

EXPERIMENT NO. 2

NAME: KOMAL MAHESH CHITNIS

MOODLE ID: 20102068

DIV: A

ROLL NO: 26

```
komalchitnis02@komal-virtual-machine: ~  
komalchitnis02@komal-virtual-machine:~$ sudo mysql  
[sudo] password for komalchitnis02:  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 8  
Server version: 8.0.29-0ubuntu0.20.04.3 (Ubuntu)  
  
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Oracle is a registered trademark of Oracle Corporation and/or its  
affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> create database dwm_db;  
Query OK, 1 row affected (0.05 sec)  
  
mysql> use dwm_db;  
Database changed  
mysql> create table customer_dim(cust_id int,name varchar(20),city varchar(20),state varchar(20),country varchar(20),primary key(cust_id));  
Query OK, 0 rows affected (0.10 sec)  
  
mysql> insert into cust_dim values(1,'komal','thane','maharashtra','india');  
ERROR 1146 (42S02): Table 'dwm_db.cust_dim' doesn't exist  
mysql> insert into customer_dim values(1,'komal','thane','maharashtra','india');  
Query OK, 1 row affected (0.03 sec)  
  
mysql> insert into customer_dim values(2,'mahek','thane','maharashtra','india');  
Query OK, 1 row affected (0.01 sec)  
  
mysql> insert into customer_dim values(3,'sahil','mumbai','maharashtra','india');  
Query OK, 1 row affected (0.01 sec)  
  
mysql> insert into customer_dim values(4,'manav','kalyan','maharashtra','india');  
Query OK, 1 row affected (0.00 sec)  
  
mysql> select *from customer_dim;  
+-----+-----+-----+-----+-----+  
| cust_id | name  | city  | state  | country |  
+-----+-----+-----+-----+-----+  
| 1      | komal | thane | maharashtra | india  |  
| 2      | mahek | thane | maharashtra | india  |  
| 3      | sahil | mumbai | maharashtra | india  |  
| 4      | manav | kalyan | maharashtra | india  |  
+-----+-----+-----+-----+-----+  
4 rows in set (0.00 sec)
```

```
komalchitnis02@komal-virtual-machine: ~  
mysql> create table wallet_dim(wallet_id int,name varchar(20),code int);  
Query OK, 0 rows affected (0.07 sec)  
  
mysql> insert into wallet_dim values(1001,'gpay',1234);  
Query OK, 1 row affected (0.01 sec)  
  
mysql> insert into wallet_dim values(1002,'phonepay',4567);  
Query OK, 1 row affected (0.01 sec)  
  
mysql> insert into wallet_dim values(1003,'paytm',7890);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> drop table wallet_dim;  
Query OK, 0 rows affected (0.05 sec)  
  
mysql> create table wallet_dim(wallet_id int,name varchar(20),code int, primary key(wallet_id));  
Query OK, 0 rows affected (0.05 sec)  
  
mysql> insert into wallet_dim values(1001,'gpay',1234);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> insert into wallet_dim values(1002,'phonepay',4567);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> insert into wallet_dim values(1003,'paytm',7890);  
Query OK, 1 row affected (0.01 sec)  
  
mysql> insert into wallet_dim values(1004,'razorpay',2357);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> select *from wallet_dim;  
+-----+-----+-----+  
| wallet_id | name    | code |  
+-----+-----+-----+  
| 1001      | gpay    | 1234 |  
| 1002      | phonepay | 4567 |  
| 1003      | paytm   | 7890 |  
| 1004      | razorpay | 2357 |  
+-----+-----+-----+  
4 rows in set (0.01 sec)
```

```
mysql> create table time_dim(time_key int,day int,month varchar(20),year int,primary key(time_key));
Query OK, 0 rows affected (0.08 sec)
```

```
mysql> insert into time_dim values(10,1,'february',2021);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into time_dim values(11,5,'may',2022);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into time_dim values(12,15,'august',2020);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into time_dim values(13,20,'october',2023);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select *from time_dim;
+-----+-----+-----+-----+
| time_key | day | month | year |
+-----+-----+-----+-----+
| 10 | 1 | february | 2021 |
| 11 | 5 | may | 2022 |
| 12 | 15 | august | 2020 |
| 13 | 20 | october | 2023 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> create table usageservice_dim(service_id int,type varchar(20),company varchar(20),primary key(service_id));
Query OK, 0 rows affected (0.07 sec)
```

```
mysql> insert into usageservice_dim values(500,'mobile_recharge','jio');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into usageservice_dim values(510,'appliance','acer');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into usageservice_dim values(520,'shopping','vanhusen');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into usageservice_dim values(550,'stationary','canlin');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select *from usageservice_dim;
+-----+-----+-----+
| service_id | type | company |
+-----+-----+-----+
| 500 | mobile_recharge | jio |
| 510 | appliance | acer |
| 520 | shopping | vanhusen |
| 550 | stationary | canlin |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> create table transaction_fact(trans_id int,cust_id int,time_key int,wallet_id int,service_id int,trans_date date,trans_credit int,trans_debit int,primary key(trans_id),foreign key(cust_id) references customer_dim(cust_id),foreign key(wallet_id) references wallet_dim(wallet_id),foreign key(time_key) references time_dim(time_key),foreign key(service_id) references usageservice_dim(service_id));
ERROR 2013 (HY000): Lost connection to MySQL server during query
No connection. Trying to reconnect...
Connection id: 8
Current database: dwn_db
```

```
Query OK, 0 rows affected (0.39 sec)
```

```
mysql> desc transaction_fact;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| trans_id | int | NO | PRI | NULL | |
| cust_id | int | YES | MUL | NULL | |
| time_key | int | YES | MUL | NULL | |
| wallet_id | int | YES | MUL | NULL | |
| service_id | int | YES | MUL | NULL | |
| trans_date | date | YES | | NULL | |
| trans_credit | int | YES | | NULL | |
| trans_debit | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.02 sec)
```

```
mysql> insert into transaction_fact values(101,1,10,1001,500,'2021-02-01',50000,6000);
Query OK, 1 row affected (0.02 sec)
```

```
mysql> insert into transaction_fact values(102,2,11,1002,510,'2022-05-05',60000,4000);
Query OK, 1 row affected (0.02 sec)
```

```
mysql> insert into transaction_fact values(103,3,12,1003,520,'2020-08-15',30000,5000);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> insert into transaction_fact values(104,4,13,1004,550,'2023-10-20',70000,7000);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select *from transaction_fact;
+-----+-----+-----+-----+-----+-----+-----+
| trans_id | cust_id | time_key | wallet_id | service_id | trans_date | trans_credit | trans_debit |
+-----+-----+-----+-----+-----+-----+-----+
| 101 | 1 | 10 | 1001 | 500 | 2021-02-01 | 50000 | 6000 |
| 102 | 2 | 11 | 1002 | 510 | 2022-05-05 | 60000 | 4000 |
| 103 | 3 | 12 | 1003 | 520 | 2020-08-15 | 30000 | 5000 |
| 104 | 4 | 13 | 1004 | 550 | 2023-10-20 | 70000 | 7000 |
+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```

4 rows in set (0.00 sec)

mysql> select max(trans_credit) from transaction_fact;
+-----+
| max(trans_credit) |
+-----+
|          70000 |
+-----+
1 row in set (0.00 sec)

mysql> select max(trans_debit) from transaction_fact;
+-----+
| max(trans_debit) |
+-----+
|           7000 |
+-----+
1 row in set (0.00 sec)

mysql> select min(trans_credit) from transaction_fact;
+-----+
| min(trans_credit) |
+-----+
|          30000 |
+-----+
1 row in set (0.00 sec)

mysql> select min(trans_debit) from transaction_fact;
+-----+
| min(trans_debit) |
+-----+
|           4000 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> select *from customer_dim where cust_id=(select cust_id from transaction_fact where trans_credit=70000);
+-----+
| cust_id | name | city | state | country |
+-----+
|        4 | Manav | kalyan | maharashtra | india |
+-----+
1 row in set (0.00 sec)

mysql> select *from customer_dim where cust_id=(select cust_id,max(trans_credit) from transaction_fact );
ERROR 1241 (21000): Operand should contain 1 column(s)

mysql> select cust_id,max(trans_credit) from transaction_fact group by cust_id;
+-----+
| cust_id | max(trans_credit) |
+-----+
|        1 |          50000 |
|        2 |          60000 |
|        3 |          30000 |
|        4 |          70000 |
+-----+
4 rows in set (0.01 sec)

```



```
mysql> select cust_id from transaction_fact where trans_credit=(select max(trans_credit) from transaction_fact);
```

```
+-----+
| cust_id |
+-----+
|      4 |
+-----+
```

```
1 row in set (0.01 sec)
```

```
mysql> select *from transaction_fact where trans_credit=(select max(trans_credit) from transaction_fact);
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| trans_id | cust_id | time_key | wallet_id | service_id | trans_date | trans_credit | trans_debit |
+-----+-----+-----+-----+-----+-----+-----+-----+
|      104 |      4 |      13 |      1004 |      550 | 2023-10-20 |      70000 |      7000 |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql> select *from transaction_fact order by trans_credit,cust_id;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| trans_id | cust_id | time_key | wallet_id | service_id | trans_date | trans_credit | trans_debit |
+-----+-----+-----+-----+-----+-----+-----+-----+
|      103 |      3 |      12 |      1003 |      520 | 2020-08-15 |      30000 |      5000 |
|      101 |      1 |      10 |      1001 |      500 | 2021-02-01 |      50000 |      6000 |
|      102 |      2 |      11 |      1002 |      510 | 2022-05-05 |      60000 |      4000 |
|      104 |      4 |      13 |      1004 |      550 | 2023-10-20 |      70000 |      7000 |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

```
4 rows in set (0.00 sec)
```

```
mysql> select *from transaction_fact order by trans_debit,cust_id;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| trans_id | cust_id | time_key | wallet_id | service_id | trans_date | trans_credit | trans_debit |
+-----+-----+-----+-----+-----+-----+-----+-----+
|      102 |      2 |      11 |      1002 |      510 | 2022-05-05 |      60000 |      4000 |
|      103 |      3 |      12 |      1003 |      520 | 2020-08-15 |      30000 |      5000 |
|      101 |      1 |      10 |      1001 |      500 | 2021-02-01 |      50000 |      6000 |
|      104 |      4 |      13 |      1004 |      550 | 2023-10-20 |      70000 |      7000 |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

```
4 rows in set (0.01 sec)
```

```
mysql> select city,count(*) from customer_dim group by city;
```

```
+-----+-----+
| city | count(*) |
+-----+-----+
| thane |      2 |
| mumbai |      1 |
| kalyan |      1 |
+-----+-----+
```

```
3 rows in set (0.01 sec)
```

```
mysql> select avg(trans_credit) from transaction_fact;
```

```
+-----+
| avg(trans_credit) |
+-----+
|      52500.0000 |
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql> select avg(trans_debit) from transaction_fact;
```

```
+-----+
| avg(trans_debit) |
+-----+
|      5500.0000 |
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql> select *from customer_dim where name like 'n%';
```

```
+-----+-----+-----+-----+-----+
| cust_id | name | city | state | country |
+-----+-----+-----+-----+-----+
|      2 | mahek | thane | maharashtra | india |
|      4 | manav | kalyan | maharashtra | india |
+-----+-----+-----+-----+-----+
```

```
2 rows in set (0.01 sec)
```

```
mysql> select state,count(*) from customer_dim group by state having city in ('thane');
```

```
ERROR 1054 (42S22): Unknown column 'city' in 'having clause'
```

```
mysql> select state,count(*) from customer_dim group by state having state in('maharashtra');
```

```
+-----+-----+
| state | count(*) |
+-----+-----+
| maharashtra |      4 |
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql> select city,count(*) from customer_dim group by city having city in ('thane','mumbai');
```

```
+-----+-----+
| city | count(*) |
+-----+-----+
| thane |      2 |
| mumbai |      1 |
+-----+
```

```
2 rows in set (0.00 sec)
```

```
mysql> select *from transaction_fact where trans_debit=(select avg(trans_debit) from transaction_fact where trans_date='2022-05-05');
+-----+-----+-----+-----+-----+-----+-----+-----+
| trans_id | cust_id | time_key | wallet_id | service_id | trans_date | trans_credit | trans_debit |
+-----+-----+-----+-----+-----+-----+-----+-----+
|      102 |       2 |      11 |      1002 |         510 | 2022-05-05 |        60000 |         4000 |
+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select *from customer_dim where cust_id=(select cust_id from transaction_fact where service_id=(select service_id from usageservice_dim where type='paytm'));
Empty set (0.01 sec)

mysql> select *from customer_dim where cust_id=(select cust_id from transaction_fact where service_id=(select service_id from usageservice_dim where type='shopping'));
+-----+-----+-----+-----+-----+
| cust_id | name | city | state | country |
+-----+-----+-----+-----+-----+
|       3 | sahil | mumbai | maharashtra | india |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> select *from customer_dim where cust_id=(select cust_id from transaction_fact where wallet_id=(select wallet_id from wallet_dim where type='jio'));
ERROR 1054 (42S22): Unknown column 'type' in 'where clause'
mysql> select *from customer_dim where cust_id=(select cust_id from transaction_fact where wallet_id=(select wallet_id from wallet_dim where name='jio'));
Empty set (0.01 sec)

mysql> select *from customer_dim where cust_id=(select cust_id from transaction_fact where wallet_id=(select wallet_id from wallet_dim where name='paytm'));
+-----+-----+-----+-----+-----+
| cust_id | name | city | state | country |
+-----+-----+-----+-----+-----+
|       3 | sahil | mumbai | maharashtra | india |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```



```
mysql> select *from transaction_fact natural join customer_dim;
```

cust_id	trans_id	time_key	wallet_id	service_id	trans_date	trans_credit	trans_debit	name	city	state	country
1	101	10	1001	500	2021-02-01	50000	6000	komal	thane	maharashtra	india
2	102	11	1002	510	2022-05-05	60000	4000	mahek	thane	maharashtra	india
3	103	12	1003	520	2020-08-15	30000	5000	sahil	mumbai	maharashtra	india
4	104	13	1004	550	2023-10-20	70000	7000	manav	kalyan	maharashtra	india

```
4 rows in set (0.00 sec)
```