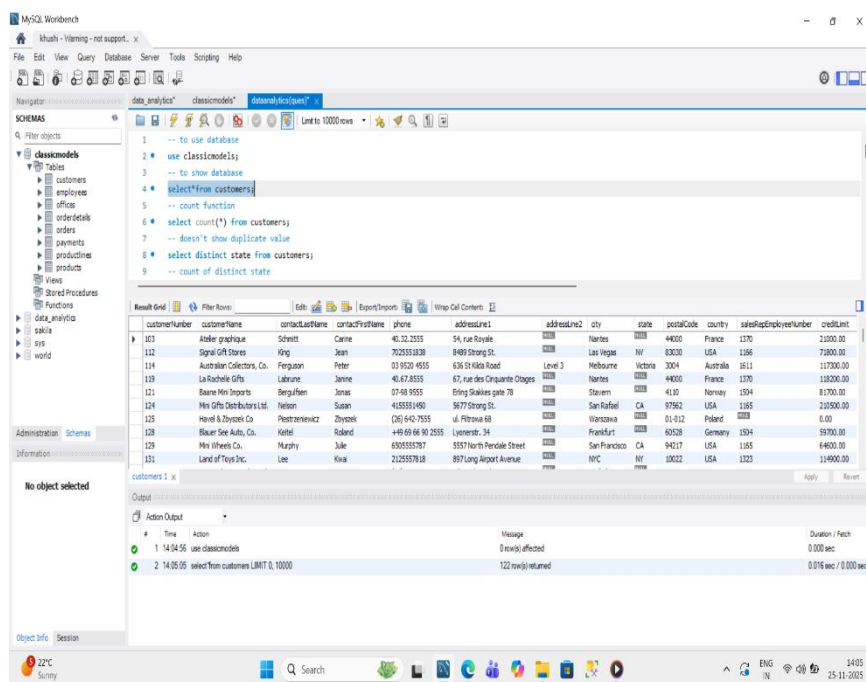
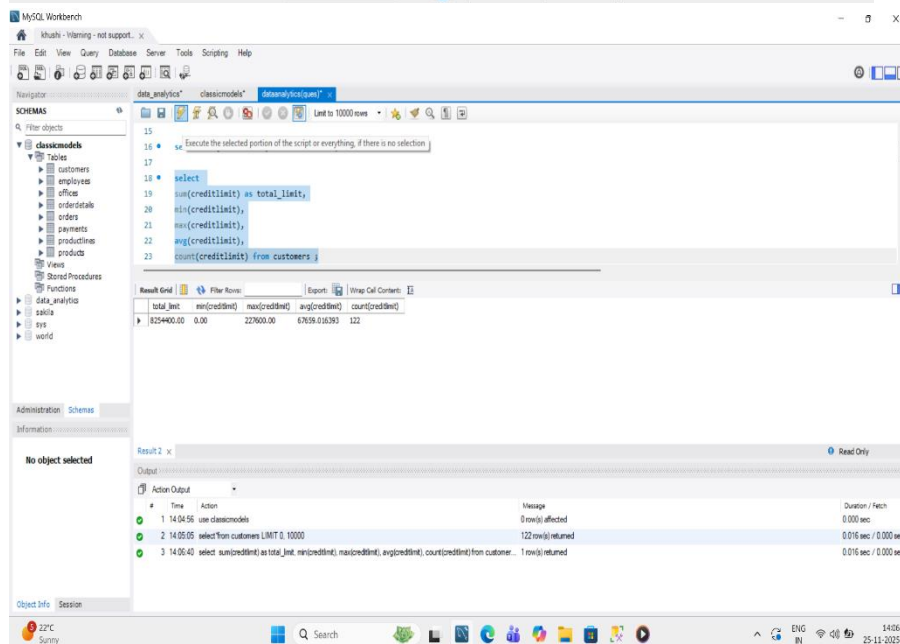


SQL: DDL(Data Defination language)

1. Commands : select||insert||update||delete
2. Aggregate function
3. Text func
4. Datetime func
5. Logic func
6. Sub query
7. Where
8. Group by: having,limit,offset
9. order



To show database



Aggregate function

- Sum
- Max
- Min
- Avg
- Count
- Round
- Floor
- Ceil
- Truncate

MySQL Workbench

khushi - Varming - not support...

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHMAS

Filter objects

classmodels

customers

employees

office

orderdetails

orders

payments

productlines

products

Views

Stored Procedures

Functions

data_analytics

sys

world

Administration Schemas

Information

No object selected

Object Info Session

22°C Sunny

14:06 23-11-2025

data_analytics classmodels classmodels/cls/ques7

Limit to 10000 rows

24

25

26

27

28

29

30

31

32

Execute the selected portion of the script or everything, if there is no selection

upper(customername),

lower(customername),

left(customername, 3),

right(customername, 3),

mid(customername, 3, 3),

replace(customername, 'a', 'B')

from customers;

Result Grid

Filter Rows

Export

Wrap Cell Contents

ES

customername	upper(customername)	lower(customername)	left(customername, 3)	right(customername, 3)	mid(customername, 3, 3)	replace(customername, 'a', 'B')
Atelier graphique	ATELIER GRAPHIQUE	atelier graphique	ate	que	td	Atier g@phique
Signal Gift Stores	SIGNAL GIFT STORES	signal gift stores	sig	nes	ign	Sign@l Gift Stores
Australian Collectors, Co.	AUSTRALIAN COLLECTORS, CO.	australian collectors, co.	aus	co.	ustr	Aust@n Collectors, Co.
La Rochelle Gifts	LA ROCHELLE GIFTS	la rochele gifts	la	fts	a ro	L@ Rochelle Gifts
Baane Mini Imports	BAANE MINI IMPORTS	baane min imports	baa	ts	aane	B@B@ne Mini Imports
Mini Gifts Distributors Ltd.	MINI GIFTS DISTRIBUTORS LTD.	mini gifts distributors ltd.	min	td.	ni	Min Gifts Distributors Ltd.
Havel & Zypseck Co.	HAVEL & ZYPSECK CO.	havel & zypseck co	havl	co	avel	H@vel & Zypseck Co.
Blauer See Auto, Co.	BLAUER SEE AUTO, CO.	blauer see auto, co.	bla	co.	lau	Bl@uer See Auto, Co.
Mini Wheels Co.	MINI WHEELS CO.	mini wheels co.	min	co.	ni	Min Wheels Co.

Result 3 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	14:04:58	use classmodels	0 rows affected	0.000 sec / 0.000 sec
2	14:05:00	select from customers LIMIT 0, 10000	122 rows returned	0.016 sec / 0.000 sec
3	14:05:01	select upper(customername), lower(customername), left(customername, 3), right(customername, 3), mid(customername, 3, 3), replace(customername, 'a', 'B') from customers;	122 rows returned	0.016 sec / 0.000 sec

Text function:

- Upper
- Lower
- Right
- Left
- Mid
- replace

MySQL Workbench

khushi - Varming - not support...

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHMAS

Filter objects

classmodels

customers

employees

office

orderdetails

orders

payments

productlines

products

Views

Stored Procedures

Functions

data_analytics

sys

world

Administration Schemas

Information

No object selected

Object Info Session

22°C Sunny

14:07 25-11-2025

data_analytics classmodels classmodels/cls/ques7

Limit to 10000 rows

34

35

36

37

38

39

40

41

42

SELECT CUSTOMERNAME,

Substring_index(customername, '-', 1) from customers;

select contactfirstname,contactlastname, concat(contactfirstname, '-',contactlastname) from customers;

select group_concat(customername) from customers;

select replace(group_concat(customername),' ','-') from customers;

Result Grid

Filter Rows

Export

Wrap Cell Contents

ES

CUSTOMERNAME	Substring_index(customername, '-', 1)
Atelier graphique	graphique
Signal Gift Stores	Stores
Australian Collectors, Co.	Co.
La Rochelle Gifts	Gifts
Baane Mini Imports	Imports
Mini Gifts Distributors Ltd.	Ltd.
Havel & Zypseck Co.	Co.
Blauer See Auto, Co.	Co.
Mini Wheels Co.	Co.

Result 4 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	14:07:35	SELECT CUSTOMERNAME, Substring_index(customername, '-', 1) from customers LIMIT 0, 10000	122 rows returned	0.000 sec / 0.000 sec
6	14:07:35	select contactfirstname,contactlastname, concat(contactfirstname, '-',contactlastname) from customers LIMIT 0, 10000	122 rows returned	0.000 sec / 0.000 sec
7	14:07:35	select group_concat(customername) from customers LIMIT 0, 10000	1 rows returned	0.000 sec / 0.000 sec
8	14:07:35	select replace(group_concat(customername),' ','-') from customers LIMIT 0, 10000	1 rows returned	0.000 sec / 0.000 sec
9	14:07:35	select concat(upper(left(customername, 1)),lower(right(customername, 2, 1000)) from customers LIMIT 0, 10000	122 rows returned	0.000 sec / 0.000 sec
10	14:07:35	select customername length(customername) from customers LIMIT 0, 10000	122 rows returned	0.000 sec / 0.000 sec

1.

MySQL Workbench

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File Edit View Query Database Server Tools Scripting Help

Navigator

Schemas

Filter objects

classmodels

Tables

- customers
- employees
- offices
- orderdetails
- orders
- payments
- productlines
- products
- views
- Stored Procedures
- Functions
- data_analysis
- skila
- sys
- world

Administration Schemas

Information

No object selected

data_analysis classmodels dataanalysis/ques7

Limit to 1000 rows

```

34 SELECT CUSTOMERNAME,
35 Substring_index(customername, ",",-1) from customers;
36
37 select contactfirstname,contactlastname,concat(contactfirstname,"",contactlastname) from customers;
38
39 select group_concat(customername) from customers;
40
41 select replace(group_concat(customername),",","") from customers;
42

```

Result Grid

contactfirstname	contactlastname	concat(contactfirstname,"",contactlastname)
Carne	Schmitt	Carne Schmitt
Jean	King	Jean King
Peter	Ferguson	Peter Ferguson
Jennie	Laburne	Jennie Laburne
Jonas	Bergulfsen	Jonas Bergulfsen
Susan	Nelson	Susan Nelson
Zyadck	Pestrenievicz	Zyadck Pestrenievicz
Roland	Kleid	Roland Kleid
Julie	Murphy	Julie Murphy

Result 4 Result 5 x Result 6 Result 7 Result 8 Result 9

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	14:07:35	SELECT CUSTOMERNAME, Substring_index(customername, ",",-1) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
6	14:07:35	select contactfirstname,contactlastname,concat(contactfirstname,"",contactlastname) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
7	14:07:35	select group_concat(customername) from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
8	14:07:35	select replace(group_concat(customername),",","") from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
9	14:07:35	select concat_upper(concat(customername,1)) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
10	14:07:35	select customername,length(customername) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

22°C Sunny

Search

ENG IN

14:07 25-11-2025

2.

MySQL Workbench

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File Edit View Query Database Server Tools Scripting Help

Navigator

Schemas

Filter objects

classmodels

Tables

- customers
- employees
- offices
- orderdetails
- orders
- payments
- productlines
- products
- views
- Stored Procedures
- Functions
- data_analysis
- skila
- sys
- world

Administration Schemas

Information

No object selected

data_analysis classmodels dataanalysis/ques7

Limit to 1000 rows

```

34 SELECT CUSTOMERNAME,
35 Substring_index(customername, ",",-1) from customers;
36
37 select contactfirstname,contactlastname,concat(contactfirstname,"",contactlastname) from customers;
38
39 select group_concat(customername) from customers;
40
41 select replace(group_concat(customername),",","") from customers;
42

```

Result Grid

group_concat(customername)
Atleer graphique,Signal Gift Stores,Australian C...

Result 4 Result 5 Result 6 x Result 7 Result 8 Result 9

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	14:07:35	SELECT CUSTOMERNAME, Substring_index(customername, ",",-1) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
6	14:07:35	select contactfirstname,contactlastname,concat(contactfirstname,"",contactlastname) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
7	14:07:35	select group_concat(customername) from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
8	14:07:35	select replace(group_concat(customername),",","") from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
9	14:07:35	select concat_upper(concat(customername,1)) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
10	14:07:35	select customername,length(customername) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

22°C Sunny

Search

ENG IN

14:07 25-11-2025

3.

MySQL Workbench

khushi - Inlaming - not support...

File Edit View Query Database Server Tools Scripting Help

Navigator

data_analytics classicmodels dataanalytics/queries

SCHEMAS

Filter objects

classicmodels

Tables

customers

employees

offices

orderdetails

orders

payments

productlines

products

Views

Stored Procedures

Functions

data_analytics

sales

sys

world

Administration Schemas

Information

No object selected

Result Grid

Filter Rows

Export

Wrap Cell Contents

Limit to 10000 rows

34 SELECT CUSTOMERNAME,
35 Substring_index(customername, '-',1) from customers;
36
37 select contactfirstname,contactlastname, concat(contactfirstname,'-',contactlastname) from customers;
38
39 select group_concat(customername) from customers;
40
41 select replace(group_concat(customername),' ','-') from customers;
42

Result 4 Result 5 Result 6 Result 7 x Result 8 Result 9

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	14:07:35	SELECT CUSTOMERNAME, Substring_index(customername, '-',1) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
6	14:07:35	select contactfirstname,contactlastname, concat(contactfirstname,'-',contactlastname) from customers LIMIT ...	122 row(s) returned	0.000 sec / 0.000 sec
7	14:07:35	select group_concat(customername) from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
8	14:07:35	select replace(group_concat(customername),' ','-') from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
9	14:07:35	select concat(upper(left(customername,1)),lower(right(customername,2,100))) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
10	14:07:35	select customername,length(customername) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

22°C Sunny

Search

ENG IN

14:08 25-11-2025

4.

MySQL Workbench

khushi - Inlaming - not support...

File Edit View Query Database Server Tools Scripting Help

Navigator

data_analytics classicmodels dataanalytics/queries

SCHEMAS

Filter objects

classicmodels

Tables

customers

employees

offices

orderdetails

orders

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productlines

products

Views

Stored Procedures

Functions

data_analytics

sales

sys

world

Administration Schemas

Information

No object selected

Result Grid

Filter Rows

Export

Wrap Cell Contents

Limit to 10000 rows

37 select contactfirstname,contactlastname, concat(contactfirstname,'-',contactlastname) from customers;
38
39 select group_concat(customername) from customers;
40
41 select replace(group_concat(customername),' ','-') from customers;
42
43 select concat(upper(left(customername,1)),lower(right(customername,2,100))) from customers;
44
45 select customername,length(customername) from customers;

Result 4 Result 5 Result 6 Result 7 Result 8 x Result 9

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	14:07:35	SELECT CUSTOMERNAME, Substring_index(customername, '-',1) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
6	14:07:35	select contactfirstname,contactlastname, concat(contactfirstname,'-',contactlastname) from customers LIMIT ...	122 row(s) returned	0.000 sec / 0.000 sec
7	14:07:35	select group_concat(customername) from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
8	14:07:35	select replace(group_concat(customername),' ','-') from customers LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec
9	14:07:35	select concat(upper(left(customername,1)),lower(right(customername,2,100))) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec
10	14:07:35	select customername,length(customername) from customers LIMIT 0, 10000	122 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

22°C Sunny

Search

ENG IN

14:08 25-11-2025

5.

MySQL Workbench interface showing a query editor with the following SQL statements:

```

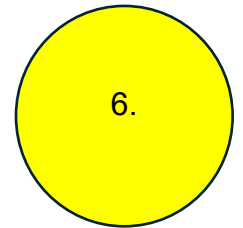
37 • select contactfirstname,contactlastname, concat(contactfirstname," ",contactlastname) from customers;
38
39 • select group_concat(customername) from customers;
40
41 • select replace(group_concat(customername),","," ") from customers;
42
43 • select concat(upper(left(customername,1)),lower(right(customername,2,100))) from customers;
44
45 • select customername,length(customername) from customers;

```

The Result Grid shows the following data:

customername	length(customername)
Atelier graphique	17
Signal Gift Stores	18
Australian Collectors, Co.	26
La Rochelle Gifts	17
Baume Merc Imports	18
Mini Gifts Distributors Ltd.	28
Havel & Zyporek Co	18
Blauser See Auto, Co.	20
Nep Virens Co.	15
Land of Toys Inc.	17

The Action Output shows the execution of the queries with their respective durations and row counts.



MySQL Workbench interface showing a query editor with the following SQL statements:

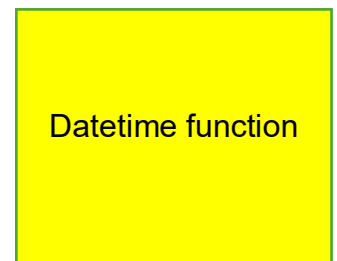
```

48 • select now();
49 • select current_date();
50 • select paymentdate,
51 year(paymentdate),
52 month(paymentdate),
53 day(paymentdate),
54 dayname(paymentdate) from payments ;
55 • select orderdate ,shippeddate, datediff(shippeddate,orderdate) from orders;
56 • select round(avg(datediff(shippeddate,orderdate)),0)from orders; -- error

```

The Result Grid shows the following data:

paymentdate	year(paymentdate)	month(paymentdate)	day(paymentdate)	dayname(paymentdate)
2004-10-19	2004	10	19	Tuesday
2003-06-05	2003	6	5	Thursday
2004-12-18	2004	12	18	Saturday
2004-12-17	2004	12	17	Friday
2003-06-06	2003	6	6	Friday
2004-08-20	2004	8	20	Friday
2003-05-20	2003	5	20	Tuesday
2004-12-15	2004	12	15	Wednesday
2003-05-31	2003	5	31	Saturday
2004-03-10	2004	3	10	Wednesday



data_analytics* classicmodels* dataanalytics(ques)*

Limit to 10000 rows

```

63 -- done number,text,date function
64 -- if condition
65 • select*, if(amount>=0 and amount<=10000,"10k","other") from payments;
66 • select*, case
67   when amount>=0 and amount<=5000 then "low"
68   when amount>=5001 and amount<=1000 then "medium"
69   else "high"
70 end from payments;
71 -- sub query[nested query]

```

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

	customerNumber	checkNumber	paymentDate	amount	if(amount>=0 and amount<=10000,"10k","other")
▶	103	HQ336336	2004-10-19	6066.78	10k
	103	JM555205	2003-06-05	14571.44	other
	103	OM314933	2004-12-18	1676.14	10k
	112	BO864823	2004-12-17	14191.12	other
	112	HQ55022	2003-06-06	32641.98	other
	112	ND748579	2004-08-20	33347.88	other
	114	GG31455	2003-05-20	45864.03	other
	114	MA765515	2004-12-15	82261.22	other
	114	NP603840	2003-05-31	7565.08	10k
	114	ND748579	2004-08-20	33347.88	other

Result 13 x

If condition

data_analytics* classicmodels* dataanalytics(ques)*

Limit to 10000 rows

```

63 -- done number,text,date function
64 -- if condition
65 • select*, if(amount>=0 and amount<=10000,"10k","other") from payments;
66 • select*, case
67   when amount>=0 and amount<=5000 then "low"
68   when amount>=5001 and amount<=1000 then "medium"
69   else "high"
70 end from payments;
71 -- sub query[nested query]

```

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

	customerNumber	checkNumber	paymentDate	amount	case when amount>=0 and amount<=5000 then "low" when amount>=5001 and amount<=1000 then "medium" else "high" end
	103	HQ336336	2004-10-19	6066.78	high
	103	JM555205	2003-06-05	14571.44	high
	103	OM314933	2004-12-18	1676.14	low
	112	BO864823	2004-12-17	14191.12	high
	112	HQ55022	2003-06-06	32641.98	high
	112	ND748579	2004-08-20	33347.88	high

Case else

```

data_analytics* classicmodels* dataanalytics(ques)* x
Limit to 10000 rows
69     else "high"
70     end from payments;
71     -- sub query[nested query]
72 •   select* from payments;
73 •   select*from customers;
74
75 •   select sum(amount) from payments;
76 •   select sum(creditlimit) from customers;
77 •   select sum(amount)/(select sum(creditlimit) from customers) from payments;

```

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

sum(amount)/(select sum(creditlimit) from customers)
1.072621

Sub query

```

data_analytics* classicmodels* dataanalytics(ques)* x
Limit to 10000 rows
124     -- where clause: filter
125 •   select*from customers where city="Las Vegas";
126 •   select*from customers where country != "USA";
127 •   select*from customers where creditlimit >= 100000;
128 •   select *from customers where creditlimit between 150000 and 250000;
129 •   select * from customers where country like "aus%";
130 •   select*from customers where country like "a%a";
131 •   select*from customers where country like "B_gium";
132 •   select*from customers where country in ("australia", "belgium");

```

Where clause

```

data_analytics* classicmodels* dataanalytics(ques)* x
Limit to 10000 rows
133
134     -- 25 nov 2025 tuesday
135     -- group by
136 •   use classicmodels;
137 •   select country, sum(creditlimit) from customers group by country;
138 •   select country, city, sum(creditlimit) from customers group by country, city;
139
140     -- orderby: find top and bottom records
141 •   select country, sum(creditlimit) as cr from customers group by country order by cr desc;

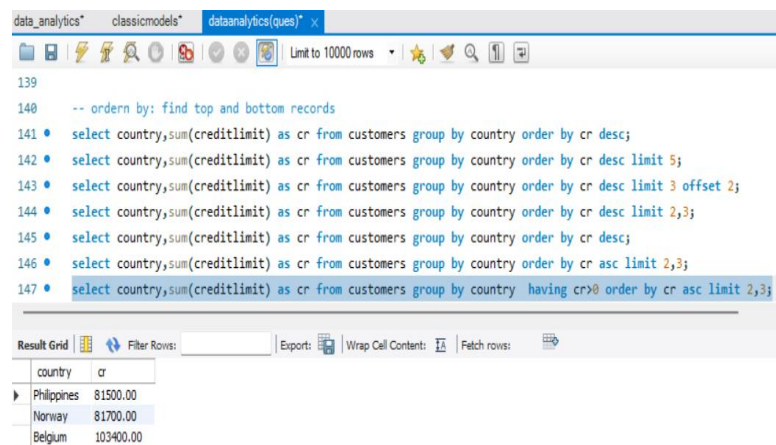
```

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

country	city	sum(creditlimit)
France	Nantes	139200.00
USA	Las Vegas	71800.00
Australia	Melbourne	117300.00
Norway	Stavern	81700.00
USA	San Rafael	210500.00
Poland	Warszawia	0.00
Germany	Frankfurt	59700.00
USA	San Francisco	169600.00
USA	NYC	437100.00
Spain	Madrid	391800.00

Group by

Order by:



The screenshot shows a SQL IDE interface with a list of queries on the left and a result grid on the right. The queries are numbered 139 to 147. Query 147 is highlighted. The result grid shows the output of the highlighted query, which is a table with two columns: 'country' and 'cr'.

```
139
140 -- ordern by: find top and bottom records
141 • select country,sum(creditlimit) as cr from customers group by country order by cr desc;
142 • select country,sum(creditlimit) as cr from customers group by country order by cr desc limit 5;
143 • select country,sum(creditlimit) as cr from customers group by country order by cr desc limit 3 offset 2;
144 • select country,sum(creditlimit) as cr from customers group by country order by cr desc limit 2,3;
145 • select country,sum(creditlimit) as cr from customers group by country order by cr desc;
146 • select country,sum(creditlimit) as cr from customers group by country order by cr asc limit 2,3;
147 • select country,sum(creditlimit) as cr from customers group by country having cr>0 order by cr asc limit 2,3;
```

Result Grid

country	cr
Philippines	81500.00
Norway	81700.00
Belgium	103400.00

Sequence:

- A. Select
- B. Column,func
- C. Table name
- D. Where
- E. Group by
- F. Having
- G. Limit
- H. Offset