### TD6 : Bases de Données

#### 1) SHOW databases;

#### 2) SHOW columns FROM employees;

```
MariaDB [classicmodels]> SHOW columns FROM employees;
 Field
                               Null | Key | Default | Extra |
                 Type
 employeeNumber | int(11)
                               NO
                                      PRI
                                            NULL
                 varchar(50)
 lastName
                                NO
                                            NULL
 firstName
                 varchar(50)
                                NO
                                            NULL
 extension
                 varchar(10)
                                NO
                                            NULL
 email
                 varchar(100)
                               NO
                                            NULL
 officeCode
                                      MUL
                varchar(10)
                              NO
                                            NULL
 reportsTo
                | int(11)
                               YES
                                      MUL
                                            NULL
 jobTitle | varchar(50)
                              NO
                                            NULL
8 rows in set (0.012 sec)
```

#### 3) SELECT \* FROM employees;

mployeeNumber	lastName	firstName	extension	email	officeCode	reportsTo	jobTitle		
1002	Murphy	Diane	x5800	dmurphy@classicmodelcars.com	1	NULL	President		
1056	Patterson	Mary	x4611	mpatterso@classicmodelcars.com	1	1002	VP Sales		
1076	Firrelli	Jeff	x9273	jfirrelli@classicmodelcars.com	1	1002	VP Marketing		
1088	Patterson	William	x4871	wpatterson@classicmodelcars.com	6	1056	Sales Manager (APAG		
1102	Bondur	Gerard	x5408	gbondur@classicmodelcars.com	4	1056	Sale Manager (EMEA)		
1143	Bow	Anthony	x5428	abow@classicmodelcars.com	1	1056	Sales Manager (NA)		
1165	Jennings	Leslie	x3291	ljennings@classicmodelcars.com	1	1143	Sales Rep		
1166	Thompson	Leslie	x4065	lthompson@classicmodelcars.com	1	1143	Sales Rep		
1188	Firrelli	Julie	x2173	jfirrelli@classicmodelcars.com	2	1143	Sales Rep		
1216	Patterson	Steve	x4334	spatterson@classicmodelcars.com	2	1143	Sales Rep		
1286	Tseng	Foon Yue	x2248	ftseng@classicmodelcars.com	3	1143	Sales Rep		
1323	Vanauf	George	x4102	gvanauf@classicmodelcars.com	3	1143	Sales Rep		
1337	Bondur	Loui	x6493	lbondur@classicmodelcars.com	4	1102	Sales Rep		
1370	Hernandez	Gerard	x2028	ghernande@classicmodelcars.com	4	1102	Sales Rep		
1401	Castillo	Pamela	x2759	pcastillo@classicmodelcars.com	4	1102	Sales Rep		
1501	Bott	Larry	x2311	lbott@classicmodelcars.com	7	1102	Sales Rep		
1504	Jones	Barry	x102	bjones@classicmodelcars.com	7	1102	Sales Rep		
1611	Fixter	Andy	x101	afixter@classicmodelcars.com	6	1088	Sales Rep		
1612	Marsh	Peter	x102	pmarsh@classicmodelcars.com	6	1088	Sales Rep		
1619	King	Tom	x103	tking@classicmodelcars.com	6	1088	Sales Rep		
1621	Nishi	Mami	x101	mnishi@classicmodelcars.com	5	1056	Sales Rep		
1625	Kato	Yoshimi	x102	ykato@classicmodelcars.com	5	1621	Sales Rep		
1702	Gerard	Martin	x2312	mgerard@classicmodelcars.com	4	1102	Sales Rep		

#### 4) SELECT Firstname, Lastname FROM employees;

```
MariaDB [classicmodels]> SELECT Firstname, Lastname FROM employees;
 Firstname | Lastname
  -----+
 Diane | Murphy
Diane
Mary
Jeff
Firrelli
William
Patterson
Gerard
Bondur
Anthony
Leslie
Jennings
Leslie
Julie
Firrelli
Steve
Patterson
Tseng
 Foon Yue | Tseng
 George
             Vanauf
 Loui
             Bondur
 Gerard
             Hernandez
 Pamela
             | Castillo
             Bott
 Larry
 Barry
             Jones
             Fixter
 Andy
 Peter
             Marsh
             King
 Tom
             Nishi
 Mami
             Kato
 Yoshimi
 Martin
             Gerard
23 rows in set (0.000 sec)
```

## 5) SELECT customerName, city FROM customers;

MariaDB [classicmodels]> SELECT custom	merName, city FROM customers;
customerName	city
Atelier graphique	Nantes
Signal Gift Stores	Las Vegas
Australian Collectors, Co.	Melbourne
La Rochelle Gifts	Nantes
Baane Mini Imports	Stavern
Mini Gifts Distributors Ltd.	San Rafael
Havel & Zbyszek Co	Warszawa
Blauer See Auto, Co.	Frankfurt
Mini Wheels Co.	San Francisco
Land of Toys Inc.	NYC
Euro+ Shopping Channel	Madrid
Volvo Model Replicas, Co	Lule N '
Danish Wholesale Imports	Kobenhavn
Saveley & Henriot, Co.	Lyon
Dragon Souveniers, Ltd.	Singapore
Muscle Machine Inc	NYC
Diecast Classics Inc.	Allentown
Technics Stores Inc.	Burlingame
Handji Gifts& Co	Singapore
Herkku Gifts	Bergen
American Souvenirs Inc	New Haven
Porto Imports Co.	Lisboa
Daedalus Designs Imports	Lille
La Corne D'abondance, Co.	Paris
Cambridge Collectables Co.	Cambridge
Gift Depot Inc.	Bridgewater
Osaka Souveniers Co.	Kita-ku
Vitachrome Inc.	NYC
Toys of Finland, Co.	Helsinki
AV Stores, Co.	Manchester
Clover Collections, Co.	Dublin
Auto-Moto Classics Inc.	Brickhaven
UK Collectables, Ltd.	Liverpool
Canadian Gift Exchange Network	Vancouver

6) SELECT customerName FROM customers WHERE country = "France";

7) SELECT customerName FROM customers WHERE city = "Lyon" OR city = "Paris" OR city = "Nantes";

8) SELECT customerName FROM customers WHERE customerName LIKE "%SA%";

9) SELECT customers.customerName, employees.firstName, employees.lastName FROM customers

JOIN employees

ON customers.salesRepEmployeeNumber = employees.employeeNumber;

ou

SELECT c.customerName, e.firstName, e.lastName FROM customers c JOIN employees e ON c.salesRepEmployeeNumber = e.employeeNumber;

```
MariaDB [classicmodels]> SELECT c.customerName, e.firstName, e.lastName
   -> FROM customers c
   -> JOIN employees e ON c.salesRepEmployeeNumber = e.employeeNumber;
 customerName
                                   | firstName | lastName
                               | Leslie
| Leslie
| Leslie
 Mini Gifts Distributors Ltd.
                                              Jennings
                                              Jennings
Jennings
 Mini Wheels Co.
 Technics Stores Inc.
 Corporate Gift Ideas Co.
                                   Leslie
                                               Jennings
 The Sharp Gifts Warehouse
                                   Leslie
                                               Jennings
                                               Jennings
 Signal Collectibles Ltd.
                                   Leslie
 Signal Gift Stores
                                   Leslie
                                               Thompson
                                    Leslie
 Toys4GrownUps.com
                                                Thompson
 Boards & Toys Co.
                                    Leslie
                                                Thompson
 Collectable Mini Designs Co.
                                   Leslie
                                                Thompson
 Men 'R' US Retailers, Ltd.
                                   Leslie
                                               Thompson
 West Coast Collectables Co.
                                   Leslie
                                               Thompson
 Cambridge Collectables Co.
                                    Julie
                                               Firrelli
 Online Mini Collectables
                                    Julie
                                                Firrelli
 Mini Creations Ltd.
                                     Julie
                                                Firrelli
 Classic Gift Ideas, Inc
                                    Julie
                                                Firrelli
 Collectables For Less Inc.
                                    Julie
                                                Firrelli
 Diecast Collectables
                                    Julie
                                                Firrelli
 Diecast Classics Inc.
                                     Steve
                                                Patterson
 Auto-Moto Classics Inc.
                                                Patterson
                                    Steve
```

10) SELECT customers.customerName, customers.country, employees.firstName, employees.lastName, offices.country FROM customers

JOIN employees ON customers.salesRepEmployeeNumber employees.employeeNumber

JOIN offices ON employees.officeCode = offices.officeCode;

ariaDB [classicmodels]> SELECT cus -> JOIN employees ON customers. -> JOIN offices ON employees.of	.salesRepEmploye	eNumber = emp	loyees.emplo e;	yeeNumber	irstName, employees.lastName, offices.country FROM cus
customerName	country	firstName	+   lastName	country	1
Mini Gifts Distributors Ltd.	USA	Leslie	Jennings	USA	<del></del> 
Mini Wheels Co.	USA	Leslie	Jennings	USA	
Technics Stores Inc.	USA	Leslie	Jennings	USA	
Corporate Gift Ideas Co.	USA	Leslie	Jennings	USA	
The Sharp Gifts Warehouse	USA	Leslie	Jennings	USA	
Signal Collectibles Ltd.	USA	Leslie	Jennings	USA	
Signal Gift Stores	USA	Leslie	Thompson	USA	
Toys4GrownUps.com	USA	Leslie	Thompson	USA	
Boards & Toys Co.	USA	Leslie	Thompson	USA	
Collectable Mini Designs Co.	i USA	Leslie	Thompson	USA	
Men 'R' US Retailers, Ltd.	USA	Leslie	Thompson	USA	
West Coast Collectables Co.	USA	Leslie	Thompson	USA	
Cambridge Collectables Co.	i USA	Julie	Firrelli	USA	
Online Mini Collectables	i USA	Julie	Firrelli	USA	
Mini Creations Ltd.	USA	Julie	Firrelli	USA	
Classic Gift Ideas, Inc	USA	Julie	Firrelli	USA	
Collectables For Less Inc.	USA	Julie	Firrelli	USA	
Diecast Collectables	USA	Julie	Firrelli	USA	
Diecast Classics Inc.	USA	Steve	Patterson	USA	
Auto-Moto Classics Inc.	USA	Steve	Patterson	USA	
Marta's Replicas Co.	USA	Steve	Patterson	USA	
Gifts4AllAges.com	USA	Steve	Patterson	USA	
Online Diecast Creations Co.	USA	Steve	Patterson	USA	
FunGiftIdeas.com	USA	Steve	Patterson	USA	
Muscle Machine Inc	USA	Foon Yue	Tseng	USA	
American Souvenirs Inc	USA	Foon Yue	Tseng	USA	
Vitachrome Inc.	USA	Foon Yue	Tseng	USA	
Qui-obec Home Shopping Network	Canada	Foon Yue	Tseng	USA	
Classic Legends Inc.	I USA	Foon Yue	Tseng	LUSA	

11) SELECT employeeNumber, lastName, firstName, jobTitle FROM employees
WHERE reportsTo = (

SELECT employeeNumber FROM employees WHERE jobTitle="VP marketing");

MariaDB [classicmodels]> SELECT employeeNumber, lastName, firstName, jobTitle FROM employees WHERE reportsTo = (SELECT employeeNumber FROM employees WHERE jobTitle="VP marketing");
Empty set (0.001 sec)

12) SELECT e.firstName, e.jobTitle, o.country FROM employees e JOIN offices o ON e.officeCode = o.officeCode WHERE e.jobTitle = "Sales Rep" AND o.country = "USA";

13) SELECT c.customerName AS Client, e.firstName, e.lastName AS Employé, o.city AS Ville, o.country AS Pays FROM customers c
JOIN employees e ON c.salesRepEmployeeNumber = e.employeeNumber
JOIN offices o ON e.officeCode = o.officeCode

WHERE o.country = 'USA';

ariaDB [classicmodels]> SELECT c.cu				ity, o.country FROM custon	mers
-> JOIN employees e ON c.salesRe -> JOIN offices o ON e.officeCod			oyeeNumber		
-> JOIN OTTICES O ON E.OTTICECOU -> WHERE o.country = "USA";	e = 0.0111ce	Loue			
-> WHERE O.COUNTRY = USA ;			+		
customerName		lastName		country	
cuscomer wante	+		+		
Mini Gifts Distributors Ltd.	Leslie	Jennings	San Francisco	USA	
Mini Wheels Co.	Leslie	Jennings	San Francisco	USA	
Technics Stores Inc.	Leslie	Jennings	San Francisco	USA	
Corporate Gift Ideas Co.	Leslie	Jennings	San Francisco	USA	
The Sharp Gifts Warehouse	Leslie	Jennings	San Francisco	USA	
Signal Collectibles Ltd.	Leslie	Jennings	San Francisco	USA	
Signal Gift Stores	Leslie	Thompson	San Francisco	USA	
Toys4GrownUps.com	Leslie	Thompson	San Francisco	USA	
Boards & Toys Co.	Leslie	Thompson	San Francisco	USA	
Collectable Mini Designs Co.	Leslie	Thompson	San Francisco	USA	
Men 'R' US Retailers, Ltd.	Leslie	Thompson	San Francisco	USA	
West Coast Collectables Co.	Leslie	Thompson	San Francisco	USA	
Cambridge Collectables Co.	Julie	Firrelli	Boston	USA	
Online Mini Collectables	Julie	Firrelli	Boston	USA	
Mini Creations Ltd.	Julie	Firrelli	Boston	USA	
Classic Gift Ideas, Inc	Julie	Firrelli	Boston	USA	
Collectables For Less Inc.	Julie	Firrelli	Boston	USA	
Diecast Collectables	Julie	Firrelli	Boston	USA	
Diecast Classics Inc.	Steve	Patterson	Boston	USA	
Auto-Moto Classics Inc.	Steve	Patterson	Boston	USA	
Marta's Replicas Co.	Steve	Patterson	Boston	USA	
Gifts4AllAges.com	Steve	Patterson	Boston	USA	
Online Diecast Creations Co.	Steve	Patterson	Boston	USA	
FunGiftIdeas.com	Steve	Patterson	Boston	USA	
Muscle Machine Inc	Foon Yue	Tseng	NYC	USA	
American Souvenirs Inc	Foon Yue	Tseng	NYC	USA	
Vitachrome Inc.	Foon Yue	Tseng	NYC	USA	
Qu├®bec Home Shopping Network	Foon Yue	Tseng	NYC	USA	
Classic Legends Inc.	Foon Yue	Tseng	NYC	USA	
Super Scale Inc.	Foon Yue	Tseng	NYC	USA	
Microscale Inc.	Foon Yue	Tseng	NYC	USA	
Land of Toys Inc.	George	Vanauf	NYC	USA	
Gift Depot Inc.	George	Vanauf	NYC	USA	
Canadian Gift Exchange Network	George	Vanauf	NYC	USA	
Royal Canadian Collectables, Ltd.	George	Vanauf	NYC	USA	
Mini Classics	George	Vanauf	NYC	USA	
Tekni Collectables Inc.	George	Vanauf	NYC	USA	
Gift Ideas Corp.	George	Vanauf	NYC	USA	
Motor Mint Distributors Inc.	George	Vanauf	NYC	USA İ	

# 14) SELECT country AS pays, COUNT(customerNumber) AS NombreClients FROM customers GROUP BY country;

MariaDB [classion	cmodels]> SELECT	country AS	pays,	COUNT(cu	stomerNumbe	r) AS	NombreClients	FROM	customers	GROUP	BY	country;
pays	NombreClients	į										
Australia	5	<del>†</del> 										
Austria	2											
Belgium	2	ļ										
Canada	3	ļ										
Denmark	2	ļ										
Finland	3	ļ										
France	12	!										
Germany	13	!										
Hong Kong	1											
Ireland	2	!										
Israel	1											
Italy	4											
Japan   Netherlands	1 1											
New Zealand	4											
Norway	3											
Philippines	1 1											
Poland	1											
Portugal	2	i										
Russia	1	i										
Singapore	3	i										
South Africa	1	i										
Spain	7	i										
Sweden	2	i										
Switzerland	3	i										
UK	5											
USA	36											
	+	+										
?7 rows in set (	(0.048 sec)											

# 15) SELECT AVG(NombreClients) AS NombreMoyenClients FROM (

SELECT COUNT(customerName) AS NombreClients FROM customers GROUP BY country

) AS ClientsParPays;

16) SELECT e.jobTitle AS JobTitle, COUNT(e2.employeeNumber) AS

**EmployeesFollowed** 

FROM employees e

JOIN employees e2 ON e.employeeNumber = e2.reportsTo

**GROUP BY e.jobTitle** 

ORDER BY e.jobTitle;

17) SELECT customers.country AS Pays,

 ${\bf SUM} (order details. quantity Ordered * order details. price {\bf Each}) \ {\bf AS} \ {\bf Montant Total}$ 

**FROM orders** 

**JOIN customers** 

ON orders.customerNumber = customers.customerNumber

JOIN orderdetails

ON orders.orderNumber = orderdetails.orderNumber

**GROUP BY customers.country;** 

```
ariaDB [classicmodels]> SELECT customers.country AS Pays
FROM orders JOIN customers ON orders.customerNumber = cu
.orderNumber GROUP BY customers.country;
                                                                                                      Pays, SUM(orderdetails.quantityOrdered * orderdetails.priceEach) AS MontantTotal = customers.customerNumber JOIN orderdetails ON orders.orderNumber = orderdetail
Australia
Austria
Belgium
Canada
Denmark
                                   562582.59
                                  562582.59
188540.06
100068.76
205911.86
218994.92
295149.35
 Finland
                                   196470.99
 Germany
 Hong Kong
Ireland
                                   45480.79
49898.27
360616.81
 Italy
 Japan
New Zealand
 Norway
Philippines
                                   270846.30
87468.30
 Singapore
Spain
                                   263997.78
                                   187638.35
                                  108777.92
436947.44
 Switzerland
UK
USA
                                 3273280.05
  rows in set (0.005 sec)
```

18) SELECT CONCAT(employees.firstName, '', employees.lastName) AS Employe, SUM(orderdetails.quantityOrdered \* orderdetails.priceEach) AS MontantTotal FROM employees

**JOIN customers** 

ON employees.employeeNumber = customers.salesRepEmployeeNumber JOIN orders

ON customers.customerNumber = orders.customerNumber JOIN orderdetails ON orders.orderNumber = orderdetails.orderNumber GROUP BY employees.employeeNumber;

