

# Tugas 3 Praktikum Basis Data

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## Single Entity

1. Prepare a list of offices sorted by country, state, city.

```
SELECT officeCode, country, state, city
FROM offices
ORDER BY country, state, city ASC;
```

RESULT:

officeCode	country	state	city
6	Australia	NULL	Sydney
4	France	NULL	Paris
5	Japan	Chiyoda-Ku	Tokyo
7	UK	NULL	London
1	USA	CA	San Francisco
2	USA	MA	Boston
3	USA	NY	NYC

7 rows in set (0.00 sec)

2. How many employees are there in the company?

```
SELECT COUNT(1) AS total_employee
FROM employees;
```

RESULT:

total_employee
23

1 row in set (0.00 sec)

3. What is the total of payments received?

```
SELECT SUM(amount) AS total_payment
FROM payments;
```

RESULT:

total_payment
8853839.23

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

4. List the product lines that contain 'Cars'.

```
SELECT DISTINCT productLine
FROM products
WHERE productLine LIKE "%Cars%";
```

RESULT:

```
+-----+
| productLine |
+-----+
| Classic Cars |
| Vintage Cars |
+-----+
2 rows in set (0.00 sec)
```

5. Report total payments for October 28, 2004.

```
SELECT SUM(amount) AS total_payment
FROM payments
WHERE paymentDate = "2004-10-28";
```

RESULT:

```
+-----+
| total_payment |
+-----+
|      47411.33 |
+-----+
1 row in set (0.00 sec)
```

6. Report those payments greater than \$100,000.

```
SELECT *
FROM payments
WHERE amount > 100000;
```

RESULT:

```
+-----+-----+-----+-----+
| customerNumber | checkNumber | paymentDate | amount |
+-----+-----+-----+-----+
|          124 | AE215433   | 2005-03-05  | 101244.59 |
|          124 | KI131716   | 2003-08-15  | 111654.40 |
|          141 | ID10962    | 2004-12-31  | 116208.40 |
|          141 | JE105477   | 2005-03-18  | 120166.58 |
|          148 | KM172879   | 2003-12-26  | 105743.00 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

7. List the products in each product line.

```
SELECT productLine, productName
FROM products
ORDER BY productLine ASC;
```

RESULT:

productLine	productName
Classic Cars	1976 Ford Gran Torino
Classic Cars	1958 Chevy Corvette Limited Edition
Classic Cars	1952 Citroen-15CV
Classic Cars	1982 Lamborghini Diablo
Classic Cars	1969 Chevrolet Camaro Z28
Classic Cars	1998 Chrysler Plymouth Prowler
Vintage Cars	1911 Ford Town Car
Vintage Cars	1930 Buick Marquette Phaeton
Vintage Cars	1932 Model A Ford J-Coupe
Vintage Cars	1941 Chevrolet Special Deluxe Cabriolet

110 rows in set (0.00 sec)

8. How many products in each product line?

```
SELECT productLine, COUNT(1) AS total_products
FROM products
GROUP BY productLine;
```

RESULT:

productLine	total_products
Classic Cars	38
Motorcycles	13
Planes	12
Ships	9
Trains	3
Trucks and Buses	11
Vintage Cars	24

7 rows in set (0.00 sec)

9. What is the minimum payment received?

```
SELECT MIN(amount) AS minimum_payment
FROM payments;
```

RESULT:

minimum_payment
615.45

1 row in set (0.00 sec)

10. List all payments greater than twice the average payment.

```
SELECT *
FROM payments
WHERE amount > 2*(SELECT AVG(amount) FROM payments);
```

RESULT:

customerNumber	checkNumber	paymentDate	amount
114	MA765515	2004-12-15	82261.22
124	AE215433	2005-03-05	101244.59
124	BG255406	2004-08-28	85410.87
124	ET64396	2005-04-16	83598.04
124	KI131716	2003-08-15	111654.40
141	ID10962	2004-12-31	116208.40
141	IN446258	2005-03-25	65071.26
141	JE105477	2005-03-18	120166.58
148	KM172879	2003-12-26	105743.00
167	GN228846	2003-12-03	85024.46
239	NQ865547	2004-03-15	80375.24
321	DJ15149	2003-11-03	85559.12
323	AL493079	2005-05-23	75020.13

13 rows in set (0.00 sec)

11. What is the average percentage markup of the MSRP on buyPrice?

```
SELECT CONCAT((AVG(MSRP) / AVG(buyprice))*100,"%") AS markup_percentage
FROM products;
```

RESULT:

markup_percentage
184.6463674082%

1 row in set (0.00 sec)

12. How many distinct products does ClassicModels sell?

```
SELECT DISTINCT COUNT(productCode) AS total_product
FROM products;
```

RESULT:

total_product
110

1 row in set (0.00 sec)

13. Report the name and city of customers who don't have sales representatives?

```
SELECT customerName, city
FROM customers
WHERE salesRepEmployeeNumber IS NULL;
```

RESULT:

customerName	city
Havel & Zbyszek Co	Warszawa
Porto Imports Co.	Lisboa
Asian Shopping Network, Co	Singapore
Natürlich Autos	Cunewalde
ANG Resellers	Madrid
Messner Shopping Network	Frankfurt
Franken Gifts, Co	München
BG&E Collectables	Fribourg
Schuyler Imports	Amsterdam
Der Hund Imports	Berlin
Cramer Spezialitäten, Ltd	Brandenburg
Asian Treasures, Inc.	Cork
SAR Distributors, Co	Hatfield
Kommission Auto	Münster
Lisboa Souvenirs, Inc	Lisboa
Stuttgart Collectable Exchange	Stuttgart
Feuer Online Stores, Inc	Leipzig
Warburg Exchange	Aachen
Anton Designs, Ltd.	Madrid
Mit Vergnügen & Co.	Mannheim
Kremlin Collectables, Co.	Saint Petersburg
Raanan Stores, Inc	Herzlia

22 rows in set (0.00 sec)

14. What are the names of executives with VP or Manager in their title? Use the CONCAT function to combine the employee's first name and last name into a single field for reporting.

```
SELECT CONCAT(firstName," ",lastName) AS full_name, jobTitle
FROM employees
WHERE jobTitle LIKE "%VP%" OR jobTitle LIKE "%Manager%";
```

RESULT:

full_name	jobTitle
Mary Patterson	VP Sales
Jeff Firrelli	VP Marketing
William Patterson	Sales Manager (APAC)
Gerard Bondur	Sale Manager (EMEA)
Anthony Bow	Sales Manager (NA)

5 rows in set (0.00 sec)

15. Which orders have a value greater than \$5,000?

```
SELECT orderNumber, SUM(quantityOrdered*priceEach) AS value
FROM orderDetails
GROUP BY orderNumber;
HAVING value > 5000;
```

RESULT:

orderNumber	value
10100	10223.83
10101	10549.01
10102	5494.78
10103	50218.95
10104	40206.20
10105	53959.21
10422	5849.44
10423	8597.73
10424	29310.30
10425	41623.44

326 rows in set (0.01 sec)

### One to many relationship

1. Report the account representative for each customer.

```
SELECT c.customerName,CONCAT(e.firstName," ",e.lastName) as rep_name
FROM customers c
LEFT JOIN employees e ON c.salesRepEmployeeNumber = e.employeeNumber;
```

RESULT:

customerName	rep_name
Atelier graphique	Gerard Hernandez
Signal Gift Stores	Leslie Thompson
Australian Collectors, Co.	Andy Fixter
La Rochelle Gifts	Gerard Hernandez
Baane Mini Imports	Barry Jones
Mini Gifts Distributors Ltd.	Leslie Jennings
Signal Collectibles Ltd.	Leslie Jennings
Double Decker Gift Stores, Ltd	Larry Bott
Diecast Collectables	Julie Firrelli
Kelly's Gift Shop	Peter Marsh

122 rows in set (0.00 sec)

2. Report total payments for Atelier graphique.

```
SELECT SUM(p.amount) AS total_payment
FROM payments p
JOIN customers c USING (customerNumber)
WHERE customerName = "Atelier graphique";
```

RESULT:

```
+-----+
| total_payment |
+-----+
|      22314.36 |
+-----+
1 row in set (0.00 sec)
```

3. Report the total payments by date

```
SELECT paymentDate, SUM(amount) AS total_payment
FROM payments
GROUP BY paymentDate;
```

RESULT:

```
+-----+-----+
| paymentDate | total_payment |
+-----+-----+
| 2003-01-16  |      10223.83 |
| 2003-01-28  |      10549.01 |
| 2003-01-30  |       5494.78 |
| 2003-02-16  |      50218.95 |
| 2003-02-20  |     53959.21 |
| 2003-02-25  |      40206.20 |
|             |               |
|             |               |
|             |               |
| 2005-05-23  |      75020.13 |
| 2005-05-25  |     30253.75 |
| 2005-06-03  |     12432.32 |
| 2005-06-09  |     46656.94 |
+-----+-----+
232 rows in set (0.00 sec)
```

4. Report the products that have not been sold.

```
SELECT p.productName
FROM products p
LEFT JOIN orderDetails d USING(productCode)
WHERE d.productCode IS NULL;
```

RESULT:

```
+-----+
| productName |
+-----+
| 1985 Toyota Supra |
+-----+
1 row in set (0.00 sec)
```

5. List the amount paid by each customer.

```
SELECT c.customerName, SUM(p.amount) AS total_payment
FROM customers c
JOIN payments p USING(customerNumber)
```

GROUP BY c.customerName;

RESULT:

customerName	total_payment
Alpha Cognac	60483.36
Amica Models & Co.	82223.23
Anna's Decorations, Ltd	137034.22
Atelier graphique	22314.36
Australian Collectables, Ltd	44920.76
Australian Collectors, Co.	180585.07
Vida Sport, Ltd	108777.92
Vitachrome Inc.	72497.64
Volvo Model Replicas, Co	43680.65
West Coast Collectables Co.	43748.72

98 rows in set (0.00 sec)

6. How many orders have been placed by Herkku Gifts?

```
SELECT COUNT(o.orderNumber) AS total_order
FROM orders o
JOIN customers c USING (customerNumber)
WHERE customerName = "Herkku Gifts";
```

RESULT:

total_order
3

1 row in set (0.00 sec)

7. Who are the employees in Boston?

```
SELECT CONCAT(e.firstName," ",e.lastName) AS full_name, o.city
FROM employees e
JOIN offices o USING (officeCode)
WHERE o.city = "Boston";
```

RESULT:

full_name	city
Julie Firrelli	Boston
Steve Patterson	Boston

2 rows in set (0.00 sec)

8. Report those payments greater than \$100,000. Sort the report so the customer who made the highest payment appears first.



```

SELECT c.customerName, p.amount
FROM customers c
JOIN payments p USING(customerNumber)
WHERE p.amount > 100000
ORDER BY p.amount DESC;

```

RESULT:

customerName	amount
Euro+ Shopping Channel	120166.58
Euro+ Shopping Channel	116208.40
Mini Gifts Distributors Ltd.	111654.40
Dragon Souvenirs, Ltd.	105743.00
Mini Gifts Distributors Ltd.	101244.59

5 rows in set (0.00 sec)

9. List the value of 'On Hold' orders.

```

SELECT SUM(d.quantityOrdered*d.priceEach) AS value,o.orderNumber, o.status
FROM orders o
JOIN orderDetails d USING(orderNumber)
WHERE o.status = "On Hold"
GROUP BY o.orderNumber;

```

RESULT:

value	orderNumber	status
23014.17	10334	On Hold
43525.04	10401	On Hold
52229.55	10407	On Hold
50806.85	10414	On Hold

4 rows in set (0.00 sec)

10. Report the number of orders 'On Hold' for each customer.

```

content.SELECT c.customerName, COUNT(o.orderNumber) AS total_on_hold_order
FROM customers c
JOIN orders o USING(customerNumber)
WHERE o.status = "On Hold"
GROUP BY c.customerName;

```

RESULT:

customerName	total_on_hold_order
Gifts4AllAges.com	1
Tekni Collectables Inc.	1
The Sharp Gifts Warehouse	1
Volvo Model Replicas, Co	1

4 rows in set (0.00 sec)