

3강

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Select 맛보기





➤ W3schools 에서 SQL 맛보기

<https://www.w3schools.com/mysql/>

The screenshot shows the W3schools MySQL tutorial page. The top navigation bar includes links for Tutorials, Exercises, Certificates, Services, a search bar, and user account options like Plus, For Teachers, and Spaces. The main menu below the bar lists various technologies: HTML, CSS, JAVASCRIPT, SQL, PYTHON, JAVA, PHP, HOW TO, W3.CSS, C, C++, C#, BOOTSTRAP, REACT, MySQL (which is highlighted in green), JQUERY, EXCEL, XML, and DJANGO. On the left, a sidebar for the MySQL tutorial is visible, showing sections for MySQL HOME (selected) and MySQL SQL, with sub-links for SELECT, WHERE, AND, OR, NOT, ORDER BY, INSERT INTO, NULL Values, UPDATE, DELETE, LIMIT, MIN and MAX, COUNT, AVG, SUM, and LIKE. The main content area features a green header stating "MySQL is ideal for both small and large applications." It includes a prominent green button labeled "Start learning MySQL now »". Below this, a section titled "Examples in Each Chapter" describes how users can edit SQL statements and view results using the online editor. A code example is shown in a text box:

```
SELECT * FROM Customers;
```

Below the code, there are two buttons: a red-bordered "Try it Yourself »" button and a green "Click" button.



➤ W3schools 에서 SQL 맛보기

https://www.w3schools.com/mysql/trysql.asp?filename=trysql_select_all

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SQL Statement:

```
select * from Employees
-- 주석 처리
```

SQL 명령문 작성

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL ×

Click

테이블명

Tablename	Records
Customers	91
Categories	8
Employees	10
OrderDetails	518
Orders	196
Products	77
Shippers	3
Suppliers	29

Restore Database

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필드명(Attribute)

레코드 개수

Number of Records: 10

EmployeeID	LastName	FirstName	BirthDate	Photo	Notes
1	Davolio	Nancy	1968-12-08	EmpID1.pic	Education includes a BA in psychology from Colorado State University. She also completed (The Art of the Cold Call). Nancy is a member of 'Toastmasters International'.
2	Fuller	Andrew	1952-02-19	EmpID2.pic	Andrew received his BTS commercial and a Ph.D. in international marketing from the University of Dallas. He is fluent in French and Italian and reads German. He joined the



➤ select 구문 : 원하는 자료를 조회

SELECT 필드명

[FROM 테이블명]

[WHERE 조건식]

[GROUP BY 그룹으로 묶을 필드명]

[HAVING 조건식]

[ORDER BY 정렬할 필드명]

1. 테이블의 모든 내용 보기

*(asterisk)는 테이블의 모든 컬럼을 뜻 한다.

`SELECT * FROM Customers;`

-- 이와 같이 주석을 달 수 있습니다.



Number of Records: 91						
CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden



2. 원하는 column(열)만 골라서 보기

```
SELECT CustomerName FROM Customers;
```

```
SELECT CustomerName, ContactName, Country  
FROM Customers;
```



Number of Records: 91

CustomerName	ContactName	Country
Alfreds Futterkiste	Maria Anders	Germany
Ana Trujillo Emparedados y helados	Ana Trujillo	Mexico
Antonio Moreno Taquería	Antonio Moreno	Mexico
Around the Horn	Thomas Hardy	UK
Berglunds snabbköp	Christina Berglund	Sweden



2. 원하는 column(열)만 골라서 보기

※테이블의 컬럼이 아닌 값도 선택할 수 있습니다.

아래 구문의 1과 *Hello*, NULL을 확인하세요.

SELECT

```
CustomerName, 1, 'Hello', NULL  
FROM Customers;
```



Number of Records: 91

CustomerName	1	Hello	NULL
Alfreds Futterkiste	1	Hello	
Ana Trujillo Emparedados y helados	1	Hello	
Antonio Moreno Taquería	1	Hello	
Around the Horn	1	Hello	
Berglunds snabbköp	1	Hello	



3. 원하는 조건의 row(행)만 걸러서 보기

WHERE 구문 뒤에 조건을 붙여 원하는 데이터만 가져올 수 있습니다.

```
SELECT * FROM Orders
```

```
WHERE EmployeeID = 3;
```



Number of Records: 127

OrderID	CustomerID	EmployeeID	OrderDate	ShipperID
10251	84	3	1996-07-08	1
10253	34	3	1996-07-10	2
10256	88	3	1996-07-15	2
10266	87	3	1996-07-26	3
10273	63	3	1996-08-05	3

```
SELECT * FROM OrderDetails
```

```
WHERE Quantity < 5;
```

```
SELECT * FROM Orders
```

```
where OrderDate>='1996-07-01' and OrderDate<='1996-07-31';
```



4. 원하는 순서로 데이터 가져오기

ORDER BY 구문을 사용해서 특정 컬럼을 기준으로 데이터를 정렬할 수 있습니다.

구분	기준	기본
ASC	오름차순	✓
DESC	내림차순	

```
SELECT * FROM Customers  
ORDER BY ContactName;
```

```
SELECT * FROM OrderDetails  
ORDER BY ProductID ASC, Quantity DESC;
```



Number of Records: 2155

OrderDetailID	OrderID	ProductID	Quantity
1570	10847	1	80
1741	10918	1	60
1271	10729	1	50
100	10285	1	45
2022	11031	1	45



5. 원하는 만큼만 데이터 가져오기

LIMIT {가져올 갯수} 또는 **LIMIT {건너뛸 갯수}, {가져올 갯수}**를 사용하여, 원하는 위치에서 원하는 만큼만 데이터를 가져올 수 있습니다.

```
SELECT * FROM Customers  
LIMIT 10;
```

```
SELECT * FROM Customers  
LIMIT 0, 10;
```

```
SELECT * FROM Customers  
LIMIT 30, 10;
```

6. 원하는 별명(alias)으로 데이터 가져오기

AS를 사용해서 컬럼명을 변경할 수 있습니다.

```
SELECT  
CustomerId AS ID,  
CustomerName AS NAME,  
Address AS ADDR  
FROM Customers;
```



6. 원하는 별명(alias)으로 데이터 가져오기

AS를 사용해서 컬럼명을 변경할 수 있습니다.

SELECT

```
CustomerId AS '아이디',
CustomerName AS '고객명',
Address AS '주소'
FROM Customers;
```



7. 원하는 필드명을 기준으로 그룹으로 묶어 통계자료 데이터 가져오기
단, Having을 사용해서 조건을 입력한다.

```
SELECT * FROM Customers Group by Country;
```

```
SELECT * FROM Customers Group by Country  
Having City ='London';
```

```
SELECT count(*) as '배송업체별 수' FROM Orders  
Group by ShipperID;
```

```
SELECT count(*) as '월별고객 주문수량', OrderDate  
FROM Orders Group by month(OrderDate);
```

단, HAVING 절에서 통계함수 사용시 (count,sum,avg.....) group by 절에서 검색된 데이터에 한에 조건을 입력해야 함을 주의 하자!!

조건이 존재하고 통계함수를 사용해야 할 경우

Select sum(price) from product where city='Londun' group by ~~~~



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< Orders > 테이블의 EmployeeID가 9이상인 모든 데이터가 출력되도록 SQL문을 작성하여 아래 화면과 같은 결과를 도출하세요
(단, where절 이용)

출력 결과

Number of Records: 43

OrderID	CustomerID	EmployeeID	OrderDate	ShipperID
10255	68	9	1996-07-12	3
10263	20	9	1996-07-23	3
10324	71	9	1996-10-08	1
10331	9	9	1996-10-16	1
10386	21	9	1996-12-18	3
10411	10	9	1997-01-10	3
10475	76	9	1997-03-14	1
10501	6	9	1997-04-09	3



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< Employees > 테이블의 FirstName을 기준으로 내림차순 정렬되어 출력되도록 SQL문을 작성하여 아래 화면과 같은 결과를 도출하세요
(단, Order by절 이용)

출력 결과

Number of Records: 9					
EmployeeID	LastName	FirstName	BirthDate	Photo	Notes
5	Buchanan	Steven	1955-03-04	EmpID5.pic	Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree. Upon joining the company as a sales representative, he spent 6 months in an orientation program at the Seattle office and then returned to his permanent post in London, where he was promoted to sales manager. Mr. Buchanan has completed the courses 'Successful Telemarketing' and 'International Sales Management'. He is fluent in French.
7	King	Robert	1960-05-29	EmpID7.pic	Robert King served in the Peace Corps and traveled extensively before completing his degree in English at the University of Michigan and then joining the company. After completing a course entitled 'Selling in Europe', he was transferred to the London office.
1	Davolio	Nancy	1968-12-08	EmpID1.pic	Education includes a BA in psychology from Colorado State University. She also completed (The Art of the Cold Call). Nancy is a member of 'Toastmasters International'.
6	Suyama	Michael	1963-07-02	EmpID6.pic	Michael is a graduate of Sussex University (MA, economics) and the University of California at Los Angeles (MBA, marketing). He has also taken the courses 'Multi-Cultural Selling' and 'Time Management for the Sales Professional'. He is fluent in



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< **Customers** > 테이블의 CustomerID, CustomerName , City , Country 필드를 각각 '아이디', '고객명', '도시', '국가'로 as를 이용하여 컬럼명을 변경하고, City = 'London' OR Country = 'Mexico' 인 조건에 만족하는 레코드 5개만 출력되도록 SQL 문을 작성하여 아래 화면과 같은 결과를 도출하세요
(단, Limit 이용)

출력 결과

Number of Records: 5				
아이디	고객명	도시	국가	
2	Ana Trujillo Emparedados y helados	México D.F.	Mexico	
3	Antonio Moreno Taquería	México D.F.	Mexico	
4	Around the Horn	London	UK	
11	B's Beverages	London	UK	
13	Centro comercial Moctezuma	México D.F.	Mexico	



☞ 여기서 잠깐 !!

< Products > 테이블의 CategoryID 별로 Price 필드의 값이 21.00 이상인 모든 데일터가 출력되도록 SQL문을 작성하여 아래 화면과 같은 결과를 도출하세요
(단, group by, having 이용)

출력 결과

Number of Records: 5					
ProductID	ProductName	SupplierID	CategoryID	Unit	Price
11	Queso Cabrales	5	4	1 kg pkg.	21.00
22	Gustaf's Knäckebröd	9	5	24 - 500 g pkgs.	21.00
9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97.00
7	Uncle Bob's Organic Dried Pears	3	7	12 - 1 lb pkgs.	30.00
10	Ikura	4	8	12 - 200 ml jars	31.00

3강

SELECT 연습문제





1. <EMP>(사원) 테이블의 모든 레코드를 조회하는 SQL문을 작성하시오.

<EMP>

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	80/12/17	800		20
7499	ALLEN	SALESMAN	7698	81/02/20	1600	300	30
7521	WARD	SALESMAN	7698	81/02/22	1250	500	30
7566	JONES	MANAGER	7839	81/04/02	2975		20
7654	MARTIN	SALESMAN	7698	81/09/28	1250	1400	30
7698	BLAKE	MANAGER	7839	81/05/01	2850		30
7782	CLARK	MANAGER	7839	81/06/09	2450		10
7788	SCOTT	ANALYST	7566	87/07/13	3000		20
7839	KING	PRESIDENT		81/11/17	5000		10
7844	TURNER	SALESMAN	7698	81/09/08	1500	0	30
7876	ADAMS	CLERK	7788	87/07/13	1100		20
7900	JAMES	CLERK	7698	81/12/03	950		30
7902	FORD	ANALYST	7566	81/12/03	3000		20
7934	MILLER	CLERK	7782	82/01/23	1300		10



2. <EMP>(사원) 테이블의 사원번호(EMPNO)와 이름(ENAME)을 조회하는 SQL문을 작성하시오.

<EMP>

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	80/12/17	800		20
7499	ALLEN	SALESMAN	7698	81/02/20	1600	300	30
7521	WARD	SALESMAN	7698	81/02/22	1250	500	30
7566	JONES	MANAGER	7839	81/04/02	2975		20
7654	MARTIN	SALESMAN	7698	81/09/28	1250	1400	30
7698	BLAKE	MANAGER	7839	81/05/01	2850		30
7782	CLARK	MANAGER	7839	81/06/09	2450		10
7788	SCOTT	ANALYST	7566	87/07/13	3000		20
7839	KING	PRESIDENT		81/11/17	5000		10
7844	TURNER	SALESMAN	7698	81/09/08	1500	0	30
7876	ADAMS	CLERK	7788	87/07/13	1100		20
7900	JAMES	CLERK	7698	81/12/03	950		30
7902	FORD	ANALYST	7566	81/12/03	3000		20
7934	MILLER	CLERK	7782	82/01/23	1300		10



3. <EMP>(사원) 테이블의 월급여(SAL)가 2500이상 되는 사원을 조회하는 SQL문을 작성하시오.

<EMP>

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	80/12/17	800		20
7499	ALLEN	SALESMAN	7698	81/02/20	1600	300	30
7521	WARD	SALESMAN	7698	81/02/22	1250	500	30
7566	JONES	MANAGER	7839	81/04/02	2975		20
7654	MARTIN	SALESMAN	7698	81/09/28	1250	1400	30
7698	BLAKE	MANAGER	7839	81/05/01	2850		30
7782	CLARK	MANAGER	7839	81/06/09	2450		10
7788	SCOTT	ANALYST	7566	87/07/13	3000		20
7839	KING	PRESIDENT		81/11/17	5000		10
7844	TURNER	SALESMAN	7698	81/09/08	1500	0	30
7876	ADAMS	CLERK	7788	87/07/13	1100		20
7900	JAMES	CLERK	7698	81/12/03	950		30
7902	FORD	ANALYST	7566	81/12/03	3000		20
7934	MILLER	CLERK	7782	82/01/23	1300		10



4. <EMP>(사원) 테이블의 커미션(COMM)이 300, 500, 1400 인 사원의 사번(EMPNO), 이름(ENAME), 커미션(COMM)을 조회하는 SQL문을 작성하시오.

<EMP>

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	80/12/17	800		20
7499	ALLEN	SALESMAN	7698	81/02/20	1600	300	30
7521	WARD	SALESMAN	7698	81/02/22	1250	500	30
7566	JONES	MANAGER	7839	81/04/02	2975		20
7654	MARTIN	SALESMAN	7698	81/09/28	1250	1400	30
7698	BLAKE	MANAGER	7839	81/05/01	2850		30
7782	CLARK	MANAGER	7839	81/06/09	2450		10
7788	SCOTT	ANALYST	7566	87/07/13	3000		20
7839	KING	PRESIDENT		81/11/17	5000		10
7844	TURNER	SALESMAN	7698	81/09/08	1500	0	30
7876	ADAMS	CLERK	7788	87/07/13	1100		20
7900	JAMES	CLERK	7698	81/12/03	950		30
7902	FORD	ANALYST	7566	81/12/03	3000		20
7934	MILLER	CLERK	7782	82/01/23	1300		10



5. 아래의 <결과물>처럼 출력되도록 Customers테이블을 이용하여 조회하는 SQL문 작성

Number of Records: 5

아이디	고객명	도시	국가
2	Ana Trujillo Emparedados y helados	México D.F.	Mexico
3	Antonio Moreno Taquería	México D.F.	Mexico
4	Around the Horn	London	UK
11	B's Beverages	London	UK
13	Centro comercial Moctezuma	México D.F.	Mexico

정답



6. 아래의 <결과물>처럼 출력되도록 Products테이블을 이용하여 조회하는 SQL문 작성 (group by, having 이용)

Number of Records: 5

ProductID	ProductName	SupplierID	CategoryID	Unit	Price
11	Queso Cabrales	5	4	1 kg pkg.	21.00
22	Gustaf's Knäckebröd	9	5	24 - 500 g pkgs.	21.00
9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97.00
7	Uncle Bob's Organic Dried Pears	3	7	12 - 1 lb pkgs.	30.00
10	Ikura	4	8	12 - 200 ml jars	31.00

정답