

Level 1

Download the CSV files, study them and design a database with a star schema that contains at least 4 tables from which you can perform the following queries:

create database Customers;

```
1 • create database Customers;
```

Output				
Action Output				
#	Time	Action	Message	Duration / Fetch
1	18:28:04	select p.product_name,sum(s.product_id)as total,s.id from SingleproductID as s inner join products as p...	251163 row(s) returned	6.469 sec / 0.234 se
2	10:02:59	drop database customers	8 row(s) affected	0.438 sec
3	10:03:16	create database Customers	1 row(s) affected	0.047 sec

-- Dimension table company creation

create table company

(

company_id varchar(15) primary key,

company_name varchar(55),

phone varchar(50),

email varchar(50),

country varchar(50),

website varchar(55)

);

```
1  -- Level 1
2  -- Download the CSV files, study them and design a database with a star schema that
3  -- contains at least 4 tables from which you can perform the following queries:
4
5
6  • create database Customers;
7
8  -- Dimension table company creation
9  • create table company
10 (
11     company_id varchar(15) primary key,
12     company_name varchar(55),
13     phone varchar(50),
14     email varchar(50),
15     country varchar(50),
16     website varchar(55)
17 );
18
```

Output

#	Time	Action	Message	Duration
✓ 2	10:02:59	drop database customers	8 row(s) affected	0.438 sec
✓ 3	10:03:16	create database Customers	1 row(s) affected	0.047 sec
✗ 4	10:05:21	create table company (company_id varchar(15) primary key, company_name varchar(55), phone va...	Error Code: 1046. No database selected Select the default DB to be used by double-clicking its nam...	0.016 sec
✓ 5	10:05:37	create table company (company_id varchar(15) primary key, company_name varchar(55), phone va...	0 row(s) affected	0.047 sec

SHOW VARIABLES LIKE 'secure_file_priv';

SET GLOBAL local_infile = 1;

LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv'
INTO TABLE company
FIELDS TERMINATED BY ','

ENCLOSED BY ''''

LINES TERMINATED BY '\r\n'

IGNORE 1 ROWS;

```
SHOW VARIABLES LIKE 'secure_file_priv';
```

```
SET GLOBAL local_infile = 1;
```

```
LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv'
INTO TABLE company
FIELDS TERMINATED BY ','
ENCLOSED BY ''''
LINES TERMINATED BY '\r\n'
IGNORE 1 ROWS;
```

in Output

Time	Action	Message	Duration / Fetch
10:05:37	create table company (company_id varchar(15) primary key, company_name varchar(55), phone va...	0 row(s) affected	0.047 sec
10:10:08	SHOW VARIABLES LIKE 'secure_file_priv'	1 row(s) returned	0.032 sec / 0.000
10:10:12	SET GLOBAL local_infile = 1	0 row(s) affected	0.000 sec
10:10:20	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv' ...	100 row(s) affected Records: 100 Deleted: 0 Skipped: 0 Warnings: 0	0.093 sec

select * from company;

```
1
2 • select * from company;
3
```

company_id	company_name	phone	email	country	website
b-2222	Ac Fermentum Incorporated	06 85 56 52 33	donec.porrtitor.tellus@yahoo.net	Germany	https://instagram.com/site
b-2226	Magna A Neque Industries	04 14 44 64 62	risus.donec.nibh@icloud.org	Australia	https://whatsapp.com/group/9
b-2230	Fusce Corp.	08 14 97 58 85	risus@protonmail.edu	United States	https://pinterest.com/sub/cars
b-2234	Convalis In Incorporated	06 66 57 29 50	mauris.ut@aol.couk	Germany	https://conn.com/user/110
b-2238	Ante Iaculis Nec Foundation	08 23 04 99 53	sed.dictum.proin@outlook.ca	New Zealand	https://netflix.com/settings
b-2242	Donec Ltd	01 25 51 37 37	at.iaculis@hotmail.couk	Norway	https://nytimes.com/user/110

put

#	Time	Action	Message	Duration / Fetch
6	10:10:08	SHOW VARIABLES LIKE 'secure_file_priv'	1 row(s) returned	0.032 sec / 0.000 sec
7	10:10:12	SET GLOBAL local_infile = 1	0 row(s) affected	0.000 sec
8	10:10:20	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv' ...	100 row(s) affected Records: 100 Deleted: 0 Skipped: 0 Warnings: 0	0.093 sec
9	10:11:34	select * from company	100 row(s) returned	0.000 sec / 0.000 sec

-- Dimension table credit_card creation

create table creditcards

(

id varchar(55) primary key,

user_id int ,

iban varchar(55),

pan varchar(55),

pin int,

cvv int,

track1 varchar(55),

track2 varchar(55),

expiring_date varchar(20)

);

```
-- Dimension table credit_card creation
• create table creditcards
(
  id varchar(55) primary key,
  user_id int ,
  iban varchar(55),
  pan varchar(55),
  pin int,
  cvv int,
  track1 varchar(55),
  track2 varchar(55),
  expiring_date varchar(20)
);
```

jt

Action Output

	Time	Action	Message	Duration / Fetch
7	10:10:12	SET GLOBAL local_infile = 1	0 row(s) affected	0.000 sec
8	10:10:20	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv' ...	100 row(s) affected Records: 100 Deleted: 0 Skipped: 0 Warnings: 0	0.093 sec
9	10:11:34	select * from company	100 row(s) returned	0.000 sec / 0.000 sec
10	10:13:49	create table creditcards (id varchar(55) primary key, user_id int , iban varchar(55), pan varchar(55), p...	0 row(s) affected	0.062 sec

LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/credit_cards.csv'

```
IGNORE 1 ROWS;
```

```
LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/credit_cards.csv'
INTO TABLE creditcards
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;
```

Time	Action	Message	Duration / F
8 10:10:20	LOAD DATA LOCAL INFILE 'C:/ProgramData/MySQL/MySQL Server 8.0/Uploads/companies.csv' ...	100 row(s) affected Records: 100 Deleted: 0 Skipped: 0 Warnings: 0	0.093 sec
9 10:11:34	select * from company	100 row(s) returned	0.000 sec /
10 10:13:49	create table creditcards (id varchar(55) primary key, user_id int, iban varchar(55), pan varchar(55), p...	0 row(s) affected	0.062 sec
11 10:15:22	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/credit_cards.csv' INTO TABLE creditcard...	5000 row(s) affected Records: 5000 Deleted: 0 Skipped: 0 Warnings: 0	0.297 sec

```
select * from creditcards;
```

`select * from creditcards;`

id
Filter Rows:
Edit:
Export/Import:
Wrap Cell Contents:
Fetch rows:

	user_id	iban	pan	pin	cvv	track1	track2	expiring_date
857	276	XX4857591835292505850771	2314242385113924	1819	467	%B2314242385113924~LWCBUJLCWUBD^22...	%B2314242385113924=2410101518363164?	09/27/25
858	277	XX8581768137002436094025	6582720299715533	3964	817	%B6582720299715533^TIQWITIQMWI^2404...	%B6582720299715533=241101104546272?	12/28/28
859	278	XX7826930491423553609370	8861684536289642	4983	277	%B8861684536289642~COFGBDCOFBGD^280...	%B8861684536289642=2502101761665371?	11/26/26
860	279	XX5559590368835304645299	2481155515498459	6876	661	%B2481155515498459~TJJUJTJUJTJU~31040...	%B2481155515498459=2602101514414395?	07/27/27
861	280	XX2035182877195191627307	1308930301149557	5710	398	%B1308930301149557~HPOBNZH~PQBNZ^330...	%B1308930301149557=2805101751305028?	04/25/26
862	281	XX4774721462463645409758	6715617009807829	4042	174	%B6715617009807829~LDMMWTDLMDMTD^33...	%B6715617009807829=2210101702370428?	11/27/26

i3 x

n Output

Time	Action	Message	Duration / Fetch
10:11:34	select * from company	100 row(s) returned	0.000 sec / 0.000 sec
10:13:49	create table creditcards (id varchar(55) primary key, user_id int , iban varchar(55), pan varchar(55), p...	0 row(s) affected	0.062 sec
10:15:22	LOAD DATA LOCAL INFILE C:\Users\sarav\Downloads\credit_cards.csv INTO TABLE creditcard...	5000 row(s) affected Records: 5000 Deleted: 0 Skipped: 0 Warnings: 0	0.297 sec
10:16:39	select * from creditcards	5000 row(s) returned	0.000 sec / 0.015 sec

-- Dimension table user creation

create table user

(

id int primary key,

name varchar(55),

surname varchar(55),

phone varchar(35),

email varchar(55),

birth_date varchar(50),

country varchar(50),

city varchar(50),

postal_code varchar(50),

address varchar(50)

);

```
-- Dimension table user creation
create table user
(
  id int primary key,
  name varchar(55),
  surname varchar(55),
  phone varchar(35),
  email varchar(55),
  birth_date varchar(50),
  country varchar(50),
  city varchar(50),
  postal_code varchar(50),
  address varchar(50)
);
```

Output

Time	Action	Message	Duration / Fetch
10:13:49	create table creditcards (id varchar(55) primary key, user_id int, iban varchar(55), pan varchar(55), p...	0 row(s) affected	0.062 sec
10:15:22	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/credit_cards.csv' INTO TABLE creditcard...	5000 row(s) affected Records: 5000 Deleted: 0 Skipped: 0 Warnings: 0	0.297 sec
10:16:39	select * from creditcards	5000 row(s) returned	0.000 sec / 0.015 sec
10:18:18	create table user (id int primary key, name varchar(55), surname varchar(55), phone varchar(35), em...	0 row(s) affected	0.062 sec

```

LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/american_users.csv'

INTO TABLE user

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'

IGNORE 1 ROWS;

```

```

• LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/american_users.csv'
  INTO TABLE user
  FIELDS TERMINATED BY ','
  ENCLOSED BY '"'
  LINES TERMINATED BY '\n'
  IGNORE 1 ROWS;

```

ction Output			
Time	Action	Message	Duration / Fetch
11 10:15:22	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/credit_cards.csv' INTO TABLE creditcard...	5000 row(s) affected Records: 5000 Deleted: 0 Skipped: 0 Warnings: 0	0.297 sec
12 10:16:39	select * from creditcards	5000 row(s) returned	0.000 sec / 0.015 sec
13 10:18:18	create table user (id int primary key, name varchar(55), sumame varchar(55), phone varchar(35), em...	0 row(s) affected	0.062 sec
14 10:19:41	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/american_users.csv' INTO TABLE user FI...	1010 row(s) affected Records: 1010 Deleted: 0 Skipped: 0 Warnings: 0	0.141 sec

```

LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/european_users.csv'

INTO TABLE user

FIELDS TERMINATED BY ','

ENCLOSED BY '"'

LINES TERMINATED BY '\n'

IGNORE 1 ROWS;

```

```
LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/european_users.csv'
INTO TABLE user
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;
```

Time	Action	Message	Duration / Fetch
12 10:16:39	select * from creditcards	5000 row(s) returned	0.000 sec / 0.015 sec
13 10:18:18	create table user (id int primary key, name varchar(55), surname varchar(55), phone varchar(35), em...	0 row(s) affected	0.062 sec
14 10:19:41	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/american_users.csv' INTO TABLE user FI...	1010 row(s) affected Records: 1010 Deleted: 0 Skipped: 0 Warnings: 0	0.141 sec
15 10:20:56	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/european_users.csv' INTO TABLE user FI...	3990 row(s) affected Records: 3990 Deleted: 0 Skipped: 0 Warnings: 0	0.218 sec

```
select * from user;
```

```
select * from user;
```

name	surname	phone	email	birth_date	country	city	postal_code	address
Zeus	Gamble	1-282-581-0551	interdum.enim@protonmail.edu	Nov 17, 1985	United States	New York	10001	348-7818 Sagittis St.
Garrett	Mcconnell	(718) 257-2412	integer.vitae.nibh@protonmail.org	Aug 23, 19	Nov 17, 1985	Philadelphia	19101	903 Sit Ave
Ciaran	Harrison	(522) 598-1365	interdum.feugiat@aol.org	Apr 29, 1998	United States	Houston	77001	736-2063 Tellus St.
Howard	Stafford	1-411-740-3269	ornare.egestas@icloud.edu	Feb 18, 1989	United States	Phoenix	85001	Ap #545-2244 Erat. Rd.
Hayfa	Pierce	1-554-541-2077	et.malesuada.fames@hotmail.org	Sep 26, 1998	United States	Philadelphia	19101	341-2821 Ultrices Av.
Joel	Tyson	(718) 288-8020	gravida.nunc.sed@yahoo.ca	Oct 15, 1989	United States	San Jose	95101	888-2799 Amet Street

Time	Action	Message	Duration / Fetch
10:18:18	create table user (id int primary key, name varchar(55), surname varchar(55), phone varchar(35), em...	0 row(s) affected	0.062 sec
10:19:41	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/american_users.csv' INTO TABLE user FI...	1010 row(s) affected Records: 1010 Deleted: 0 Skipped: 0 Warnings: 0	0.141 sec
10:20:56	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/european_users.csv' INTO TABLE user FI...	3990 row(s) affected Records: 3990 Deleted: 0 Skipped: 0 Warnings: 0	0.218 sec
10:21:59	select * from user	5000 row(s) returned	0.000 sec / 0.032 sec

```
-- create table transaction
```

```
create table transaction
```

```
(
```

```
id varchar(50) primary key,
```

```
card_id varchar(55),
```



```

business_id varchar(50) ,

tiempstamp timestamp,

amount decimal(10,2),

declined boolean,

product_id varchar(55),

user_id int,

lat float,

longtitude float,

foreign key (business_id) references company(company_id),

foreign key ( card_id) references creditcards(id),

foreign key(user_id) references user(id)

);

```

```

9
0
1  -- create table transaction
2 • create table transaction
3 (
4   id varchar(50) primary key,
5   card_id varchar(55),
6   business_id varchar(50) ,
7   tiempstamp timestamp,
8   amount decimal(10,2),
9   declined boolean,
0   product_id varchar(55),
1   user_id int,
2   lat float,
3   longtitude float,
4   foreign key (business_id) references company(company_id),
5   foreign key ( card_id) references creditcards(id),
6   foreign key(user_id) references user(id)
7 );
8
9
0
1

```

put

Action Output

#	Time	Action	Message	Duration / Fetch
14	10:19:41	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/american_users.csv' INTO TABLE user FI...	1010 row(s) affected Records: 1010 Deleted: 0 Skipped: 0 Warnings: 0	0.141 sec
15	10:20:56	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/european_users.csv' INTO TABLE user FI...	3990 row(s) affected Records: 3990 Deleted: 0 Skipped: 0 Warnings: 0	0.218 sec
16	10:21:59	select * from user	5000 row(s) returned	0.000 sec / 0.032 sec
17	10:23:58	create table transaction (id varchar(50) primary key, card_id varchar(55), business_id varchar(50) , ti...	0 row(s) affected	0.125 sec

```
LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/transactions.csv'

INTO TABLE transaction

FIELDS TERMINATED BY ';'

ENCLOSED BY '"'

LINES TERMINATED BY '\r\n'

IGNORE 1 ROWS;
```

```
LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/transactions.csv'
INTO TABLE transaction
FIELDS TERMINATED BY ';'
ENCLOSED BY '"'
LINES TERMINATED BY '\r\n'
IGNORE 1 ROWS;
```

tion Output			
Time	Action	Message	Duration / Fetch
15 10:20:56	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/european_users.csv' INTO TABLE user FI...	3990 row(s) affected Records: 3990 Deleted: 0 Skipped: 0 Warnings: 0	0.218 sec
16 10:21:59	select * from user	5000 row(s) returned	0.000 sec / 0.032 sec
17 10:23:58	create table transaction (id varchar(50) primary key, card_id varchar(55), business_id varchar(50), ti...	0 row(s) affected	0.125 sec
18 10:24:59	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/transactions.csv' INTO TABLE transactio...		8.656 sec

SQL Editor

```
select * from transaction;
```

Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Contents: | Fetch rows:

	card_id	business_id	timestamp	amount	declined	product_id	user_id	lat	longitude
043A49-2949-494B-A5DD-A5BAE3BB19DD	CcS-9294	b-2458	2024-08-28 07:16:46	395.43	0	16,26,97, 87	4713	46.1999	1.43554
0447FE-B650-4DCF-85DE-C7ED0EE1CAAD	CcS-5019	b-2370	2016-12-21 20:07:18	155.63	0	66,69, 87	438	41.5972	12.2218
04506B-ED2E-F2F-8186-CE074D875D0	CcS-6699	b-2390	2020-07-14 15:37:45	326.01	0	30,11,16, 81	2118	29.7573	-95.3796
0481C3-1C26-4FEF-83A0-4CD0EB004BBD	CcS-6696	b-2230	2017-09-04 19:44:53	161.60	0	72	2115	53.5489	-113.503
051AA4-9CBE-4268-8070-C38062A1B3E2	CcS-7606	b-2266	2017-01-05 18:19:25	148.91	0	18	3025	52.2084	5.69081
08A312-EDFE-4FAF-BC99-E9C92EC3CA4D	CcU-3358	b-2598	2023-09-23 04:51:43	294.59	0	35,33, 19	215	53.5535	-113.499

tion Output

Time	Action	Message	Duration / Fetch
16 10:21:59	select * from user	5000 row(s) returned	0.000 sec / 0.032 sec
17 10:23:58	create table transaction (id varchar(50) primary key, card_id varchar(55), business_id varchar(50), ti...	0 row(s) affected	0.125 sec
18 10:24:59	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/transactions.csv' INTO TABLE transactio...		8.656 sec
19 10:26:03	select * from transaction	100000 row(s) returned	0.000 sec / 0.406 sec

Perform a subquery that shows all users with more than 80 transactions using at least 2 tables.

-- Perform a subquery that shows all users with more than 80 transactions using at least 2 tables.

```
select *
from user where id in(
select user_id
from transaction
where declined =0
group by user_id
having count(id)>80);
```

```

122
123 • select *
124 from user where id in(
125     select user_id
126     from transaction
127     where declined =0
128     group by user_id
129     having count(id)>80);

```

id	name	surname	phone	email	birth_date	country	city	postal_code	address
185	Molly	Gillam	0800 120 8023	donec@outlook.couk	Dec 21, 1993	United Kingdom	London	EC1A 1BB	P.O. Box 202, 5638 MI Rd.
289	Dxwgi	Hwcrw	+98-309-8797	dxwgi.hwcrw@example.com	Aug 20, 1976	Germany	Stuttgart	70173	82 Hwcrw Street
318	Bnyr	Astuw	+33-120-9644	bnyr.astuw@example.com	May 3, 1974	Italy	Genoa	16100	53 Astuw Street

ser 17 x

Output

#	Time	Action	Message	Duration / Fetch
39	11:27:46	select p.product_name,sum(s.product_id)as total,s.id from SingleproductID as s inner join product...	251163 row(s) returned	5.828 sec / 0.219 sec
40	11:45:01	select *from user where id in(select user_id from transaction where declined =0 group by user_id ...	3 row(s) returned	0.953 sec / 0.000 sec
41	11:47:06	select *from user where id in(select user_id from transaction where declined =0 group by user_id ...	3 row(s) returned	0.500 sec / 0.000 sec
42	11:48:03	select *from user where id in(select user_id from transaction where declined =0 group by user_id ...	3 row(s) returned	0.516 sec / 0.000 sec

Exercise 2

Shows the average amount per IBAN of credit cards in the company Donec Ltd, uses at least 2 tables.

-- Exercise 2

-- Shows the average amount per IBAN of credit cards in the company Donec Ltd, uses at least 2 tables.

```

select c.company_name,
cre.iban,
round(avg(t.amount),2) as Average_amount
from transaction t
inner join company c on t.business_id = c.company_id
inner join creditcards cre on t.card_id = cre.id
where

```

c.company_name like 'Donec Ltd' and

t.declined = 0

group by c.company_name,cre.iban;

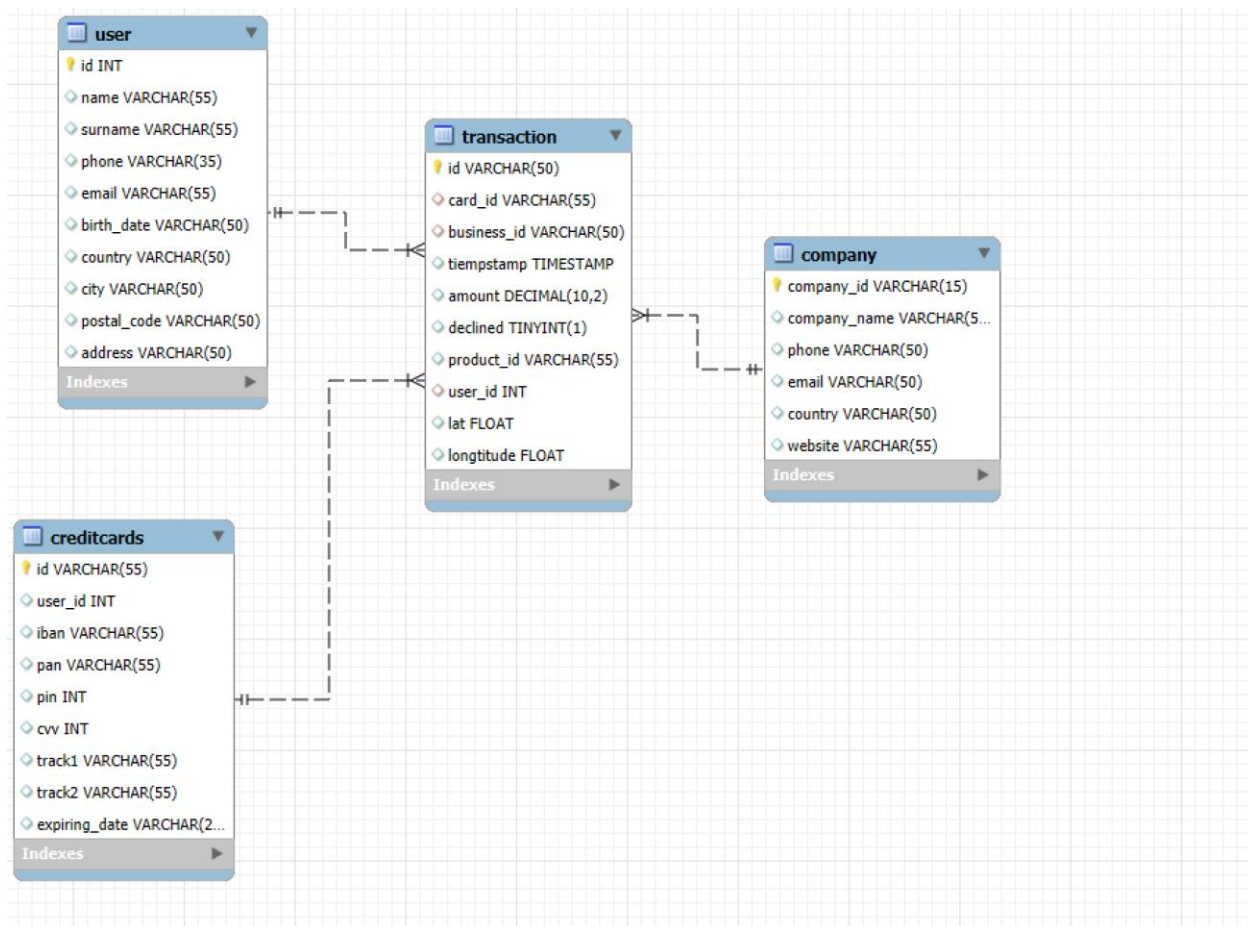
```
130
131 -- Exercise 2
132 -- Shows the average amount per IBAN of credit cards in the company Donec Ltd, uses at least 2 tables.
133
134 • select c.company_name,
135       cre.iban,
136       round(avg(t.amount),2) as Average_amount
137 from transaction t
138 inner join company c on t.business_id = c.company_id
139 inner join creditcards cre on t.card_id = cre.id
140 where
141 c.company_name like 'Donec Ltd' and
142 t.declined = 0
143 group by c.company_name,cre.iban;
144
```

company_name	iban	Average_amount
Donec Ltd	XX911406401125586307586805	356.25
Donec Ltd	SK9446370242474562577506	142.96
Donec Ltd	XX776752917845952975555640	257.37
Donec Ltd	XX413827362289719304908990	139.59
Donec Ltd	XX347787246070769610780308	240.41
Donec Ltd	XX688768436543090894854602	188.58

Result 8 x

Output

#	Time	Action	Message	Duration / Fetch
21	10:27:53	select * from transaction	100000 row(s) returned	0.016 sec / 0.375 sec
22	10:30:17	select * from user where id in(select user_id from transaction where declined =0 group by user_id ...	3 row(s) returned	0.734 sec / 0.000 sec
23	10:32:42	select c.company_name, cre.iban, round(avg(t.amount),2) as Average_amount from transaction t in...	370 row(s) returned	0.000 sec / 0.000 sec
24	10:33:25	select c.company_name, cre.iban, round(avg(t.amount),2) as Average_amount from transaction t in...	370 row(s) returned	0.016 sec / 0.000 sec



-- Level 2

-- Create a new table that reflects the status of credit cards based on

-- whether the last three transactions were declined and generate the following query:

```
create table creditcard_status as
```

```
select
```

```
t.card_id,
```

```
case
```

```
when sum(t. declined) = 3 then 'no active'
```

```

else 'active'
end as status

from(

select

card_id,

declined,

row_number() over( partition by card_id order by tiempstamp desc) as rownumber

from transaction

)t

where t.rownumber<=3

group by t.card_id;

```

```

-- Level 2
-- Create a new table that reflects the status of credit cards based on
-- whether the last three transactions were declined and generate the following query:
create table creditcard_status as
select
t.card_id,
case
when sum(t. declined) = 3 then 'no active'
else 'active'
end as status
from(
select
card_id,
declined,
row_number() over( partition by card_id order by tiempstamp desc) as rownumber
from transaction
)t
where t.rownumber<=3
group by t.card_id;

select * from creditcard_status;

```

Time	Action	Message	Duration / Fetch
10:30:17	select * from user where id in(select user_id from transaction where declined =0 group by user_id ...	3 row(s) returned	0.734 sec / 0.000 sec
10:32:42	select c.company_name, cre.iban, round(avg(t.amount),2) as Average_amount from transaction t in...	370 row(s) returned	0.000 sec / 0.000 sec
10:33:25	select c.company_name, cre.iban, round(avg(t.amount),2) as Average_amount from transaction t in...	370 row(s) returned	0.016 sec / 0.000 sec
10:39:14	create table creditcard_status as select t.card_id, case when sum(t. declined) = 3 then 'no active' el...	5000 row(s) affected Records: 5000 Duplicates: 0 Warnings: 0	0.953 sec

```

alter table creditcard_status

add constraint fk_creditcard_status

```

foreign key(card_id) references creditcards(id);

```
alter table creditcard_status
add constraint fk_creditcard_status
foreign key(card_id) references creditcards(id);
```

on Output			
Time	Action	Message	Duration / Fetch
11:59:41	select count(card_id) from creditcard_status where status = 'active'	1 row(s) returned	0.016 sec / 0.000 sec
12:00:15	select count(card_id) from creditcard_status where status = 'active'	select count(card_id) from creditcard_status where status = 'active'	0.031 sec / 0.000 sec
12:05:11	select * from creditcard_status		0.015 sec / 0.016 sec
12:10:00	alter table creditcard_status add constraint fk_creditcard_status foreign key(card_id) references creditcards(id);	5000 row(s) affected Records: 5000 Duplicates: 0 Warnings: 0	0.313 sec

select * from creditcard_status;

169	
170	• select * from creditcard_status;
171	
172	

card_id	status
CcS-4857	active
CcS-4858	active
CcS-4859	active
CcS-4860	active
CcS-4861	active
CcS-4862	active

creditcard_status 25 x

Action Output			
#	Time	Action	Message
49	12:05:11	select * from creditcard_status	5000 row(s) returned
50	12:10:00	alter table creditcard_status add constraint fk_creditcard_status foreign key(card_id) references creditcards(id);	5000 row(s) affected Records: 5000 Duplicates: 0 Warnings: 0
51	12:12:53	select count(card_id) from creditcard_status where status = 'active'	1 row(s) returned
52	12:15:46	select * from creditcard_status	5000 row(s) returned

Exercise 1

How many cards are active?

```
select count(card_id) as activecards
from creditcard_status
where status = 'active';
```



```

175
176 -- Exercise 1
177 -- How many cards are active?
178
179 • select count(card_id) as activecards
180 from creditcard_status
181 where status = 'active';
182
183

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

activecards
4995

Result Grid

Form Editor

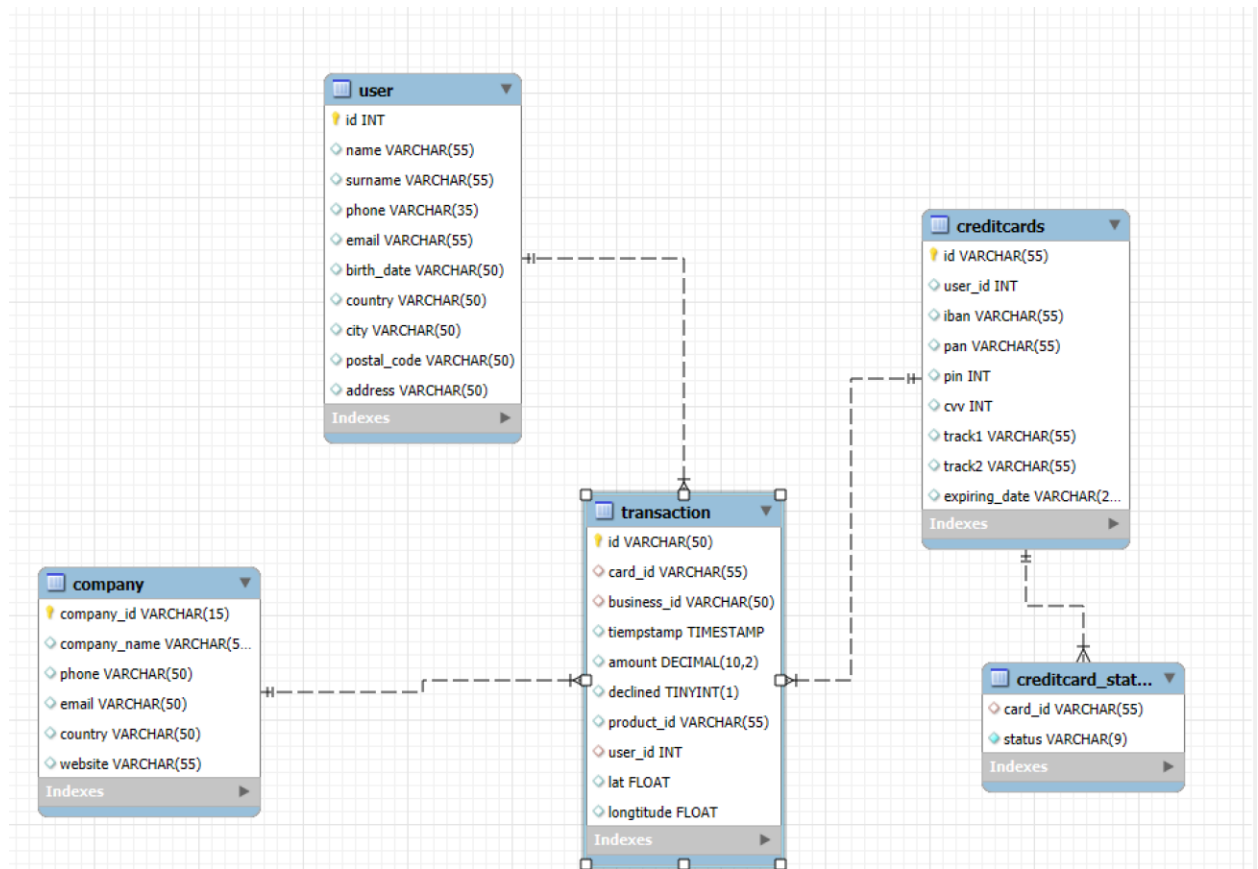
Result 45 x

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
72	13:15:55	select count(card_id) from creditcard_status where status = 'active'	1 row(s) returned	0.000 sec / 0.000 sec
73	13:17:09	select count(card_id) as activecards from creditcard_status where status = 'active'	1 row(s) returned	0.016 sec / 0.000 sec



Level 3

Create a table with which we can join the data from the new products.csv file with the created database, taking into account that from transaction you have product_ids. Generate the following query:

create table products

(

id varchar(20) primary key,

product_name varchar(40),

price varchar(20),

colour varchar(20),

weight float,

warehouse_id varchar(30)

);

```
• create table products
(
  id varchar(20) primary key,
  product_name varchar(40),
  price varchar(20),
  colour varchar(20),
  weight float,
  warehouse_id varchar(30)
);
```

Time	Action	Message	Duration / Fetch
25 10:39:14	create table creditcard_status as select t.card_id, case when sum(t.declined) = 3 then 'no active' el...	5000 row(s) affected Records: 5000 Duplicates: 0 Warnings: 0	0.953 sec
26 10:40:05	select * from creditcard_status	5000 row(s) returned	0.000 sec / 0.000 sec
27 10:40:24	select card_id from creditcard_status where status = 'active'	4995 row(s) returned	0.016 sec / 0.015 sec
28 10:45:13	create table products (id varchar(20) primary key, product_name varchar(40), price varchar(20), colo...	0 row(s) affected	0.062 sec

LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/products.csv'

INTO TABLE products

FIELDS TERMINATED BY ','

ENCLOSED BY ''''

LINES TERMINATED BY '\n'

IGNORE 1 ROWS;

```
LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/products.csv'
INTO TABLE products
FIELDS TERMINATED BY ','
ENCLOSED BY ''
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;
```

Time	Action	Message	Duration / Fetch
10:40:05	select * from creditcard_status	5000 row(s) returned	0.000 sec / 0.000 sec
10:40:24	select card_id from creditcard_status where status = 'active'	4995 row(s) returned	0.016 sec / 0.015 sec
10:45:13	create table products (id varchar(20) primary key, product_name varchar(40), price varchar(20), colo...	0 row(s) affected	0.062 sec
10:46:24	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/products.csv' INTO TABLE products FIEL...	100 row(s) affected Records: 100 Deleted: 0 Skipped: 0 Warnings: 0	0.062 sec

select * from products;

select * from products;				
irid Filter Rows: Edit: Export/Import: Wrap Cell Contents:				
product_name	price	colour	weight	warehouse_id
Direwolf Stannis	\$161.11	#7c7c7c	1	WH-4
Karstark Dorne	\$119.52	#f4f4f4	2.4	WH--5
south duel	\$40.43	#6d6d6d	3	WH--95
Karstark Dorne	\$49.70	#141414	2.7	WH--6
duel Direwolf	\$181.60	#a8a8a8	2	WH--7
palpatine chewbacca	\$139.59	#2b2b2b	1	WH--8
11 x				
on Output				
Time	Action	Message	Duration / Fetch	
10:40:24	select card_id from creditcard_status where status = 'active'	4995 row(s) returned	0.016 sec / 0.015 sec	
10:45:13	create table products (id varchar(20) primary key, product_name varchar(40), price varchar(20), colo...	0 row(s) affected	0.062 sec	
10:46:24	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/products.csv' INTO TABLE products FIEL...	100 row(s) affected Records: 100 Deleted: 0 Skipped: 0 Warnings: 0	0.062 sec	
10:47:14	select * from products	100 row(s) returned	0.015 sec / 0.000 sec	

create table SingleproductID as

select

id,

```

jt.product_id

from

transaction,

json_table(

concat( '[', product_id,']'),

'$[*]' columns(

    product_id int path '$'

)

)as jt;

```

199	
200	• create table SingleproductID as
201	select
202	id,
203	jt.product_id
204	from
205	transaction,
206	json_table(
207	concat('[', product_id,']'),
208	'\$[*]' columns(
209	product_id int path '\$'
210)
211)as jt;
212	
213	

Output				
Action Output				
#	Time	Action	Message	Duration / Fetch
✓ 29	10:46:24	LOAD DATA LOCAL INFILE 'C:/Users/sarav/Downloads/products.csv' INTO TABLE products FIEL...	100 row(s) affected Records: 100 Deleted: 0 Skipped: 0 Warnings: 0	0.062 sec
✓ 30	10:47:14	select * from products	100 row(s) returned	0.015 sec / 0.000 sec
✓ 31	10:57:52	select * from transaction	100000 row(s) returned	0.000 sec / 0.391 sec
✓ 32	10:59:35	create table SingleproductID as select id, jt.product_id from transaction, json_table(...	253391 row(s) affected Records: 253391 Duplicates: 0 Warnings: 0	3.937 sec

```
select * from SingleproductID;
```

• `select * from SingleproductID;`

id	product_id
00051AA4-9CBE-4268-B070-C38062A1B3E2	18
0008A312-EDFE-4A4F-BC99-E9C92EC3CA4D	35
0008A312-EDFE-4A4F-BC99-E9C92EC3CA4D	33
0008A312-EDFE-4A4F-BC99-E9C92EC3CA4D	19
0009A151-9BCF-4E31-9053-A468FF77FAAB	93
0009A151-9BCF-4E31-9053-A468FF77FAAB	55

Read Only

Action Output

#	Time	Action	Message	Duration / Fetch
30	10:47:14	select * from products	100 row(s) returned	0.015 sec / 0.000 sec
31	10:57:52	select * from transaction	100000 row(s) returned	0.000 sec / 0.391 sec
32	10:59:35	create table SingleproductID as select id, #product_id from transaction, json_table(...	253391 row(s) affected Records: 253391 Duplicates: 0 Warnings: 0	3.937 sec
33	11:01:23	select * from SingleproductID	253391 row(s) returned	0.000 sec / 0.407 sec

`select * from SingleproductID;`

`alter table SingleproductID`

`modify column product_id varchar(10);`

`alter table SingleproductID`

`add constraint fk_product_id`

`foreign key(product_id) references products(id);`

- `alter table SingleproductID`
`modify column product_id varchar(10);`
- `alter table SingleproductID`
`add constraint fk_product_id`
`foreign key(product_id) references products(id);`

Action Output

#	Time	Action	Message	Duration / Fetch
34	11:03:39	alter table SingleproductID add constraint fk_product_id foreign key(product_id) reference...	Error Code: 3780. Referencing column 'product_id' and referenced column 'id' in foreign key constrai...	0.015 sec
35	11:04:14	select * from SingleproductID	253391 row(s) returned	0.000 sec / 0.437 sec
36	11:14:36	alter table SingleproductID modify column product_id varchar(10)	253391 row(s) affected Records: 253391 Duplicates: 0 Warnings: 0	2.125 sec
37	11:14:47	alter table SingleproductID add constraint fk_product_id foreign key(product_id) reference...	253391 row(s) affected Records: 253391 Duplicates: 0 Warnings: 0	4.063 sec

nlload@crinddev> sql

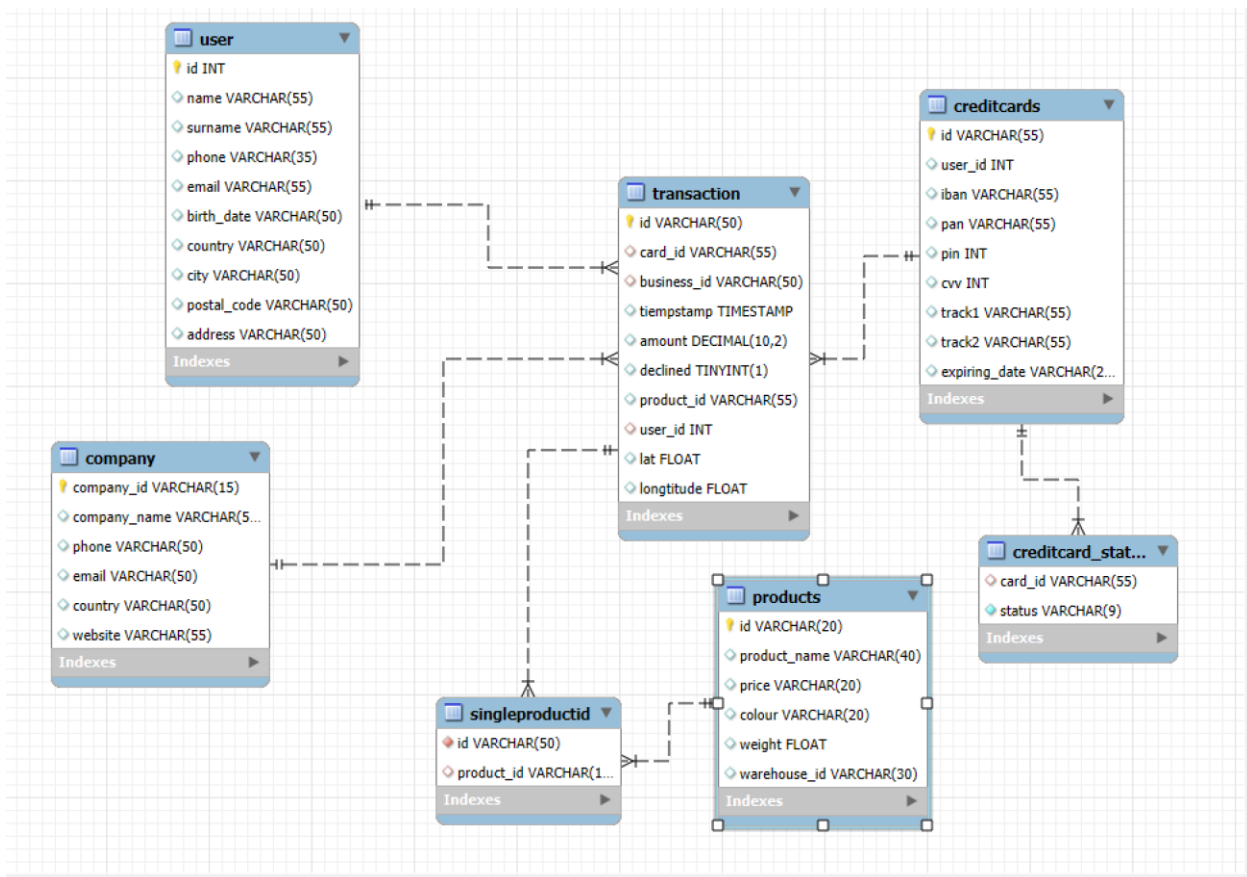
`alter table SingleproductID`

add constraint fk_id2

foreign key(id) references transaction(id);

```
alter table SingleproductID
add constraint fk_id2
foreign key(id) references transaction(id);
```

Input	Action	Message	Duration / Fetch
14:14	select * from SingleproductID	253391 row(s) returned	0.000 sec / 0.437 sec
14:36	alter table SingleproductID modify column product_id varchar(10)	253391 row(s) affected Records: 253391 Duplicates: 0 Warnings: 0	2.125 sec
14:47	alter table SingleproductID add constraint fk_product_id foreign key(product_id) reference...	253391 row(s) affected Records: 253391 Duplicates: 0 Warnings: 0	4.063 sec
12:25	alter table SingleproductID add constraint fk_id2 foreign key(id) references transaction(id)	253391 row(s) affected Records: 253391 Duplicates: 0 Warnings: 0	6.516 sec



```

select p.product_name,count(s.product_id)as total,s.product_id
from SingleproductID as s
inner join products as p on p.id= s.product_id
group by p.product_name,s.product_id
order by total DESC;

```

```

238 • select p.product_name,count(s.product_id)as total,s.product_id
239 from SingleproductID as s
240 inner join products as p on p.id= s.product_id
241 group by p.product_name,s.product_id
242 order by total DESC;
243
244
245
246
247

```

Result Grid			
Filter Rows:			
Export: Wrap Cell Contents			
	product_name	total	product_id
▶	riverlands the duel	2654	52
	Tully maester Tarly	2635	29
	duel Direwolf	2609	21
	the duel warden	2608	16
	mustafar jinn	2601	66
	sith Jade	2598	87
	rock Renly in	2597	48

Result 33 x

Read

Output

#	Time	Action	Message	Duration / Fetch
60	12:38:30	select p.product_name,count(s.product_id)as total,s.product_id from SingleproductID as s inner j...	100 row(s) returned	0.703 sec / 0.000 se
61	12:38:48	select p.product_name,count(s.product_id)as total,s.product_id from SingleproductID as s inner j...	100 row(s) returned	0.859 sec / 0.000 se