taylor1892	9837284039	taylorcuss8392@yahoo.com	D 13/6, Punjabi Basti, Chandigarh,Punjab 238746	taylor\$
Robin	Green	Hood	robin8733	7829384673	greenhood932@yahoo.com	176/3 , Srinagar, Jammu and Kashmir, 232891	robin*
Helen	Bright	Wright	helly9238	9727938364	helenwright9839@yahoo.com	Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, Maharashtra, 400066	&height
Chris	Evan	Hemsworth	chris9932	7489323743	chrismiss3298@yahoo.com	#634/28, Bhopal ,Madhya Pradesh,783110	*83chris

(8 rows)

```
courier_db=> select * from Manager;
```

managerid	manager_name	manager_addr	manager_phoneno	manager_email
31	Alex Calvert	40/44,corporation Shopping Comple, 1st Floor, R A Puram Chennai Tamil Nadu 600028	6127977399	alexcalvert2635@gmail.com
32	John Weston	Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, Maharashtra, 400066	7471491095	johnweston2298@yahoo.com

(2 rows)

Activate Windows

```
courier_db=> SELECT * FROM PERMISSION;
```

permissionid	permissionmodule	permissionname
11	Payment module	Paytz
12	SMS Notification module	Chatbotz
14	Delivery module	delizap
16	Rate Monitor Module	Starzzz
17	Service analysis Module	Buzzery
18	Schedule Module	Notifier

(6 rows)

```
courier_db=> INSERT INTO PERMISSION VALUES(13,'Email Notification module','Mailzzz');
INSERT 0 1
courier_db=> SELECT * FROM PERMISSION;
```

permissionid	permissionmodule	permissionname
12	SMS 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
13	Email Notification module	Mailzzz

(7 rows)

```
courier_db=> SELECT * FROM MANAGER;
```

managerid	manager_name	manager_addr	manager_phoneno	manager_email
31	Alex Calvert	40/44,corporation Shopping Comple, 1st Floor, R A Puram Chennai Tamil Nadu 600028	6127977399	alexcalvert2635@gmail.com
32	John Weston	Jagatram Tiwari Chwl, Main Kasturba Rd, Borivali (east),Mumbai, Maharashtra, 400066	7471491095	johnweston2298@yahoo.com

(2 rows)

```
courier_db=> UPDATE MANAGER
courier_db-> SET manager_name='Alexis Calvert'
courier_db-> WHERE managerid=31;
UPDATE 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
31	Alexis Calvert	40/44,corporation Shopping Comple, 1st Floor, R A Puram Chennai Tamil Nadu 600028	6127977399	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

The screenshot shows a terminal window with two panes. The left pane shows the initial state of the 'PERMISSION' table with 8 rows. The right pane shows the result after inserting a new row.

```
courier_db=# select * from PERMISSION;
```

permissionid	permissionmodule	permissionname
11	Payment module	Paytz
12	SMS Notification module	Chatbotz
13	Email Notification module	Mailzzz
14	Delivery module	delizap
16	Rate Monitor Module	Starzzz
17	Service analysis Module	Buzzery
18	Schedule Module	Notifier
15	Payment module	killBill

(8 rows)

```
courier_db=# insert into PERMISSION values(19,'Delivery module','Chris');
```

```
INSERT 0 1
```

```
courier_db=# select * from PERMISSION;
```

permissionid	permissionmodule	permissionname
11	Payment module	Paytz
12	SMS 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
19	Delivery module	Chris

(9 rows)

courier\_db=#

### ➤ TRANSACTION UPDATE

The screenshot shows a terminal window with two panes. The left pane shows the initial state of the 'PERMISSION' table with 8 rows. The right pane shows the result after updating a row and inserting new records.

```
courier_db=# update PERMISSION set permissionmodule = 'Payment module' where per
```

```
missionid = 15;
```

```
UPDATE 1
```

```
courier_db=# update PERMISSION set permissionmodule = 'Payment module' where per
```

```
missionid = 15;
```

```
UPDATE 1
```

```
courier_db=# select * from PERMISSION;
```

permissionid	permissionmodule	permissionname
11	Payment module	Paytz
12	SMS Notification module	Chatbotz
13	Email Notification module	Mailzzz
14	Delivery module	delizap
16	Rate Monitor Module	Starzzz
17	Service analysis Module	Buzzery
18	Schedule Module	Notifier
15	Payment module	killBill

(8 rows)

```
courier_db=#
```

```
INSERT INTO COURIER VALUES(26,'Clothes courier','courier that co
```

```
INSERT INTO COURIER VALUES(27,'Chocolate courier','Courier has e
```

```
INSERT INTO COURIER VALUES(28,'Fruits Courier','Courier consists
```

```
INSERT INTO MANAGER VALUES(31,'Alex Calvert','40/44,corporation
```

```
','6127977399','alexcalvert2635@gmail.com');
```

```
INSERT INTO DELIVERY VALUES('Hannah2448',41,'Zepo delivery to MS
```

```
INSERT INTO DELIVERY VALUES('Jake2386',42,'Flora delivery to MR
```

```
INSERT INTO DELIVERY VALUES('alice7912',43,'Chocolate delivery t
```

```
INSERT INTO DELIVERY VALUES('ton7281',44,'Fruits delivery to MR
```

```
INSERT INTO DELIVERY VALUES('taylor1892',45,'Vegetables delivery
```

```
courier_db=#
```

## ➤ TRANSACTION ATOMICITY

```

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
(8 rows)
courier_db=# update PERMISSION set permissionmodule = 'Payment module' where per
missionid = 15;
UPDATE 1
courier_db=# update PERMISSION set permissionmodule = 'Payment module' where per
missionid = 15;
UPDATE 1
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS Notification module | Chatbotz
13 | Email Notification module | Mailzzz
14 | Delivery module | dellzap
15 | Billing module | killBill
16 | Rate Monitor Module | Starzzz
17 | Service analysis Module | Buzzery
18 | Schedule Module | Notifier
19 | Payment module | killBill
(8 rows)
courier_db=#

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
(8 rows)
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS Notification module | Chatbotz
13 | Email Notification module | Mailzzz
14 | Delivery module | dellzap
15 | Billing module | killBill
16 | Rate Monitor Module | Starzzz
17 | Service analysis Module | Buzzery
18 | Schedule Module | Notifier
(8 rows)
courier_db=# insert into table PERMISSION values(19,'Delivery module','Chris');
ERROR: syntax error at or near "table"
LINE 1: insert into table PERMISSION values(19,'Delivery module','Ch...
^
courier_db=# insert into PERMISSION values(19,'Delivery module','Chris');
ERROR: current transaction is aborted, commands ignored until end of transactio
n block
courier_db=# end;
ROLLBACK
courier_db=#
  
```

## ➤ LOCK IN TRANSACTION

```

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
(8 rows)
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS Notification module | Chatbotz
13 | Email Notification module | Mailzzz
14 | Delivery module | dellzap
15 | Billing module | killBill
16 | Rate Monitor Module | Starzzz
17 | Service analysis Module | Buzzery
18 | Schedule Module | Notifier
19 | Payment module | killBill
(8 rows)
courier_db=# update PERMISSION set permissionmodule = 'P
missionid = 15;
UPDATE 1
courier_db=#

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
(8 rows)
courier_db=# insert into PERMISSION values(19,'Delivery module','Chris');
INSERT 0 1
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS Notification module | Chatbotz
13 | Email Notification module | Mailzzz
14 | Delivery module | dellzap
15 | Billing module | killBill
16 | Rate Monitor Module | Starzzz
17 | Service analysis Module | Buzzery
18 | Schedule Module | Notifier
19 | Delivery module | Chris
(9 rows)
courier_db=# update PERMISSION set permissionmodule = 'Billing module' where per
missionid = 15;
  
```



The screenshot shows a terminal window with the following commands and output:

```

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
17 | Service analysis Module | Buzzery
18 | Schedule Module | Notifier
15 | Payment module | killBill
(8 rows)
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS 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
15 | Payment module | killBill
(8 rows)
courier_db=# update PERMISSION set permissionmodule = 'P
missionid = 15;
UPDATE 1
courier_db=# end transaction;
COMMIT
courier_db=#

```

A file explorer window is also open, showing a list of files with columns for Size and Modified. The files listed are:

Size	Modified
144.5 kB	Yesterday
944 bytes	Sun
1.9 kB	Yesterday
6.8 kB	Yesterday
836 bytes	Sun

Below the file explorer, another terminal window is open with the following commands and output:

```

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
16 | Rate Monitor Module | Starzzz
17 | Service analysis Module | Buzzery
18 | Schedule Module | Notifier
(8 rows)
courier_db=# insert into PERMISSION values(19,'Delivery module','Chris');
INSERT 0 1
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS 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
19 | Delivery module | Chris
(9 rows)
courier_db=# update PERMISSION set permissionmodule = 'Billing module' where per
missionid = 15;
UPDATE 1
courier_db=#

```

A status bar at the bottom right indicates: "transaction\_t2.sql" selected (174 bytes).

## ➤ DEADLOCK IN TRANSACTION

The screenshot shows a terminal window with the following commands and output:

```

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
COMMIT
courier_db=# start transaction;
START TRANSACTION
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS 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
15 | Billing module | killBill
(8 rows)
courier_db=# update PERMISSION set permissionmodule = 'H
onid = 17;
UPDATE 1
courier_db=# update PERMISSION set permissionmodule = 'R
lssionid = 12;
UPDATE 1
courier_db=#

```

A second terminal window is open, showing the following commands and output:

```

rajeshwari@PES1UG19CS375: ~
File Edit View Search Terminal Help
courier_db=# select * from PERMISSION;
permissionid | permissionmodule | permissionname
-----
11 | Payment module | Paytz
12 | SMS 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
15 | Billing module | killBill
(8 rows)
courier_db=# update PERMISSION set permissionmodule = 'Manage courier module' wh
ere permissionid = 12;
UPDATE 1
courier_db=# update PERMISSION set permissionmodule = 'customer management modul
e' where permissionid = 17;
ERROR: deadlock detected
DETAIL: Process 5313 waits for ShareLock on transaction 1859; blocked by proces
s 5257.
Process 5257 waits for ShareLock on transaction 1858; blocked by process 5313.
HINT: See server log for query details.
CONTEXT: while updating tuple (0,7) in relation "permission"
courier_db=#

```

## CONTRIBUTION OF INDIVIDUAL MEMBERS OF THE TEAM

<i>NAME</i>	<i>CONTRIBUTION</i>	<i>NO OF HOURS</i>
RAMYA C	<ul style="list-style-type: none"> <li>→ COMPLEX QUERIES</li> <li>→ MULTIPLE USERS WITH DIFFERENT ACCESS PRIVILEGES.</li> <li>→ REPORT</li> </ul>	<u>2</u>
RAJESHWARI R	<ul style="list-style-type: none"> <li>→ SIMPLE QUERIES</li> <li>→ INITIATE CONCURRENT TRANSACTIONS AND DEMONSTRATE THE CONCURRENCY CONTROL FOR THE CONFLICTING ACTIONS.</li> </ul>	<u>2</u>
RUCHITHA V R	→ NESTED QUERIES	<u>2</u>