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Write MySQL queries for each of the given tasks and execute them in your MySQL environment.

Capture a screenshot of the query result and attach it along with the SQL statement in your lab report.

1. Retrieve all clients from sql_invoicing database

Code:

```
1 •  USE sql_invoicing;
2 •  select * from sql_invoicing.clients;
```

Table:

▶	1	Vinte	3 Nevada Parkway	Syracuse	NY	315-252-7305
	2	Myworks	34267 Glendale Parkway	Huntington	WV	304-659-1170
	3	Yadel	096 Pawling Parkway	San Francisco	CA	415-144-6037
	4	Kwideo	81674 Westerfield Circle	Waco	TX	254-750-0784
	5	Topiclounge	0863 Farmco Road	Portland	OR	971-888-9129
*	NULL	NULL	NULL	NULL	NULL	NULL

2. List all products with their names and prices from sql_invoicing database

Code:

```
1 •  USE sql_store;
2 •  select name, unit_price from products;
3
4
```

Table:

name	unit_price
Foam Dinner Plate	1.21
Pork - Bacon,back Peameal	4.65
Lettuce - Romaine, Heart	3.35
Brocolinni - Gaylan, Chinese	4.53
Sauce - Ranch Dressing	1.63
Petit Baguette	2.39
Sweet Pea Sprouts	3.29
Island Oasis - Raspberry	0.74
Longan	2.26
Broom - Push	1.09

3. Show all employees' first and last names along with their job titles from sql_invoicing database

Code:

```
1 •   USE sql_store;
2 •   select first_name, last_name from customers;
3
4
```

Table:

first_name	last_name
Babara	MacCaffrey
Ines	Brushfield
Freddi	Boagey
Ambur	Roseburgh
Clemmie	Betchley
Elka	Twiddell
Ilene	Dowson
Thacher	Naseby
Romola	Rumgay
Levy	Mynett

4. Retrieve all orders with their order dates and status from sql_invoicing database

Code:

```
USE sql_store;
select order_date, status
from orders;

```

Table:

order_date	status
2019-01-30	1
2018-08-02	2
2017-12-01	1
2017-01-22	1
2017-08-25	2
2018-11-18	1
2018-09-22	2
2018-06-08	1
2017-07-05	2
2018-04-22	2

5. Show all payment methods available in sql_invoicing database

Code:

```
USE sql_invoicing;
select * from payment_methods;

```

Table:

payment_method_id	name
1	Credit Card
2	Cash
3	PayPal
4	Wire Transfer
NULL	NULL

6. Display all invoices with their total amount and due date from sql_invoicing database

Code:

```
1 • USE sql_invoicing;
2 • select due_date, invoice_total from invoices;
3
```

Table:

due_date	invoice_total
2019-03-29	101.79
2019-07-01	175.32
2019-08-20	147.99
2019-03-28	152.21
2019-08-07	169.36
2019-02-18	157.78
2019-09-24	133.87
2019-06-09	189.12
2019-07-29	172.17
2019-07-20	159.50

7. List all customers' full names and their city from sql_invoicing database.

Code:

```
1 • USE sql_invoicing;
2 • select name, city from clients;
3
```

Table:

name	city
Vinte	Syracuse
Myworks	Huntington
Yadel	San Francisco
Kwideo	Waco
Topiclounge	Portland

8. Retrieve all offices with their addresses and cities from sql_invoicing database

Code:

```
USE sql_hr;
select office_id, address, city from offices;

```

Table:

office_id	address	city
1	03 Reinke Trail	Cincinnati
2	5507 Becker Terrace	New York City
3	54 Northland Court	Richmond
4	08 South Crossing	Cincinnati
5	553 Maple Drive	Minneapolis
6	23 North Plaza	Aurora
7	9658 Wayridge Court	Boise
8	9 Grayhawk Trail	New York City
9	16862 Westend Hill	Knoxville
10	4 Bluestem Parkway	Savannah

9. Display all order items with their order ID, product ID, and quantity from sql_invoicing database.

Code:

```
USE sql_store;
select order_id, product_id, quantity from order_items;

```

Table:

order_id	product_id	quantity
1	4	4
2	1	2
2	4	4
2	6	2
3	3	10
4	3	7
4	10	7
5	2	3
6	1	4
6	2	4
6	3	4
6	5	1
7	3	7
8	5	2
8	8	2
9	6	5

-- 10. List all payments showing the client ID, invoice ID, and payment amount from sql_invoicing database.

Code:

```
1 •  USE sql_invoicing;
2 •  select client_id, invoice_id, payment_total from invoices;
3
```

Table:

client_id	invoice_id	payment_total
2	1	0.00
5	2	8.18
5	3	0.00
3	4	0.00
5	5	0.00
1	6	74.55
3	7	0.00
1	8	0.00
5	9	0.00
1	10	0.00
3	11	0.03
5	13	87.44
3	15	80.31
1	16	0.00
3	17	68.10
5	18	42.77
1	19	0.00
NULL	NULL	NULL

11. Retrieve all employees along with their salary in descending order from sql_invoicing database.

Code:

```
1 •  USE sql_hr;
2 •  select first_name, last_name, salary from employees
3    order by salary DESC;
```

Table:

first_name	last_name	salary
Mirilla	Janowski	119241
Guthrey	Iacopetti	117690
North	de Clerc	114257
Keriann	Alloisi	110150
Sayer	Matterson	98926
Elladine	Rising	96767
Kass	Hefferan	96401
Mindy	Crissil	94860
Hazel	Tarbert	93760
Ivy	Fearey	92710
Cole	Kesterton	86119
Lynde	Aronson	77182
Estrellita	Daleman	70187
Mildrid	Sokale	67987
Yovonnda	Magrannell	63996
D'arcy	Nortunen	62871
Virge	Goodrum	54578
Nisse	Voysey	52832
Theresa	Binney	47354
Alaster	Scutchin	32179

12. List all customers who have earned points from sql_invoicing database SELECT first_name, last_name, points FROM sql_invoicing.customers WHERE points > 0;

Code:

```
1 •  USE sql_store;
2 •  SELECT first_name, last_name, points FROM customers
3    WHERE points > 0;
```

Table:

first_name	last_name	points
Babara	MacCaffrey	2273
Ines	Brushfield	947
Freddi	Boagey	2967
Ambur	Roseburgh	457
Clemmie	Betchley	3675
Elka	Twiddell	3073
Ilene	Dowson	1672
Thacher	Naseby	205
Romola	Rumgay	1486
Levy	Mynett	796

13. Display all orders placed by a specific customer (e.g., customer ID 5) from sql_invoicing database SELECT order_id, order_date FROM sql_invoicing.orders WHERE customer_id = 5;

Code:

```
1 • USE sql_store;
2 • SELECT order_id, order_date FROM orders WHERE customer_id = 5
3
```

Table:

order_id	order_date
5	2017-08-25
8	2018-06-08
NULL	NULL

14. Retrieve all employees from HR database.

Code:

```
1 • USE hr;
2 • SELECT * from employees;
3
```

Table:

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
100	Steven	King	SKING	515.123.4567	1987-06-17	AD_PRES	24000.00	NULL	NULL	90
101	Neena	Kochhar	NKOCHHAR	515.123.4568	1989-09-21	AD_VP	17000.00	NULL	100	90
102	Lex	De Haan	LDEHAAN	515.123.4569	1993-01-13	AD_VP	17000.00	NULL	100	90
103	Alexander	Hunold	AHUNOLD	590.423.4567	1990-01-03	IT_PROG	9000.00	NULL	102	60
104	Bruce	Ernst	BERNST	590.423.4568	1991-05-21	IT_PROG	6000.00	NULL	103	60
105	David	Austin	DAUSTIN	590.423.4569	1997-06-25	IT_PROG	4800.00	NULL	103	60
106	Valli	Pataballa	VPATABAL	590.423.4560	1998-02-05	IT_PROG	4800.00	NULL	103	60
107	Diana	Lorentz	DLORENTZ	590.423.5567	1999-02-07	IT_PROG	4200.00	NULL	103	60
108	Nancy	Greenberg	NGREENBE	515.124.4569	1994-08-17	FI_MGR	12000.00	NULL	101	100
109	Daniel	Faviet	DFAVIET	515.124.4169	1994-08-16	FI_ACCOUNT	9000.00	NULL	108	100
110	John	Chen	JCHEN	515.124.4269	1997-09-28	FI_ACCOUNT	8200.00	NULL	108	100
111	Ismael	Sciarra	ISCIARRA	515.124.4369	1997-09-30	FI_ACCOUNT	7700.00	NULL	108	100
112	Jose Manuel	Urman	JMURMAN	515.124.4469	1998-03-07	FI_ACCOUNT	7800.00	NULL	108	100
113	Luis	Popp	LPOPP	515.124.4567	1999-12-07	FI_ACCOUNT	6900.00	NULL	108	100
114	Den	Raphaely	DRAPHEAL	515.127.4561	1994-12-07	PU_MAN	11000.00	NULL	100	30
115	Alexander	Khoo	AKHOO	515.127.4562	1995-05-18	PU_CLERK	3100.00	NULL	114	30

15. List all job titles and their corresponding salary ranges from HR database.

Code:

```
1 •  USE hr;
2 •  select job_id, salary from employees;
3
```

Table:

job_id	salary
AD_PRES	24000.00
AD_VP	17000.00
AD_VP	17000.00
IT_PROG	9000.00
IT_PROG	6000.00
IT_PROG	4800.00
IT_PROG	4800.00
IT_PROG	4200.00
FI_MGR	12000.00
FI_ACCOUNT	9000.00
FI_ACCOUNT	8200.00
FI_ACCOUNT	7700.00
FI_ACCOUNT	7800.00
FI_ACCOUNT	6900.00
PU_MAN	11000.00
PU_CLERK	3100.00
PU_CLERK	2900.00

16. Show all departments with their department names and locations from HR database.

Code:

```
1 •  USE hr;
2 •  select department_name, location_id from departments;
3
```

Table:

department_name	location_id
Administration	1700
Marketing	1800
Purchasing	1700
Human Resources	2400
Shipping	1500
IT	1400
Public Relations	2700
Sales	2500
Executive	1700
Finance	1700
Accounting	1700
Treasury	1700
Corporate Tax	1700
Control And Credit	1700
Shareholder Servi...	1700
Benefits	1700
Manufacturing	1700

17. Retrieve all employees along with their managers' IDs from HR database.

Code:

```
1 •  USE hr;
2 •  select first_name, last_name, manager_id from employees;
3
```

Table:

first_name	last_name	manager_id
Steven	King	NULL
Neena	Kochhar	100
Lex	De Haan	100
Alexander	Hunold	102
Bruce	Ernst	103
David	Austin	103
Valli	Pataballa	103
Diana	Lorentz	103
Nancy	Greenberg	101
Daniel	Faviet	108
John	Chen	108
Ismael	Sciarra	108
Jose Manuel	Urman	108
Luis	Popp	108
Den	Raphaely	100
Alexander	Khoo	114
Shelli	Baida	114

18. Display all locations with their city and country ID from HR database.

Code:

```
1 •  USE hr;
2 •  select city, country_id, location_id, street_address from locations;
3
```

Table:

city	country_id	location_id	street_address
Roma	IT	1000	1297 Via Cola di Rie
Venice	IT	1100	93091 Calle della Testa
Tokyo	JP	1200	2017 Shinjuku-ku
Hiroshima	JP	1300	9450 Kamiya-cho
Southlake	US	1400	2014 Jabberwocky Rd
South San Francisco	US	1500	2011 Interiors Blvd
South Brunswick	US	1600	2007 Zagora St
Seattle	US	1700	2004 Charade Rd
Toronto	CA	1800	147 Spadina Ave
Whitehorse	CA	1900	6092 Boxwood St
Beijing	CN	2000	40-5-12 Laogianggen
Bombay	IN	2100	1298 Vileparle (E)
Sydney	AU	2200	12-98 Victoria Street
Singapore	SG	2300	198 Clementi North
London	UK	2400	8204 Arthur St
Oxford	UK	2500	Magdalen Centre, The...
Stretford	UK	2600	9702 Chester Road

19. List all job history details for employees from HR database.

Code:

```
1 • USE hr;
2 • SELECT employee_id FROM job_history;
3
```

Table:

	employee_id
▶	201
	114
	122
	102
	176
	176
	200
	200
	101
	101

20. Retrieve all employees who earn more than 5000 from HR database.

Code:

```
1 • USE hr;
2 • select employee_id, salary from employees where salary > 5000;
3
4
```

Table:

	employee_id	salary
▶	100	24000.00
	101	17000.00
	102	17000.00
	103	9000.00
	104	6000.00
	108	12000.00
	109	9000.00
	110	8200.00
	111	7700.00
	112	7800.00
	113	6900.00
	114	11000.00
	120	8000.00
	121	8200.00
	122	7900.00

21. Show all departments along with their manager IDs from HR database

Code:

```
1 •  USE hr;
2    SELECT department_name, manager_id
3    FROM departments;
4
```

Table:

department_name	manager_id
Administration	200
Marketing	201
Purchasing	114
Human Resources	203
Shipping	121
IT	103
Public Relations	204
Sales	145
Executive	100
Finance	108
Accounting	205
Treasury	NULL
Corporate Tax	NULL

22. Display all jobs along with their job titles and job IDs from HR database.

Code:

```
1 •  USE hr;
2 •  select job_title, job_id from jobs
3
```

Table:

job_title	job_id
President	AD_PRES
Administration Vice President	AD_VP
Accountant	FI_ACCOUNT
Finance Manager	FI_MGR
Human Resources Representative	HR_REP
Programmer	IT_PROG
Marketing Manager	MK_MAN
Marketing Representative	MK_REP
Public Relations Representative	PR_REP
Purchasing Clerk	PU_CLERK
Purchasing Manager	PU_MAN
Sales Manager	SA_MAN
Sales Representative	SA_REP
Shipping Clerk	SH_CLERK

Critical Analysis

The SQL lab tasks are designed to help us practice basic and intermediate SQL skills, like retrieving data, sorting. The tasks are based on real-life examples like orders and employee information, which makes them useful for practical learning.

Lab Assessment		
Lab Task Evaluation	/6	/10
Lab Report	/4	
Instructor Signature and Comments		