

## What is a Database?

A database is a container where data can be collected systematically. Managing, manipulation of those data are easy



## Example of Databases

Suppose an online telephone directory uses a database to store their data, Like: Name, address, phone numbers, other contact details.



## Example of Databases

Or an online library who has millions of books. In order to maintain their data they use a database.



## What is a Database management System?

A Database Management System (DBMS) is basically a software where you can store, retrieve, define, and manage your data in a database.



- 1960 - Charles Bachman designed first DBMS system
- 1970 - Codd introduced IBM'S Information Management System (IMS)
- 1976- Peter Chen coined and defined the Entity-relationship model also know as the ER model
- 1980 - Relational Model becomes a widely accepted database component
- 1985- Object-oriented DBMS develops.
- 1990s- Incorporation of object-orientation in relational DBMS.
- 1991- Microsoft ships MS access, a personal DBMS and that displaces all other personal DBMS products.
- 1995: First Internet database applications
- 1997: XML applied to database processing. Many vendors begin to integrate XML into DBMS products



## Most used Databases Management systems Software

- MySQL
- Oracle
- PostgreSQL
- SQLite
- Maria DB
- PostgreSQL



## Types of Databases Management systems

- Hierarchical database
- Network database
- Relational database
- Object-Oriented database

NoSQL



## Hierarchical Databases Management systems

- In a Hierarchical database data is structured in a tree-like manner. Those data are Stored in Hierarchically (top down or bottom up) order and also they are represented by parent-child relationship.
- In Hierarchical DBMS → parent can have many children, but in the case of children have only one parent.



## Network model

- The concept of network database model allows all the child to have multiple parents and also it helps to solve the more complex models like as the orders/parts many-to-many relationship. Entities are organized in a graph manner which have an option to be accessed through several paths.



## Relational model

- Relational DBMS are mostly used DBMS model because of its flexibility and easy to implement nature. This model is worked on normalizing data in the database. Relational model store the data in fixed structures and manipulated them using SQL.



- In Object-oriented Model concept data are stored in the form of objects. It maintains a structure which is known as classes and display the data within that. It describes the database as a collection of objects. It also stores data members values and operations both.



## Advantages of Database management System

- DBMS has lots of techniques to store, manipulate, and retrieve data
- DBMS considered as an most efficient handler to balance the data
- A DBMS uses lots of powerful functions to store, manipulate and retrieve data efficiently.
- Data Integrity and Security is one of the most strong part of DBMS
- The DBMS use data integrity to protect data and maintains the privacy
- Helps to reduced Application Development Time



## What is Relational Database management System?

A Relational database management system (RDBMS) is used for the database management system (DBMS). The concept is based on the relational model as introduced by E. F. Codd.



## What is Relational Database management System?

The relationship between data files is relational in RDMS. They connect the data and the different files by using common data numbers or may be using key concepts.

### Properties of RDMS

Values are Atomic in RDBMS

Each row is different

Columns are different

Each column can have a common name

Integrity constraints help to maintain the data consistency for multiple tables



## DBMS VS File system

### DBMS

DBMS is a collection of data but user is not required to write the procedures to manage the database.

### File System

File system is basically a collection of data and any management with the file system has to write the procedures.

DBMS	File System
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File systems are not efficient for storing and retrieving of data	DBMS is efficient to use as there are large varieties of techniques to store and retrieve the data.
File system doesn't have crash recovery mechanism. Example: While we are entering some data into the file if System crashes then content of the file is lost	DBMS has a crash recovery option, it protects user from the effects of system failures.
Protecting a file using file system is very difficult.	DBMS has its own security process to save the data



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DBMS	RDBMS
DBMS stores <b>data as file</b> .	RDBMS stores <b>data in a tabular form</b> .
In DBMS, data is stored in two way: <ul style="list-style-type: none"><li>• hierarchical form</li><li>• or a navigational form.</li></ul>	In RDBMS: the tables have a classifier known as primary key and the data values are stored in the tabular format.
<b>Normalization is needed</b> in DBMS.	<b>Normalization is</b> needed in RDBMS.
DBMS does <b>not have any security</b> for data manipulation.	RDBMS <b>has the integrity constraint</b> for the purpose of ACID (Atomocity, Consistency, Isolation and Durability) property.
In DBMS there are <b>no relation between the tables</b> .	in RDBMS there should be a <b>relationship</b> between the data values.
DBMS is used for small organization and always <b>deals with small data</b> . it also supports <b>single user</b> .	RDBMS is used for large data and also supports <b>multiple users</b> .
Examples: file systems, <b>xml</b> etc.	Example: <b>mysql, postgre, sql server, oracle</b> etc.





## Key Concept In DBMS



## What is Key in RDBMS?

**Key concept has an important role in relational database management system. This technique is used for identifying the unique rows from table and also help to establish relationship among the tables**



## Types of Key in RDBMS



Primary key

1

A primary key concept is basically a technique to classify unique tuples (rows) in a table

Student_id	Name	Age
C001	Ram	15
C002	Shyam	16

- Primary key does not contain null value
- Value should be unique
- Primary keys are not always to be a single attribute /column and It can also be a set of more than one attributes/columns



Super Key

2

A super key is a set of one or more columns or attributes to uniquely classify rows in a table

Student_id	Name	Age
C001	Ram	15
C002	Shyam	16

- Super key is a superset of a candidate key
- Example: In the student table:
  1. Student\_id
  2. Student\_id,Name

Are the super key

In the student table(**Student\_id,Name**) the name of two students can be the same, but their Student\_ID can't be the same. So, this combination can also be a key



Candidate key

3

A candidate key is a set of one or more columns or attributes to uniquely classify rows in a table

Student_id	Name	Passport number	License number
C001	Ram	CDF56432	87
C002	Shyam	DFC4321	98

- The all remaining attributes or columns except for the primary key are considered as a candidate key.
- The candidate keys are also as strong as the primary key



## Super key Vs Candidate key

Super key	Candidate key
All the candidate keys are super keys	Candidate keys are taken from super keys
All super keys can not be candidate key	But all candidate keys should be super key
Combination of various super keys make the criteria to choose the candidate keys.	Combination of various candidate keys make the criteria to choose the primary keys.
In a table, number of super keys are always greater than number of candidate keys.	In a table, number of super keys are always less than number of super keys.
Super key's attributes can contain NULL values.	Candidate key's attributes can also contain NULL values.



## Types of Key in RDBMS

4

**Alternate key**

Out of all candidate keys, only one gets selected for primary key and rest keys are known as alternate or secondary keys.

Student_id	Name	Passport number	License number
C001	Ram	CDF56432	87
C002	Shyam	DFC4321	98

- Candidate key:
- Student\_id → Primary key
- Passport number
- License number



Alternate key

## Types of Key in RDBMS

5

Composite key

Composite key consists of greater than one attribute to uniquely classify rows or records & tuples in a table

product_id	Customer_id	Order_id	Product_total
C001	O001	P008	33
C002	O0019	P0065	109

- **None of the column can perform as a primary key**
- **So the combinations of key can be considered as composite key**



## Types of Key in RDBMS

6

### Foreign key

Foreign keys are the columns of a table which refers to the primary key of another table and basically they act as a cross-reference between tables

Student_id	Name	Passport number	License number
C001	Ram	CDF56432	87
C002	Shyam	DFC4321	98

Foreign key

Student_id	Course_id
C001	De002



## What is Normalization?

**Normalization is the process of organizing data to avoid duplication and redundancy**

Helps to minimize duplicate data

To minimize or avoid data modification issues

To simplify queries



Normalization rule are divided into few categories

First Normal Form

Second Normal Form

Third Normal Form

Boyce and Codd Normal Form (BCNF)



## Types of Normalization: 1NF

First Normal Form

- **Each set of column should have a unique value**
- **It helps to prevent using the multiple columns to fetch the same row**
- **Each should contain a primary key that identifies all the rows as unique data**
- **The Primary key is usually a single column, but if needed then more than one column can be combined to create a single primary key**

Second Normal Form

Third Normal Form

Boyce and Codd Normal Form (BCNF)



## Types of Normalization: 1NF

Student	Age	Course
Raj	16	CR001, CR005
Shyam	18	CR005
Joy	19	CR005

After using 1 NF

Student	Age	Course
Raj	16	CR001
Shyam	18	CR005
Joy	19	CR005
Raj	16	CR005

After implementing the First Normal Form may be the data redundancy increases but each row as a whole will be unique



## Types of Normalization: 2NF

First Normal Form

- In the 2NF, relational must be in 1NF

Second Normal Form

- First normal form is not able to reduce the data redundancy
- 2NF follows that there will not be any partial dependency of any column on primary key
- It follows the concept of full functional dependency

Third Normal Form

Boyce and Codd Normal Form (BCNF)



## Types of Normalization: 2NF

- For example of First Normal Form there are two rows for Raj,
- He registered for two course
- The candidate key is {Student, Course}
- Age of Student depends upon Student column, which is not correct as per the Second Normal Form

Student Table	
Student	Age
Raj	16
Shyam	18
Joy	19
Raj	16

After using 2NF

Subject Table	
Student	Course
Raj	CR001
Shyam	CR005
Joy	CR005
Raj	CR005

Candidate key for Subject Table: {Student, Course} column. Now, both the tables maintains the rules for Second Normal Form



## Types of Normalization: 3NF

First Normal Form

- A relation of a table will be in 3NF if it is already in 2NF and does not contain any transitive partial dependency

Second Normal Form

- 3NF helps to reduce the data duplication.

Third Normal Form

- It is also support to achieve the data integrity.
- If table has no transitive dependency for non-prime attributes, then the relation should be in third normal form.

Boyce and Codd Normal Form (BCNF)



## Types of Normalization: 3NF

### Examples:

Student_id	Student_name	DOB	Street	city	State	Zip
------------	--------------	-----	--------	------	-------	-----

- Student\_id → Primary key,
- But street, city and state depends upon Zip.
- The dependency between zip and other fields are known as transitive dependency.
- To maintain 3NF, we need to make a table where the street, city and state, and Zip column will be there. Zip as primary key

Student Table

Student_id	Student_name	DOB	Zip
------------	--------------	-----	-----

Address Table

Zip	Street	city	State
-----	--------	------	-------



## Types of Normalization: 3NF

First Normal Form

- BCNF is basically the advance version of 3NF

Second Normal Form

- It is more strict than 3NF
- To use the law of BCNF we need to make sure that our data is already in 3NF

Third Normal Form

Boyce and Codd Normal Form (BCNF)



## What is ER diagram?

An Entity–relationship model (ER model) helps to describe the structure of a particular database with the help of a diagram, that is known as Entity Relationship Diagram (ER Diagram).



- ER diagrams are a visual tool which is used to represent the ER model.
- It was invented by Peter Chen in 1971 to create a uniform convention which can also be used for relational database and network.
- He aimed to use an ER model as a conceptual modeling approach.



## Facts of ER diagram

- **ER model helps to draw Database Design**
- **It is an easy to display graphical tool for modeling data**
- **Mostly used in Database Design**
- **It is a GUI (graphical user interface) representation of the logical structure of a Database**
- **It assists you to identifies the entities that exist in a system and the relationships between those entities**



## Why ER diagram is used?

- It helps to define terms related to entity relationship modeling
- Helps to describe entities, attributes, relationships
- ER diagrams are convertible into relational tables that allows to build databases easily
- ER diagrams are used as a blueprint for implementing data in specific software applications



## Components of ER diagram

Three basic and most used concepts in ER diagram

- Entities
- Attributes
- Relationships



## What is Entity?

**Entity defines the object or real world objects like: place, person, object, event or a concept that stores data in the database**

### Examples of entities:

- Person: Employee, Student, Patient
- Place: Store, Building
- Object: Machine, product, and Car
- Event: Sale, Registration, Renewal
- Concept: Account, Course



## What is Weak Entity?

Weak entity is an one type of entity that will not have its key attribute and also can be identified uniquely by considering the primary key of another entity



## Strong entity set vs Weak entity

Strong Entity	Weak Entity
Always has a primary key.	It does not have enough attributes to have a primary key.
Represented by a rectangle symbol.	Represented by a double rectangle symbol.
It has a Primary key represented by the underline symbol.	It has a Partial Key which is represented by a dashed underline symbol.
The member of a strong entity set is known as dominant entity set.	The member of a weak entity set is known as a subordinate entity set.
Primary Key is one of its attributes which helps to identify its member.	In a weak entity set, it is a combination of primary key and partial key of the strong entity set.



## What is Attributes?

Attributes stands for single valued field or property of either an entity-type or a relationship-type

Example of attributes:

A student table might have different attributes like:

- Student\_name
- Student\_id
- Student\_phone\_number



## Types of attributes

Four types of attributes are there

- Simple attribute
- Composite attribute
- Derived attribute
- Multivalued attribute



## What is Simple Attributes?

Simple attributes do not divided further

Example of simple attributes:

A student table might have different attributes like:

- Student\_name
- Student\_id
- Student\_phone\_number

In these attributes student\_phone\_number will be

the simple attribute



## What is Composite Attributes?

**Composite attributes can be divided further**

Example of simple attributes:

A student table might have different attributes like:

- Student\_name
- Student\_id
- Student\_phone\_number

In these attributes student\_name can be divided

further like: First name, middle name, Last name



## What is Derived Attributes?

Derived attribute does not include in the physical database directly their values are derived from other attributes present in the database

Example of simple attributes:

A student table might have different attributes like:

- Student\_name
- Student\_id
- Student\_phone\_number
- Student\_dob

Student age can be derived from date of birth



## What is Multivalued Attributes?

From the name itself we can understand these attributes can have multiple values

Example of simple attributes:

A student table might have different attributes like:

- Student\_name
- Student\_id
- Student\_phone\_number
- Student\_dob

A student can have multiple contact numbers



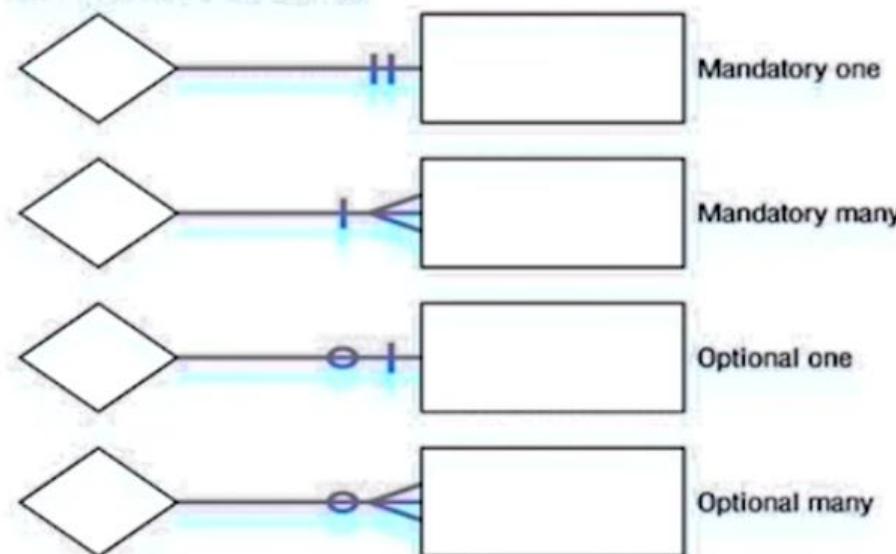
## What is cardinality?

It helps to define the relationship between the entities

Types of cardinality:

- One to one relationships
- One to many relationships
- Many to one relationships
- Many to many relationships

Relationship cardinality

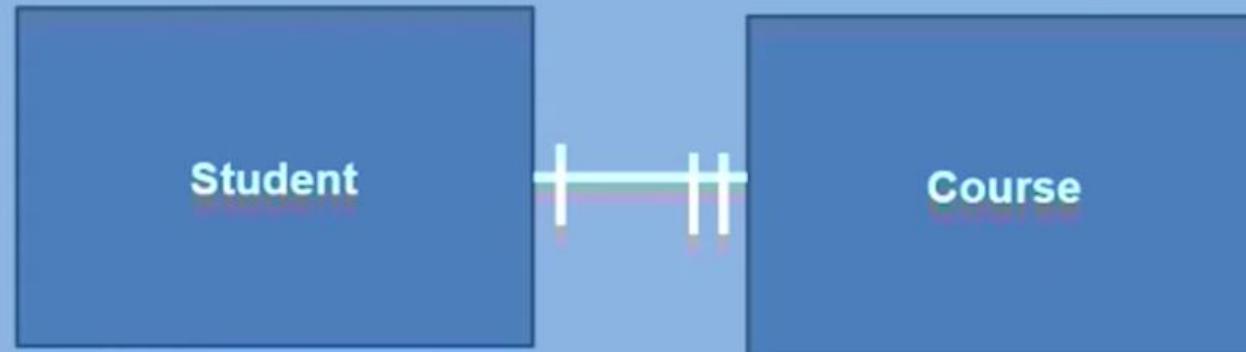


## What is One to one relationship?

One entity from entity set A can be only associated with one entity of entity set B and vice versa

Example:

One student can go and register for different courses but all those courses have a single line back to that one student.



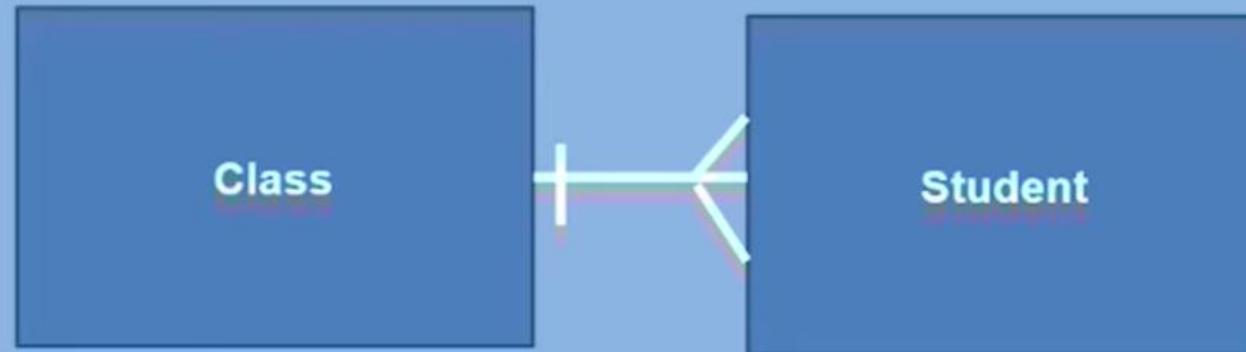
## What is One to many relationship?

**One entity from entity set A can be only associated with multiple entities of entity set**

**B but an entity from entity set B can be associated with only one entity**

Example

one class is consisting of multiple students.

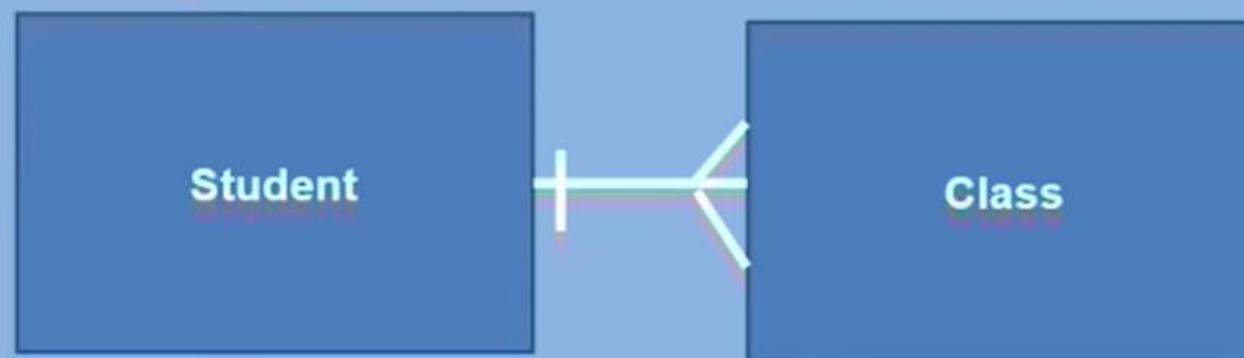


## What is Many to one relationship?

Many to one relation is basically the reverse of one to many, More than one entity from entity set A can be associated with only one entity of entity set B but an entity from entity set B may or may not be associated with more than one entity from entity set A.

Example

many students belong to the same class.

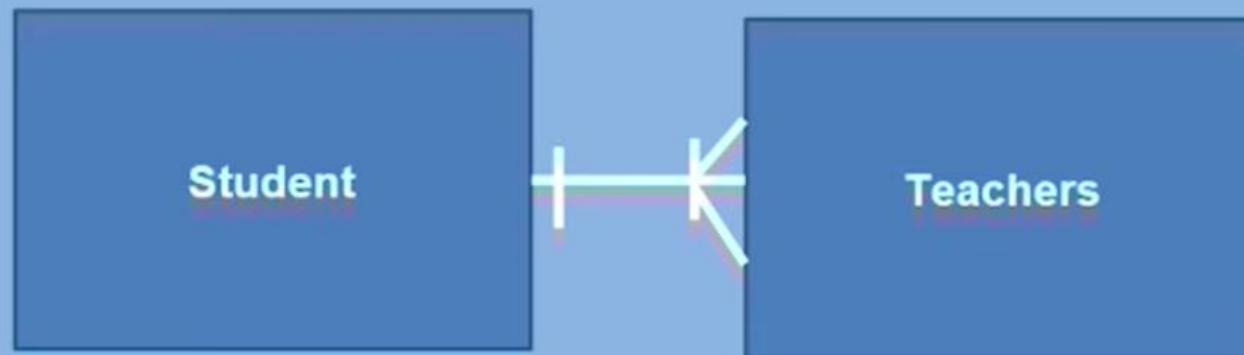


## What is Many to many relationship?

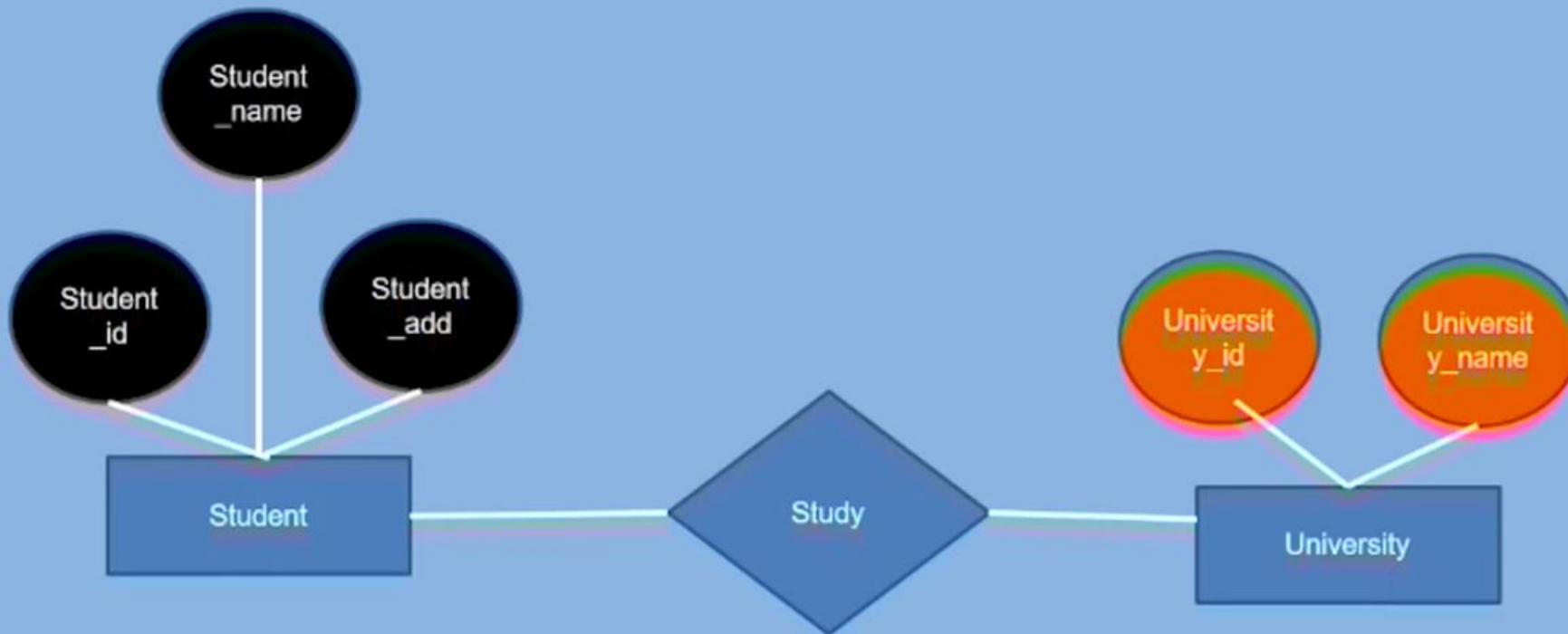
One entity from entity set A can be associated with more than one entity of entity set B  
and vice versa

### Example

Students as a group are associated with multiple teachers, and also teachers can be associated with multiple students.



## Example of ER diagram



## Description of the ER diagram

- Student and University both are entities
- The relationship between student and university is many to one
- As university can have many students but a student can not study in multiple university at the same time
- Attributes for student: student\_id, student\_name, student\_add
- Attributes for university: university\_id, university\_name

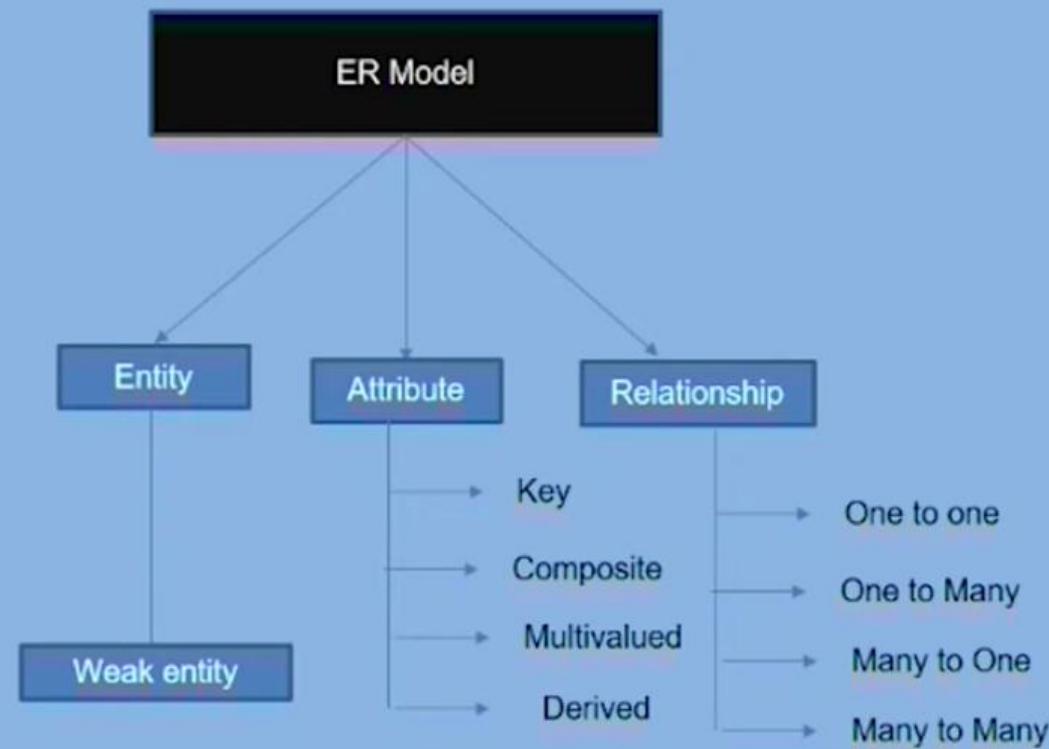


## Components of ER diagram

- Rectangle: Represents Entity sets.
- Ellipses: Attributes
- Diamonds: Relationship Set
- Lines: They link attributes to Entity Sets and Entity sets to Relationship Set
- Double Ellipses: Multivalued Attributes
- Dashed Ellipses: Derived Attributes
- Double Rectangles: Weak Entity Sets
- Double Lines: Total participation of an entity in a relationship set



## Components of ER diagram



## What is SQL?

- SQL stands for Structured Query Language
- SQL helps to access and manipulate your databases
- SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987



A data type is an attribute that specifies the type of data that the object can hold: integer data, character data, monetary data, date and time data, binary strings, and so on



## String Data types in MySQL

Data Type	Description	Length
char(n)	Stores n characters	n bytes (where n is in the range of 1–8,000)
nchar(n)	Stores n Unicode characters	2n bytes (where n is in the range of 1–4,000)
varchar(n)	Stores approximately ncharacters	Actual string length +2 bytes (where n is in the range of 1–8,000)
varchar(max)	Stores up to 2 <sup>31</sup> –1 characters	Actual string length +2 bytes
nvarchar(n)	Stores approximately ncharacters	2n(actual string length) +2 bytes (where n is in the range of 1–4,000)
nvarchar(max)	Stores up to ((2 <sup>31</sup> –1)/2)–2 characters	2n(actual string length) +2 bytes

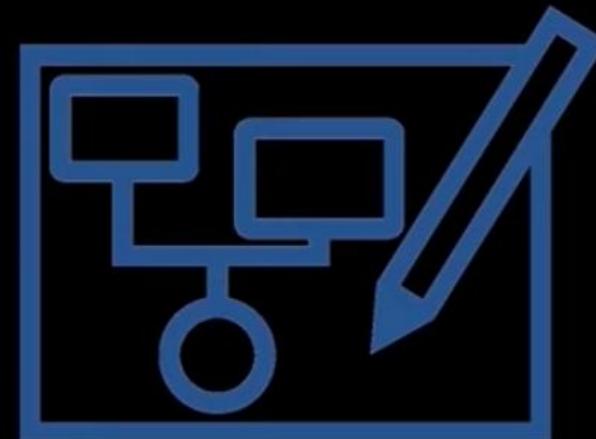


## Types of command in MySQL: DDL

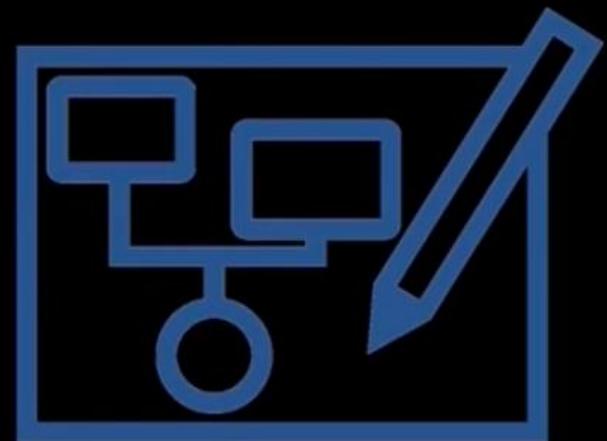


## Types of command in MySQL: DDL

- DDL→ Data definition language
- Helps to define the database schema
- Deals with description of the database
- Also have power to deal with creating and modifying the structure of database object



- CREATE – This command is used to create the database. It also have some objects like table, index, function, views, store procedure and triggers
- DROP – DROP is mainly used to delete objects from the database
- ALTER –ALTER is used to alter the structure of the database
- TRUNCATE – TRUNCATE command is used to remove all records from a table which includes all memory allocated for the records are removed.
- COMMENT – It is used to add comments to the data dictionary
- RENAME– This is used to rename an object existing in the database.



Local instance MySQL80 ×

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MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information Output

No object selected

#	Time	Action	Message	Duration / Fetch
11	22:53:39	TRUNCATE TABLE student_table	0 row(s) affected	0.594 sec
12	23:16:12	create database mysqldemo	1 row(s) affected	0.172 sec
13	23:16:38	create database mysqldemo	Error Code: 1007. Can't create database 'mysqldemo'; database exists	0.000 sec
14	23:17:50	use mysqldemo	0 row(s) affected	0.000 sec
15	23:19:14	drop database mysqldemo	0 row(s) affected	0.094 sec
16	23:19:43	show databases;	15 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

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Limit to 1000 rows

```

8
9 • - create table student_table(
10     student_id INT ,
11     student_name VARCHAR(100),
12     course_name VARCHAR(40)
13 );
14
15 • show tables;

```

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

Tables\_in\_myqldemo

student\_table

Result Grid

Administration Schemas Result 3 ×

Information Output

Action Output

#	Time	Action	Message	Duration / Fetch
16	23:19:43	show databases	15 row(s) returned	0.000 sec / 0.000 sec
17	23:20:12	create database myqldemo	1 row(s) affected	0.141 sec
18	23:20:17	use myqldemo	0 row(s) affected	0.000 sec
19	23:20:23	show databases	16 row(s) returned	0.000 sec / 0.000 sec
20	23:24:29	create table student_table( student_id INT , student_name VARCHAR(100), course_na... )	0 row(s) affected	0.531 sec
21	23:24:54	show tables	1 row(s) returned	0.157 sec / 0.000 sec

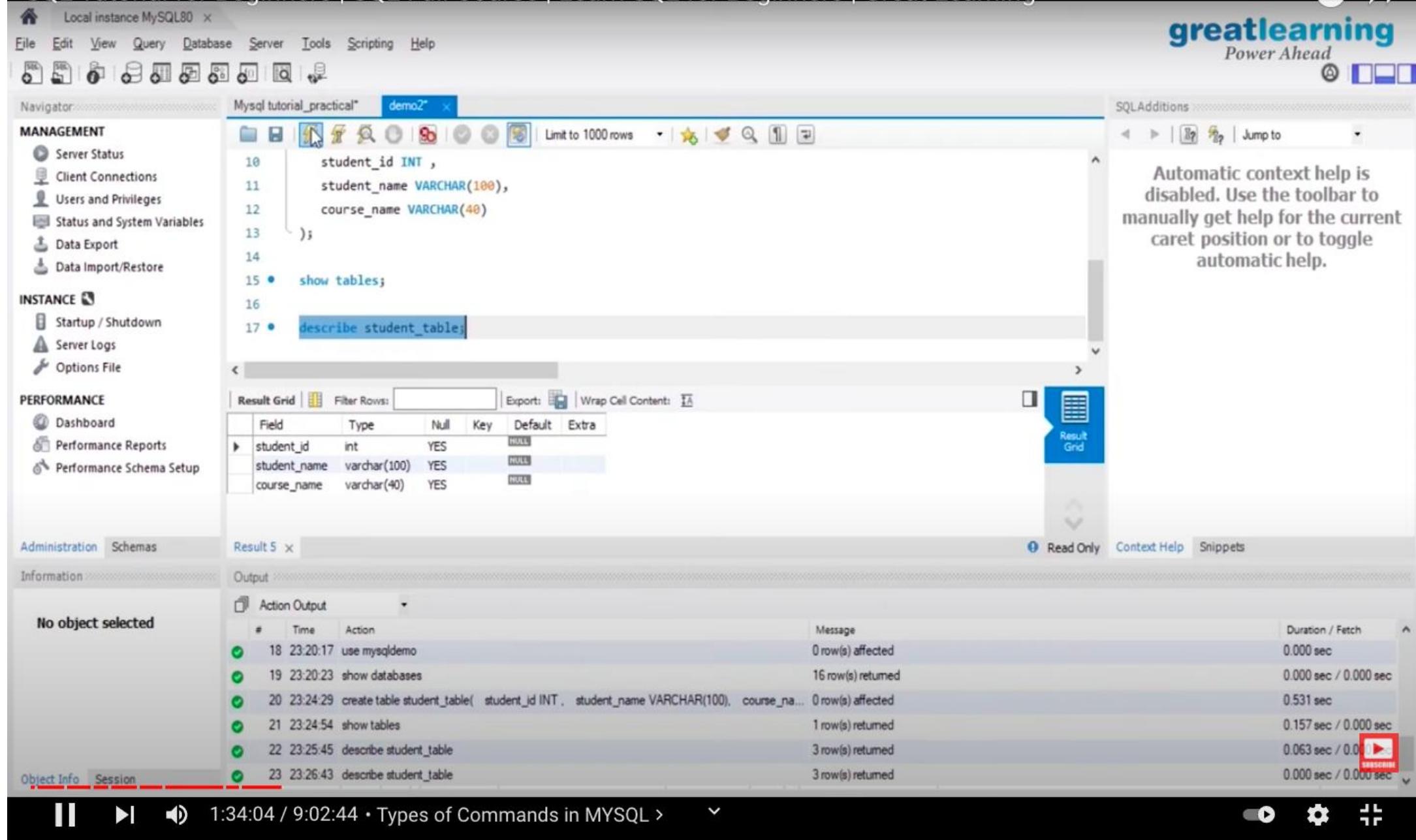
Object Info Session

Read Only Context Help Snippets

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```
4
5 • drop database mysqldemo;
6
7 • show databases;
8
9 • ⏷ create table student_table(
10     student_id INT ,
11     student_name VARCHAR(100),
12     course_name VARCHAR(40)
13 );
14
15 • show tables;
16
17 • describe student_table;
18
19 • alter table student_table add email varchar(100);
```

SQLAdditions

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Administration Schemas

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No object selected

#	Time	Action	Message	Duration / Fetch
19	23:20:23	show databases	16 row(s) returned	0.000 sec / 0.000 sec
20	23:24:29	create table student_table( student_id INT , student_name VARCHAR(100), course_na...)	0 row(s) affected	0.531 sec
21	23:24:54	show tables	1 row(s) returned	0.157 sec / 0.000 sec
22	23:25:45	describe student_table	3 row(s) returned	0.063 sec / 0.000 sec
23	23:26:43	describe student_table	3 row(s) returned	0.000 sec / 0.000 sec
24	23:30:45	alter table student_table add email varchar(100)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.265 sec

Object Info Session

▶ ▶ 🔍 1:36:59 / 9:02:44 • Types of Commands in MYSQL > ⏷

Context Help Snippets

◀ ▶ 🔍 ⏷ Jump to

## Types of command in MySQL: DML

- DML → Data Manipulation Language
- This DML command handles all the data manipulation part
- It includes most important parts of the SQL



- INSERT – INSERT is used to insert the data in the table
- UPDATE - Helps to update existing data within a table
- DELETE - To delete records from a database table



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Action Output

#	Time	Action	Message	Duration / Fetch
52	10:37:40	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (3,"Shyama","c1005","shyama@gmail.com")	1 row(s) affected	0.094 sec
53	10:38:01	select * from student_table LIMIT 0, 1000	2 row(s) returned	0.032 sec / 0.000 sec
54	10:38:09	TRUNCATE TABLE student_table	0 row(s) affected	0.469 sec
55	10:38:14	select * from student_table LIMIT 0, 1000	0 row(s) returned	0.000 sec / 0.000 sec
56	10:38:21	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (2,"Ram","c1003","Ram@gmail.com")	1 row(s) affected	0.078 sec
57	10:38:21	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (3,"Shyama","c1005","shyama@gmail.com")	1 row(s) affected	0.078 sec

Object Info Session

1:41:12 / 9:02:44 · Types of Commands in MYSQL >

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

greatlearning Power Ahead

## Types of command in MySQL: DQL

- DQL→ Data Query Language
- DQL used to make queries on the data within schema objects
- The main focus of DQL Command is to get some schema relation based on the query passed into it
- SELECT→ This command is used to retrieve all the data from the table



# SQL Tutorial for Beginners | SQL Full Course | Learn SQL for Beginners | Great Learning



Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator Mysql tutorial\_practical\* demo2\*

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INSTANCE

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PERFORMANCE

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- Performance Schema Setup

Administration Schemas student\_table 12 x

Information Output

No object selected

Action Output

#	Time	Action	Message	Duration / Fetch
56	10:38:21	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (2,"Ra...", "1 row(s) affected")		0.078 sec
57	10:38:21	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (3,"Sh...", "1 row(s) affected")		0.078 sec
58	10:46:16	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (4,"Sh...", "1 row(s) affected")		0.047 sec
59	10:46:16	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (6,"Ri...", "1 row(s) affected")		0.078 sec
60	10:46:16	INSERT INTO student_table (student_id,student_name,course_name,email) VALUES (7,"De...", "1 row(s) affected")		0.078 sec
61	10:48:23	select student_id from student_table LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session 1:46:20 / 9:02:44 · Types of Commands in MYSQL >

SQLAdditions Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

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Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

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Administration Schemas

Information

No object selected

student\_table 15 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
63	10:49:06	select student_id,email,course_name from student_table LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
64	10:49:46	select * from student_table LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session 1:47:42 / 9:02:44 · Types of Commands in MYSQL > ▶ 🔍 ⏪ ⏩ 🔍

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

The screenshot shows a MySQL Workbench interface. In the top-left, there's a sidebar with sections for MANAGEMENT, INSTANCE, and PERFORMANCE. The main area has tabs for 'Mysql tutorial\_practical\*' and 'demo2\*'. A central pane displays a query editor with the following SQL code:

```
VALUES (6,"Rima",'c1007','Rima@gmail.com');
INSERT INTO student_table (student_id,student_name,course_name,email)
VALUES (7,"Deb",'c1008','Deb@gmail.com');
delete from student_table;
select student_id,email,course_name from student_table;
select * from student_table;
```

Below the code is a results grid showing the following data:

student_name	course_name	student_id	email
Ram	c1003	2	Ram@gmail.com
Shyama	c1005	3	shyama@gmail.com
Shilpi	c1006	4	Rshil123@gmail.com
Rima	c1007	6	Rima@gmail.com
Deb	c1008	7	Deb@gmail.com

The bottom section shows the history of actions with their times, messages, and durations.

## Types of command in MySQL: DCL

- DCL→ Data Control Language
- Deals with the rights and permission of the database
- Works for the controlling part of the data
- GRANT→ provide user's access privileges to database.
- REVOKE→ Helps to withdraw user's access privileges given by using the GRANT command.



```
42     VALUES (7,"Deb",'c1008','Deb@gmail.com');  
43  
44 • delete from student_table;  
45  
46 • SET SQL_SAFE_UPDATES = 0;  
47  
48  
49 • select student_id,email,course_name from student_table;  
50  
51 • select * from student_table;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

	student_id	student_name	course_name	email
▶	1	prakash	c1002	prakash@gmail.com
	2	Ram	c1003	Ram@gmail.com
	3	Shyama	c1005	shyama@gmail.com
	4	Shilpi	c1006	Rshil123@gmail.com
	6	Rima	c1007	Rima@gmail.com
	7	Deb	c1008	Deb@gmail.com



Result Grid

Form Editor

student\_table 16 ×

Read Only

Context Help Snippets

Output

Action Output

File Edit View Query Database Server Tools Scripting Help

Navigator: Mysql tutorial\_practical\* demo2\*

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INSTANCE

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PERFORMANCE

- Dashboard
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- Performance Schema Setup

Administration Schemas Information

No object selected

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

```
33
34 • Execute the selected portion of the script or everything, if there is no selection
35 VALUES (4,"Shilpi",'c1006','Rshil123@gmail.com');
36
37
38 • INSERT INTO student_table (student_id,student_name,course_name,email)
39 VALUES (6,"Rima",'c1007','Rima@gmail.com');
40
41 • INSERT INTO student_table (student_id,student_name,course_name,email)
42 VALUES (7,"Deb",'c1008','Deb@gmail.com');
43
44 • delete from student_table;
45
46 • SET SQL_SAFE_UPDATES = 0;
47
48
49 • select student_id,email,course_name from student_table;
50
51 • select * from student_table;
```

Output

Action Output	#	Time	Action	Message	Duration / Fetch
Action Output	75	11:08:14	select * from student_table LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000
Action Output	76	11:08:14	select * from student_table	6 row(s) returned	0.000 sec / 0.000

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator Mysql tutorial\_practical\* demo2\*

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- Performance Schema Setup

Administration Schemas

Information

No object selected

student\_table 17 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
76	11:08:40	delete from student_table	6 row(s) affected	0.093 sec
77	11:09:21	select * from student_table LIMIT 0..1000	0 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

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

student_id	student_name	course_name	email

Result Grid

Form Editor

Read Only Context Help Snippets

SUBSCRIBE

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator Mysql tutorial\_practical\* demo2\* ×

MANAGEMENT

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Administration Schemas

Information

No object selected

Output

Action Output

#	Time	Action	Message	Duration / Fetch
84	11:10:05	select * from student_table LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
85	11:10:33	TRUNCATE TABLE student_table	0 row(s) affected	0.719 sec

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Object Info Session

SUBSCRIBE

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator Mysql tutorial\_practical\* demo2\*

MANAGEMENT

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PERFORMANCE

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- Performance Schema Setup

Administration Schemas

Information

No object selected

student\_table 19 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
85	11:10:33	TRUNCATE TABLE student_table	0 row(s) affected	0.719 sec
86	11:11:14	select * from student_table LIMIT 0, 1000	0 row(s) returned	0.110 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

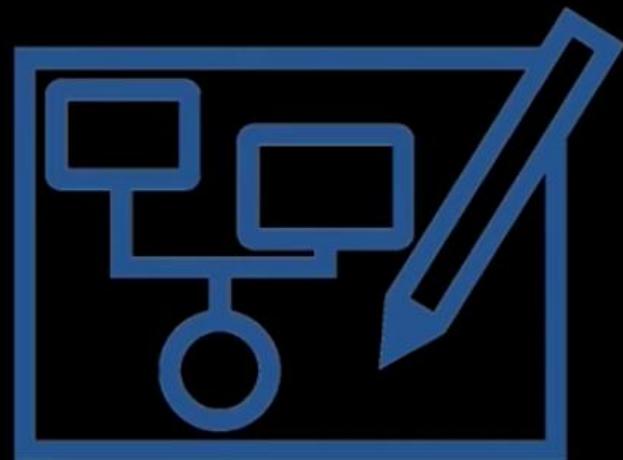
Result Grid Form Editor

Read Only Context Help Snippets

SUBSCRIBE

## Types of command in MySQL: TCL

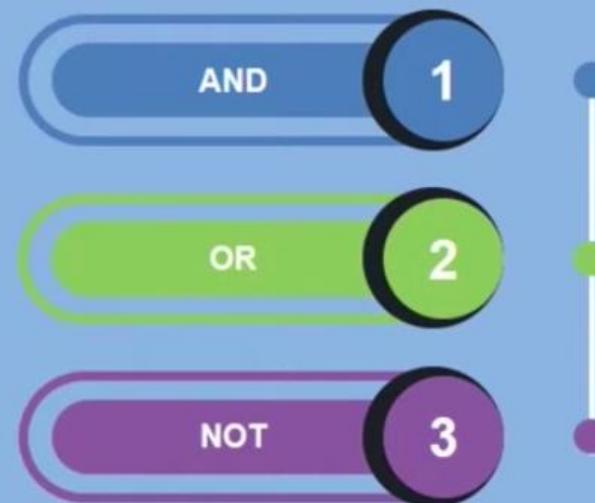
- TCL → Transaction Control Language
- COMMIT – commits a Transaction
- ROLLBACK – rollbacks a transaction for any error occurs
- SAVEPOINT – use a save point within a transaction
- SET TRANSACTION – specify the characteristics for the transaction



**WHERE Clause** is used to filter the record from the data



Operators are also combined with where clause to filter the data



AND

1

**AND operator returns a record if all the conditions are TRUE which  
are separated by AND**



OR

2

**OR operator returns a record if any conditions are TRUE which are separated by OR**



NOT

3

**NOT operator returns a record if the conditions are not TRUE**



Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator

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Administration Schemas

Information

No object selected

student\_table 4 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	13:50:13	select * from student_table LIMIT 0, 1000	3 row(s) returned	0.109 sec / 0.000 sec
6	13:51:42	select * from student_table where course_name = "c1003" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

The screenshot shows the MySQL Workbench interface. In the top-left, there's a navigation bar with tabs like Home, Local instance MySQL80, File, Edit, View, Query, Database, Server, Tools, Scripting, and Help. Below the navigation bar is a toolbar with various icons. The main area has a 'Query 1' tab titled 'Mysql tutorial\_practical'. Inside the query editor, several SQL statements are listed, including an UPDATE, a SET statement, a DELETE, a SHOW TABLES, and two SELECT statements. The second SELECT statement, which retrieves data from the 'student\_table' where 'course\_name' is 'c1003', is highlighted. Below the query editor is a 'Result Grid' pane displaying the retrieved data in a table format. The table has columns: student\_id, student\_name, course\_name, and Email. One row is shown: student\_id 2, student\_name Ram, course\_name c1003, and Email Ram@gmail.com. To the right of the result grid is a vertical toolbar with icons for Result Grid, Form Editor, and other options. At the bottom of the interface, there's a timeline titled 'student\_table 4 ×' showing recent actions with their times, descriptions, messages, and durations. The timeline includes entries for a SELECT statement and another for the same SELECT statement with a WHERE clause. A 'Read Only' button is also present in the timeline header. The bottom right corner features a 'SUBSCRIBE' button with a play icon.

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator

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Administration Schemas

Information

No object selected

student\_table 9 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
10	13:52:47	select * from student_table where course_name = "c1005" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
11	13:53:59	select * from student_table where student_id = 3 and course_name = "c1005" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

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Administration Schemas

Information

No object selected

student\_table 12 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
13	13:54:36	select * from student_table where student_id = 3 and course_name = "c1005" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
14	13:55:09	select * from student_table where student_id = 5 or course_name = "c1005" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

The screenshot shows the MySQL Workbench interface. In the top-left, there's a navigation pane with sections for MANAGEMENT, INSTANCE, and PERFORMANCE. Below that is an 'Information' section. The main area has a 'Query 1' tab open with the following SQL code:

```
39
40 • select * from student_table;
41
42 • select * from student_table where course_name = "c1003";
43
44 • select * from student_table where course_name = "c1005";
45
46 • select * from student_table where student_id = 3 and course_name = "c1005";
47 • select * from student_table where student_id = 5 or course_name = "c1005";
48
```

The fourth query (line 44) is highlighted. Below the code is a 'Result Grid' showing the following data:

student_id	student_name	course_name	Email
3	Shyama	c1005	shyama@gmail.com

To the right of the result grid is a sidebar with icons for 'Result Grid' (which is selected), 'Form Editor', and 'Snippets'. At the bottom of the interface, there's an 'Action Output' log with two entries:

#	Time	Action	Message	Duration / Fetch
13	13:54:36	select * from student_table where student_id = 3 and course_name = "c1005" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
14	13:55:09	select * from student_table where student_id = 5 or course_name = "c1005" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 Mysql tutorial\_practical\* ×

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Administration Schemas

Information

No object selected

student\_table 13 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
14	13:55:09	select * from student_table where student_id = 5 or course_name = "c1005" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
15	13:58:02	select * from student_table where not student_name = "shyama" LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

IN

1

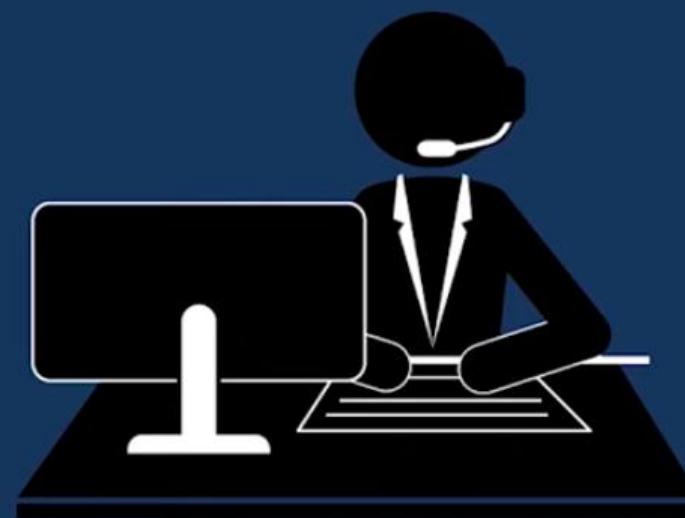
**In operator can contain multiple values in a where clause. It is also used as short cut for multiple OR conditions**



Between

2

**Between operator helps to selects values within a given range and those values can be numbers, text, or dates.**





## Navigator

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## Administration

## Schemas

## Information

No object selected

## Query 1 Mysql tutorial\_practical\*

```

42 • select * from student_table where course_name = "c1003";
43
44 • select * from student_table where course_name = "c1005";
45
46 • select * from student_table where student_id = 3 and course_name = "c1005";
47 • select * from student_table where student_id = 5 or course_name = "c1005";
48
49 • select * from student_table where not student_name = "shyama";
50
51 • select * from student_table;

```

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

student_id	student_name	course_name	Email
1	prakash	c1002	prakash@gmail.com
2	Ram	c1003	Ram@gmail.com
3	Shyama	c1005	shyama@gmail.com

## SQLAdditions



Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

## student\_table 2\*

Read Only Context Help Snippets

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
3	12:40:13	select * from student_table LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
4	12:42:09	select * from student_table LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec

## Object Info Session





Navigator

Query 1 Mysql tutorial\_practical\*

## MANAGEMENT

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## PERFORMANCE

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Administration Schemas

Information

No object selected

```

44 • select * from student_table where course_name = "c1005";
45
46 • select * from student_table where student_id = 3 and course_name = "c1005";
47 • select * from student_table where student_id = 5 or course_name = "c1005";
48
49 • select * from student_table where not student_name = "shyama";
50
51 • select * from student_table;
52
53 • select * from student_table where course_name in ('c1002','c1005');

```

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

student_id	student_name	course_name	Email
1	prakash	c1002	prakash@gmail.com
3	Shyama	c1005	shyama@gmail.com

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

student\_table 3 \*

Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
4	12:42:09	select * from student_table LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
5	12:43:57	select * from student_table where course_name in ('c1002','c1005') LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session



Local Instance MySQL 8.0 X

File Edit View Query Database Server Tools Scripting Help

Navigator: Mysql tutorial\_practical\*

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Administration Schemas

Information: No object selected

student\_table 4 X

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
5	12:43:57	select * from student_table where course_name in ('c1002','c1005') LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec
6	12:45:37	select * from student_table where student_id between 1 and 2 LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions: Jump to

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Local instance MySQL80 X

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 Mysql tutorial\_practical\* X

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Administration Schemas

Information

No object selected

student\_table 8 X

Output

Action Output

#	Time	Action	Message	Duration / Fetch
14	12:53:07	select * from student_table where email like 'a%' LIMIT 0, 1000	0 row(s) returned	0.000 sec / 0.000 sec
15	12:53:24	select * from student_table where email like 'c%' LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 Mysql tutorial\_practical\*

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Administration Schemas

Information

No object selected

student\_table 10 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
16	12-54:12	select * from student_table LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
17	12-55:20	select * from student_table where email like "%12%" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Local instance MySQL80 X

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 Mysql tutorial\_practical\*

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Information

No object selected

student\_table 14 X

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

student_id	student_name	course_name	Email
2	Ram	c1003	Ram@gmail.com
3	Shyama	c1005	shyama@gmail.com
4	Sanjan	c1004	Sanjan@gmail.com
5	Niranjan	c1004	Niranjan12@gmail.com
6	Chitra	c1004	Chitra@23@gmail.com
7	Ranjan	c1006	Ranjan35@gmail.com
4	Tom	c1009	Tom\$Jerry@gmail.com

Result Grid Form Editor

Read Only Context Help Snippets

Action Output

#	Time	Action	Message	Duration / Fetch
21	12:57:46	select * from student_table LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec
22	12:58:02	select * from student_table where email like "%gmail.com" LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec

SQLEditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

## What is NULL value in SQL?

When you have a field with null value then they will be an option for you to insert new record or update a record without adding a value



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Query 1 Mysql tutorial\_practical\*

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Administration Schemas

Information

No object selected

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

```
64 • INSERT INTO student_table (student_id,student_name,course_name,email)
65   VALUES (6,"Chitra",'c1004','Chitra23@gmail.com');
66 • INSERT INTO student_table (student_id,student_name,course_name,email)
67   VALUES (7,"Ranjan",'c1006','Ranjan35@gmail.com');
68 • INSERT INTO student_table (student_id,student_name,course_name,email)
69   VALUES (4,"Tom",'c1009','Tom$Jerry@gmail.com');
70
71 • INSERT INTO student_table (student_id,student_name,course_name,email)
72   VALUES (10,"Tom",'c1009','Tom$Jerry@yahoo.in');
73 • select * from student_table;
74
75 • select * from student_table where email like '%gmail.com';
76
77
78 • INSERT INTO student_table (student_id,student_name,course_name)
79   VALUES (10,"Tom",'c1009');
80
81 • INSERT INTO student_table (student_id,student_name,course_name)
82   VALUES (11,"Jerry",'c1008');
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
22	12:58:02	select * from student_table where email like '%gmail.com' LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
23	13:01:23	INSERT INTO student_table (student_id,student_name,course_name) VALUES (10,"Tom","...	1 row(s) affected	0.062 sec

Context Help Snippets

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Information

No object selected

Query 1 Mysql tutorial\_practical\*

Limit to 1000 rows

```

65     VALUES (6,"Chitra",'c1004','Chitra@23@gmail.com');
66 • INSERT INTO student_table (student_id,student_name,course_name,email)
67     VALUES (7,"Ranjan",'c1006','Ranjan35@gmail.com');
68 • INSERT INTO student_table (student_id,student_name,course_name,email)
69     VALUES (4,"Tom",'c1009','Tom$Jerry@gmail.com');
70
71 • INSERT INTO student_table (student_id,student_name,course_name,email)
72     VALUES (10,"Tom",'c1009','Tom$Jerry@yahoo.in');
73 • select * from student_table;
74
75 • select * from student_table where email like '%gmail.com';
    
```

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

student_id	student_name	course_name	Email
5	Niranjan	c1004	Niranjan12@gmail.com
6	Chitra	c1004	Chitra@23@gmail.com
7	Ranjan	c1006	Ranjan35@gmail.com
4	Tom	c1009	Tom\$Jerry@gmail.com
10	Tom	c1009	Tom\$Jerry@yahoo.in
10	Tom	c1009	HULL
11	Jerry	c1008	HULL

student\_table 15 x

Result Grid Form Editor

Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
24	13:01:56	INSERT INTO student_table (student_id,student_name,course_name) VALUES (11,"Jerry","c1008")	1 row(s) affected	0.078 sec
25	13:02:30	select * from student_table LIMIT 0, 1000	11 row(s) returned	0.094 sec / 0.000 sec

Object Info Session

Subscribe

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Information

No object selected

Student\_table 16 X

Output

Action Output

#	Time	Action	Message	Duration / Fetch
25	13:02:30	select * from student_table LIMIT 0, 1000	11 row(s) returned	0.094 sec / 0.000 sec
26	13:03:09	select * from Student_table where email is null LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

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**Group by statement helps to groups rows which has similar properties**

Most of the time group by function is used  
with aggregate function like: count, MAX,  
MIN etc.



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Query 1 join\_table\*

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Administration Schemas

No object selected

CREATE TABLE dataofcustomer

```
2
3 * use mydemo_final;
4
5 * show databases;
6
7 * CREATE TABLE dataofcustomer(
8     (
9         custid VARCHAR(6) PRIMARY KEY,
10        fname VARCHAR(50),
11        mname VARCHAR(30),
12        lname VARCHAR(30),
13        city VARCHAR(15),
14        age int(10),
15        mobileno VARCHAR(10),
16        occupation VARCHAR(10),
17        dob DATE
18    );
19
20
21 * show tables;
```

Output

Action Output

Time	Action	Message	Duration / Fetch
5 22:21:36	show databases	26 row(s) returned	0.000 sec / 0.00
6 22:24:42	CREATE TABLE dataofcustomer ( custid VARCHAR(6) PRIMARY KEY, fname V...	0 row(s) affected. 1 warning(s): 1681 Integer display width is deprecated and will be removed	1.532 sec

Context Help Snippets

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2:33:52 / 9:02:44 • Group by and Having Concept in MYSQL >

MySQL Workbench

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Query 1 join\_table\*

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Administration Schemas

Information

No object selected

Result Grid

custid	fname	mname	lname	city	age	mobilenr	occupation	dob
C00001	Ramesh	Chandra	Sharma	Delhi	45	9543198345	Service	1976-12-06
C00002	Avinash	Sunder	Mirha	Delhi	32	9876532109	Service	1974-10-16
C00003	Rahul		Rastogi	Delhi	24	9765178901	Student	1981-09-26
C00004	Gandhi		Deli	Delhi	46	9876532109	Housewife	1976-11-03
C00005	Naveen	Chandra	Aedekar	Mumbai	23	8976523190	Service	1976-09-19
C00006	Chitresh		Barwe	Mumbai	18	7651298321	Student	1992-11-06

dataofcustomer6 X

Output

Action Output

Time	Action	Message	Duration / Fetch
19 22:26:41	show tables	1 row(s) returned	0.000 sec / 0.00
20 22:26:50	select * from dataofcustomer	10 row(s) returned	0.000 sec / 0.00

Context Help Snippets

0:00:00 - 0:00:00

2:36:05 / 9:02:44 • Group by and Having Concept in MYSQL >

MySQL Workbench

Local instance MySQL80 X

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Navigator

Query 1 join\_table\* X

SQLAdditions

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Administration Schemas

No object selected

Result 17 X

Output

Action Output

#	Time	Action	Message	Duration / Fetch
31	22:30:27	select fname from dataofcustomer where age = 18	1 row(s) returned	0.000 sec / 0.000 sec
32	22:30:58	select min(age), fname from dataofcustomer	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Result Grid Form Editor

Read Only Context Help Snippets

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MySQL Workbench

Local instance MySQL80

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Navigator

Query 1 join\_table\*

SQLAdditions

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Administration Schemas

No object selected

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

	max(age)	fname
90	Ramesh	

Result Grid Form Editor

Output

Action Output

#	Time	Action	Message
32	22:30:58	select min(age), fname from dataofcustomer	1 row(s) returned
33	22:31:08	select max(age), fname from dataofcustomer	1 row(s) returned

Result 18 X Read Only Context Help Snippets

Object Info Session

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 join\_table\*

SQLAdditions

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Administration Schemas

No object selected

dataofcustomer 22

Output

Action Output

#	Time	Action	Message	Duration / Fetch
36	22:31:53	select max(age) from dataofcustomer;	1 row(s) returned	0.000 sec / 0.000 sec
37	22:32:04	select fname from dataofcustomer where age > 90	1 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Result Grid Form Editor

Read Only Context Help Snippets

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MySQL Workbench

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Query 1 join\_table\*

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Administration Schemas

Information

No object selected

Result 24 X

Output

Action Output

Time	Action	Message	Duration / Fetch
38 22:32:08	select * from dataofcustomer	10 row(s) returned	0.000 sec / 0.00
39 22:33:04	select count(*) from dataofcustomer	1 row(s) returned	0.031 sec / 0.00

SQLAdditions

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Administration Schemas

No object selected

Query 1 join\_table\*

Dont Limit

```

47 • select count(age) as total_customer from dataofcustomer;
48
49 • select count(age) as customer_from_Delhi from dataofcustomer where city ="Delhi";
50
51 • select avg(age) as average_age from dataofcustomer;
52
53 • select sum(age) as sum_of_age from dataofcustomer;
54
55
56 • select count(fname),city from dataofcustomer group by city;
57
    
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

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

	count(fname)	dty
4		Delhi
4		Mumbai
1		Kolkata
1		Chennai

Result Grid Form Editor

Result 27 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
41	22:36:45	select count(fname) from dataofcustomer group by city	4 row(s) returned	0.000 sec / 0.000 sec
42	22:36:55	select count(fname).city from dataofcustomer group by city	4 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

MySQL Workbench

Local instance MySQL80

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Administration Schemas

Information

No object selected

Query 1 join\_table\*

69     );  
70  
71  
72 • CREATE TABLE account  
73 ( acnumber VARCHAR(6),  
74     custid VARCHAR(6),  
75     bid VARCHAR(6),  
76     opening\_balance INT(7),  
77     mod DATE,  
78     atype VARCHAR(10),  
79     astatus VARCHAR(10),  
80     CONSTRAINT account\_acnumber\_pk PRIMARY KEY(acnumber),  
81     CONSTRAINT account\_custid\_fk FOREIGN KEY(custid) REFERENCES dataofcustomer(custid)  
82  
83 )  
84  
85  
86 • show tables;  
87  
88 • select count(\*) from customers;

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
43	22:40:23	CREATE TABLE account ( acnumber VARCHAR(6), custid VARCHAR(6), bid ...	Error Code: 1824. Failed to open the referenced table 'customer'	0.016 sec
44	22:40:39	CREATE TABLE account ( acnumber VARCHAR(6), custid VARCHAR(6), bid ...	Running...	?

Object Info Session

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MySQL Workbench

Local instance MySQL80

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Navigator

Query 1 join\_table\*

SQLAdditions

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Administration Schemas

Information

No object selected

Output

Action Output

#	Time	Action	Message	Duration / Fetch
45	22:40:45	show tables	2 row(s) returned	0.000 sec / 0.000 sec
46	22:41:54	INSERT INTO account VALUES('A00001','C00001','B00001',1000,'2012-12-15','Saving','Active')	1 row(s) affected	0.125 sec

Context Help Snippets

Object Info Session

MySQL Workbench Power Ahead

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

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No object selected

Query 1 join\_table\*

Dont Limit

```
95 • INSERT INTO account VALUES('A00009','C00003','B00007',1000,'2008-11-30','Saving','Terminated');
96 • INSERT INTO account VALUES('A00010','C00004','B00002',1000,'2013-03-01','Saving','Active');
97
98 • show tables;
99
100
101 • select * from account;
102
103
104 • select count(*), astatus from account group by astatus;
105
```

Result Grid | Filter Rows: [ ] | Exports: [ ] | Wrap Cell Contents: [ ]

count(*)	astatus
7	Active
1	Suspended
2	Terminated

Result 33 x

Output

Action Output

Time	Action	Message	Duration / Fetch
59 22:44:32	select count(*)from account group by astatus	3 row(s) returned	0.000 sec / 0.000 sec
60 22:44:44	select count(*), astatus from account group by astatus	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

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Result Grid Form Editor

Read Only Context Help Snippets

Power Ahead

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**Having clause has an important role in SQL when we use any aggregate function we can not use where clause and instead of that we use having clause**



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Query 1 join\_table\*

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No object selected

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

	count(fname)	city
>	4	Delhi
>	4	Mumbai

Result 38 X

Output

Action Output

*	Time	Action	Message	Duration / Fetch
64	22:48:13	select count(fname),city from dataofcustomer group by city	4 row(s) returned	0.016 sec / 0.000 sec
65	22:49:54	select count(fname),city from dataofcustomer group by city having count(fname)>2	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Read Only Context Help Snippets

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Query 1 join\_table\*

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No object selected

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

count(fname)	dty
4	Delhi
4	Mumbai
1	Kolkata
1	Chennai

Result 44 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
70	22:51:03	select count(fname),city from dataofcustomer group by city having count(fname)<2	2 row(s) returned	0.000 sec / 0.000 sec
71	22:51:21	select count(fname),city from dataofcustomer group by city having count(fname)!=2	4 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Read Only Context Help Snippets

SUBSCRIBE

**Alias concept is used in SQL to give temporary name to the table or the column of the table**



## What is join in SQL?

A JOIN concept which is basically a clause used to combine rows from different tables  
based on a condition



## Types of join in SQL

SELF JOIN

INNER JOIN

LEFT JOIN

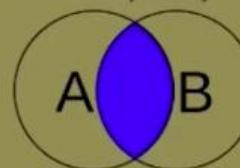
RIGHT JOIN

FULL JOIN

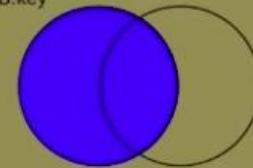


## Types of join in SQL?

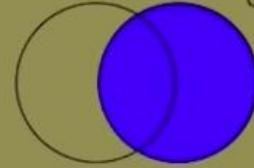
SELECT <fields>  
FROM TableA A  
INNER JOIN TableB B  
ON A.key = B.key



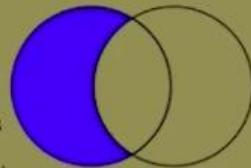
SELECT <fields>  
FROM TableA A  
LEFT JOIN TableB B  
ON A.key = B.key



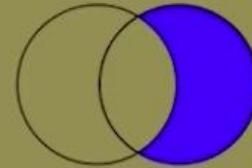
SELECT <fields>  
FROM TableA A  
RIGHT JOIN TableB B  
ON A.key = B.key



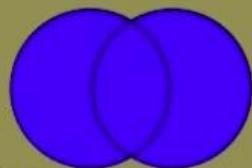
SELECT <fields>  
FROM TableA A  
LEFT JOIN TableB B  
ON A.key = B.key  
WHERE B.key IS NULL



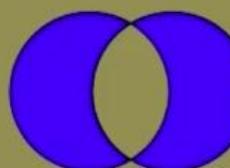
SELECT <fields>  
FROM TableA A  
RIGHT JOIN TableB B  
ON A.key = B.key  
WHERE A.key IS NULL



SELECT <fields>  
FROM TableA A  
FULL OUTER JOIN TableB B  
ON A.key = B.key

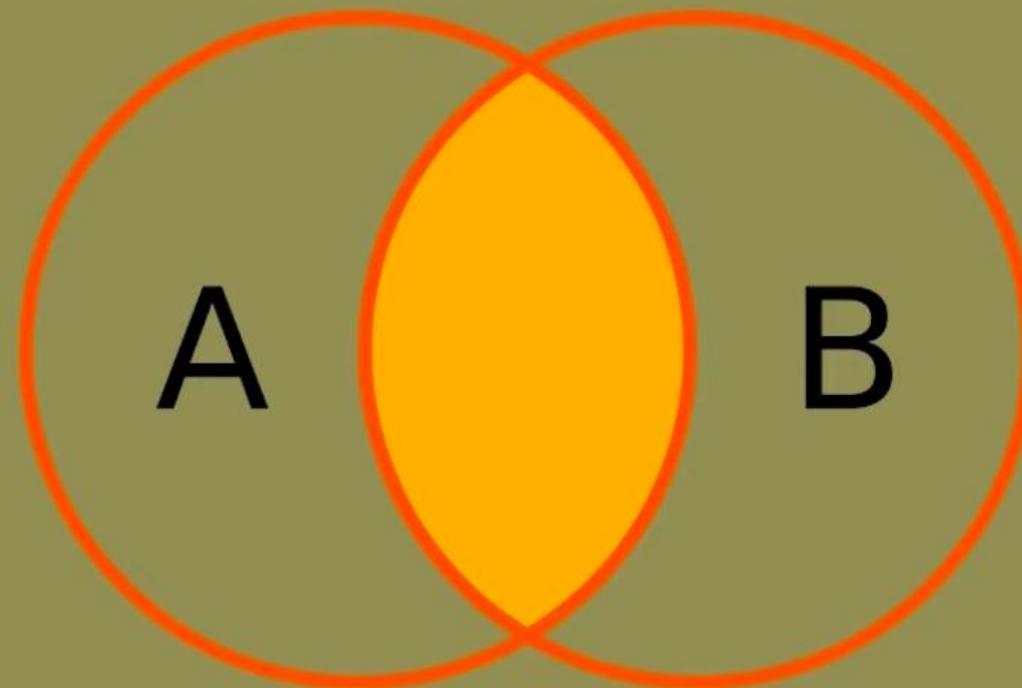


SELECT <fields>  
FROM TableA A  
FULL OUTER JOIN TableB B  
ON A.key = B.key  
WHERE A.key IS NULL



## INNER JOIN

The INNER JOIN helps to select the matching records from the both tables



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Administration Schemas

Information

No object selected

```

45
46 • CREATE TABLE customer
47 (
48     custid VARCHAR(6),
49     fname VARCHAR(30),
50     mname VARCHAR(30),
51     lname VARCHAR(30),
52     city VARCHAR(15),
53     mobileno VARCHAR(10),
54     occupation VARCHAR(10),
55     dob DATE,
56     CONSTRAINT customer_custid_pk PRIMARY KEY(custid)
57 );
58
59
60 • CREATE TABLE account
61 (
62     acnumber VARCHAR(6),
63     custid VARCHAR(6),
64     bid VARCHAR(6),

```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
65	23:29:27	CREATE TABLE account ( acnumber VARCHAR(6), custid VARCHAR(6), bid ...	Error Code: 1824. Failed to open the referenced table 'customer'	0.140 sec
66	23:29:55	CREATE TABLE customer ( custid VARCHAR(6), fname VARCHAR(30), mna...)	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds ...	0.000 sec

Object Info Session

SQLAdditions



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Context Help Snippets



3:09:38 / 9:02:44 • Joins in MYSQL &gt;



Local instance MySQL80 ×

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Administration Schemas

Information

No object selected

Query 1 × Mysql tutorial\_practical\* SQL File 3\*

```

54     occupation VARCHAR(10),
55     dob DATE,
56     CONSTRAINT customer_custid_pk PRIMARY KEY(custid)
57 );
58
59
60 • CREATE TABLE account
61 (
62     acnumber VARCHAR(6),
63     custid VARCHAR(6),
64     bid VARCHAR(6),
65     opening_balance INT(7),
66     adob DATE,
67     atype VARCHAR(10),
68     astatus VARCHAR(10),
69     CONSTRAINT account_acnumber_pk PRIMARY KEY(acnumber),
70     CONSTRAINT account_custid_fk FOREIGN KEY(custid) REFERENCES customer(custid)
71 );
72

```

SQLAdditions

Jump to

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
66	23:29:55	CREATE TABLE customer ( custid VARCHAR(6), fname VARCHAR(30), mname VARCHAR(30), lname VARCHAR(30) ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;' at line 1	0.000 sec
67	23:30:05	CREATE TABLE account ( acnumber VARCHAR(6), custid VARCHAR(6), bid VARCHAR(6), opening_balance INT(7), adob DATE, atype VARCHAR(10), astatus VARCHAR(10) ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;	0 row(s) affected	0.922 sec

Object Info Session



3:09:52 / 9:02:44 • Joins in MYSQL &gt;



Local instance MySQL80 X

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Administration Schemas

No object selected

Query 1 Mysql tutorial\_practical\* SQL File 3\*

Limit to 1000 rows

```

31     VALUES (3,"Shyama",'c1005','shyama@gmail.com');
32
33 • UPDATE student_table
34     SET course_name = 'c1004' where student_id=3;
35
36 • Delete from student_table;
37
38
39 • INSERT INTO customer VALUES('C00001','Ramesh','Chandra','Sharma','Delhi','9543198345','Service','1976-12-06');
40 • INSERT INTO customer VALUES('C00002','Avinash','Sunder','Minha','Delhi','9876532109','Service','1974-10-16');
41 • INSERT INTO customer VALUES('C00003','Rahul',null,'Rastogi','Delhi','9765178901','Student','1981-09-26');
42 • INSERT INTO customer VALUES('C00004','Parul',null,'Gandhi','Delhi','9876532109','Housewife','1976-11-03');
43 • INSERT INTO customer VALUES('C00005','Naveen','Chandra','Aedekar','Mumbai','8976523190','Service','1976-09-19');
44 • INSERT INTO customer VALUES('C00006','Chitresh',null,'Barwe','Mumbai','7651298321','Student','1992-11-06');
45 • INSERT INTO customer VALUES('C00007','Amit','Kumar','Borkar','Mumbai','9875189761','Student','1981-09-06');
46 • INSERT INTO customer VALUES('C00008','Nisha',null,'Damle','Mumbai','7954198761','Service','1975-12-03');
47 • INSERT INTO customer VALUES('C00009','Abhishek',null,'Dutta','Kolkata','9856198761','Service','1973-05-22');
48 • INSERT INTO customer VALUES('C00010','Shankar',null,'Nair','Chennai','8765489076','Service','1976-07-12');
49
50 • INSERT INTO account VALUES('A00001','C00001','B00001',1000,'2012-12-15','Saving','Active');
```

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
68	23:30:19	CREATE TABLE account ( acnumber VARCHAR(6), custid VARCHAR(6), bid ... )	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed ...	0.500 sec
69	23:30:38	show tables	3 row(s) returned	0.063 sec / 0.0

Local instance MySQL80 x

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Information

No object selected

Query 1 Mysql tutorial\_practical\* SQL File 3\*

Limit to 1000 rows

```

40 • INSERT INTO customer VALUES('C00002','Avinash','Sunder','Minha','Delhi','9876532109','Service','1974-10-16');
41 • INSERT INTO customer VALUES('C00003','Rahul',null,'Rastogi','Delhi','9765178901','Student','1981-09-26');
42 • INSERT INTO customer VALUES('C00004','Parul',null,'Gandhi','Delhi','9876532109','Housewife','1976-11-03');
43 • INSERT INTO customer VALUES('C00005','Naveen','Chandra','Aedekar','Mumbai','8976523190','Service','1976-09-19');
44 • INSERT INTO customer VALUES('C00006','Chitresh',null,'Barwe','Mumbai','7651298321','Student','1992-11-06');
45 • INSERT INTO customer VALUES('C00007','Amit','Kumar','Borkar','Mumbai','9875189761','Student','1981-09-06');
46 • INSERT INTO customer VALUES('C00008','Nisha',null,'Damle','Mumbai','7954198761','Service','1975-12-03');
47 • INSERT INTO customer VALUES('C00009','Abhishek',null,'Dutta','Kolkata','9856198761','Service','1973-05-22');
48 • INSERT INTO customer VALUES('C00010','Shankar',null,'Nair','Chennai','8765489076','Service','1976-07-12');
49
50 • INSERT INTO account VALUES('A00001','C00001','B00001',1000,'2012-12-15','Saving','Active');
51 • INSERT INTO account VALUES('A00002','C00002','B00001',1000,'2012-06-12','Saving','Active');
52 • INSERT INTO account VALUES('A00003','C00003','B00002',1000,'2012-05-17','Saving','Active');
53 • INSERT INTO account VALUES('A00004','C00002','B00005',1000,'2013-01-27','Saving','Active');
54 • INSERT INTO account VALUES('A00005','C00006','B00006',1000,'2012-12-17','Saving','Active');
55 • INSERT INTO account VALUES('A00006','C00007','B00007',1000,'2010-08-12','Saving','Suspended');
56 • INSERT INTO account VALUES('A00007','C00007','B00001',1000,'2012-10-02','Saving','Active');
57 • INSERT INTO account VALUES('A00008','C00001','B00003',1000,'2009-11-09','Saving','Terminated');
58 • INSERT INTO account VALUES('A00009','C00003','B00007',1000,'2008-11-30','Saving','Terminated');
59 • INSERT INTO account VALUES('A00010','C00004','B00002',1000,'2013-03-01','Saving','Active');

```

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
68	23:30:19	CREATE TABLE account ( acnumber VARCHAR(6), custid VARCHAR(6), bid ... )	0 row(s) affected. 1 warning(s): 1681 Integer display width is deprecated and will be removed ...	0.500 sec
69	23:30:38	show tables	3 row(s) returned	0.063 sec / 0.000 sec

Object Info Session

Context Help Snippets

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Information

No object selected

Query 1 Mysql tutorial\_practical\* SQL File 3\*

```
55 • INSERT INTO account VALUES('A00006','C00007','B00007',1000,'2010-08-12','Saving','Suspended');
56 • INSERT INTO account VALUES('A00007','C00007','B00001',1000,'2012-10-02','Saving','Active');
57 • INSERT INTO account VALUES('A00008','C00001','B00003',1000,'2009-11-09','Saving','Terminated');
58 • INSERT INTO account VALUES('A00009','C00003','B00007',1000,'2008-11-30','Saving','Terminated');
59 • INSERT INTO account VALUES('A00010','C00004','B00002',1000,'2013-03-01','Saving','Active');

60
61
62 • select * from customer;
63
64 sele
```

custid	fname	mname	lname	city	mobilenr	occupation	dob
C00005	Naveen	Chandra	Aedekar	Mumbai	8976523190	Service	1976-09-19
C00006	Chitresh	NULL	Barwe	Mumbai	7651298321	Student	1992-11-06
C00007	Amit	Kumar	Borkar	Mumbai	9875189761	Student	1981-09-06
C00008	Nisha	NULL	Damle	Mumbai	7954198761	Service	1975-12-03
C00009	Abhishek	NULL	Dutta	Kolkata	9856198761	Service	1973-05-22
C00010	Shankar	NULL	Nair	Chennai	8765489076	Service	1976-07-12
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

customer 1 x

SQLAdditions

◀ ▶ ⓘ ⓘ Jump to

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Result Grid							
Filter Rows:							
Edit:  Export/Import:  Wrap Cell Content:							
custid	fname	mname	lname	city	mobilenr	occupation	dob
C00005	Naveen	Chandra	Aedekar	Mumbai	8976523190	Service	1976-09-19
C00006	Chitresh	NULL	Barwe	Mumbai	7651298321	Student	1992-11-06
C00007	Amit	Kumar	Borkar	Mumbai	9875189761	Student	1981-09-06
C00008	Nisha	NULL	Damle	Mumbai	7954198761	Service	1975-12-03
C00009	Abhishek	NULL	Dutta	Kolkata	9856198761	Service	1973-05-22
C00010	Shankar	NULL	Nair	Chennai	8765489076	Service	1976-07-12
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Result Grid

Form Editor

Context Help Snippets

customer 1 x

Apply Revert

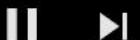
Output

Action Output

#	Time	Action	Message	Duration / Fetch
89	23:31:48	INSERT INTO account VALUES('A00010','C00004','B00002',1000,'2013-03-01','Saving','Act...	1 row(s) affected	0.031 sec
90	23:32:13	select * from customer LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.0



Object Info Session



3:11:55 / 9:02:44 · Joins in MYSQL >



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Administration Schemas

Information

No object selected

Query 1 x Mysql tutorial\_practical\* SQL File 3\*

67      atype VARCHAR(10),  
68      Execute the selected portion of the script or everything, if there is no selection  
69      CONSTRAINT account\_acnumber\_pk PRIMARY KEY(acnumber),  
70      CONSTRAINT account\_custid\_fk FOREIGN KEY(custid) REFERENCES customer(custid)  
71      );  
72  
73  
74 • show tables;  
75  
76 • select fname,acnumber from customer inner join account on customer.custid = account.custid;

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

fname	acnumber
Ramesh	A00001
Ramesh	A00008
Avinash	A00002
Avinash	A00004
Rahul	A00003
Rahul	A00009
Parul	A00010

Result 14 x Read Only Context Help Snippets

Action Output

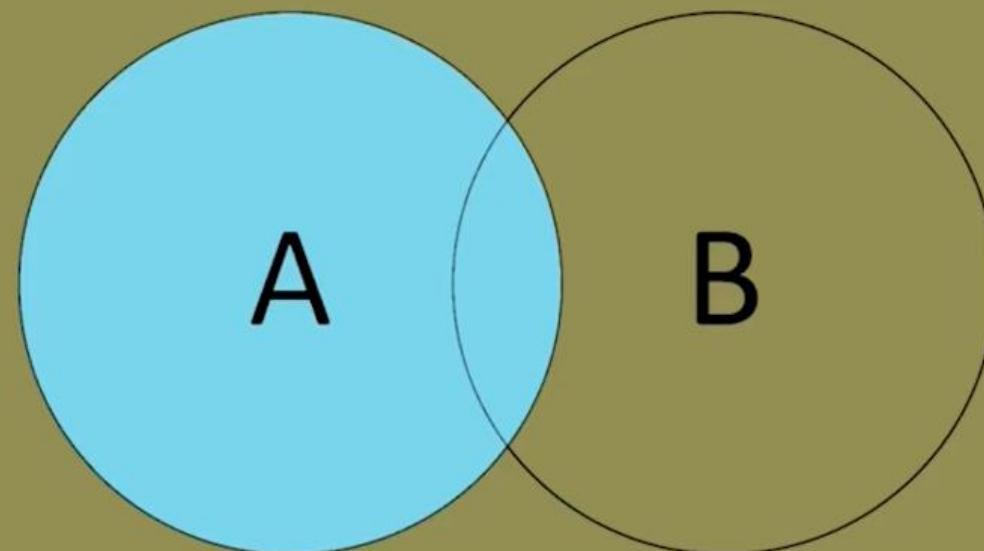
#	Time	Action	Message	Duration / Fetch
91	23:32:31	select * from account LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
92	23:35:54	select fname,acnumber from customer inner join account on customer.custid = account.custid... 10 row(s) returned		0.000 sec / 0.000 sec

Object Info Session

▶ ▶ ⏪ 3:15:07 / 9:02:44 • Joins in MYSQL > 🔍 HD ⌂

## LEFT JOIN

The LEFT JOIN helps to fetch all records from the left table and the matching records from the right table



Local instance MySQL80 ×

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Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* ×

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

```
1 • create database my_demo_database2;
2
3 • use my_demo_database2;
4
5 • CREATE TABLE customer
6   (
7     custid VARCHAR(6),
8     fname VARCHAR(30),
9     mname VARCHAR(30),
10    lname VARCHAR(30),
11    city VARCHAR(15),
12    mobileno VARCHAR(10),
13    occupation VARCHAR(10),
14    dob DATE,
15    CONSTRAINT customer_custid_pk PRIMARY KEY(custid)
16  );
17
```

Local instance MySQL80 X

File Edit View Query Database Server Tools Scripting Help

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Administration Schemas

Information

No object selected

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

Tables\_in\_my\_demo\_database2

branch

customer

Result 4 X

Output

Action Output

#	Time	Action	Message	Duration / Fetch
46	13:57:46	CREATE TABLE branch ( bid VARCHAR(6), bname VARCHAR(30), bcity VARCHAR(20) ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci	0 row(s) affected	0.578 sec
47	13:58:09	show tables	2 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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Navigator

Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* x

SQLAdditions

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Administration Schemas

Information

No object selected

Output

Action Output

#	Time	Action	Message	Duration / Fetch
58	14:08:31	INSERT INTO customer VALUES('C00006','Chitresh',null,'Barwe','Mumbai','7651298321','Student','1992-11-06');	1 row(s) affected	0.110 sec
59	14:08:31	INSERT INTO customer VALUES('C00007','Amit','Kumar','Borkar','Mumbai','9875189761','Student','1981-09-06');	1 row(s) affected	0.110 sec
60	14:08:31	INSERT INTO customer VALUES('C00008','Nisha',null,'Damle','Mumbai','7954198761','Service','1975-12-03');	1 row(s) affected	0.125 sec

Object Info Session

3:35:29 / 9:02:44 • Joins in MYSQL >

Context Help Snippets

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Navigator

Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* x

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Administration Schemas

Information

No object selected

customer 7 x

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
62	14:08:31	INSERT INTO customer VALUES('C00010','Shankar',null,'Nair','Chennai','8765489076','Ser...')	1 row(s) affected	0.125 sec
63	14:08:54	select * from customer LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.0

Object Info Session

3:36:18 / 9:02:44 • Joins in MYSQL >

Result Grid

Filter Rows:  Edit: Export/Import: Wrap Cell Content:

custid	fname	mname	lname	city	mobilenr	occupation	dob
C00001	Ramesh	Chandra	Sharma	Delhi	9543198345	Service	1976-12-06
C00002	Avinash	Sunder	Minha	Delhi	9876532109	Service	1974-10-16
C00003	Rahul	NULL	Rastogi	Delhi	9765178901	Student	1981-09-26
C00004	Parul	NULL	Gandhi	Delhi	9876532109	Housewife	1976-11-03
C00005	Naveen	Chandra	Aedekar	Mumbai	8976523190	Service	1976-09-19

Context Help Snippets

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Local instance MySQL80 ×

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Navigator

Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* ×

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Administration Schemas

Information

No object selected

Result 13 ×

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
88	14:16:42	select count(custid) from customer LIMIT 0, 1000	1 row(s) returned	0.031 sec / 0.000 sec
89	14:17:05	select count(acnumber) from account LIMIT 0, 1000	1 row(s) returned	0.078 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Result Grid

Read Only Context Help Snippets

SUBSCRIBE

Local instance MySQL80 X

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Information

No object selected

Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* X

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

```

81 • INSERT INTO account VALUES('A00009','C00003','B00007',1000,'2008-11-30','Saving','Terminated');
82 • INSERT INTO account VALUES('A00010','C00004','B00002',1000,'2013-03-01','Saving','Active');
83
84 • select * from account;
85
86 • select count(custid) from customer;
87 • select count(acnumber) from account;
88
89
90 • SELECT * FROM account
91 LEFT JOIN customer
92 ON account.custid = customer.custid;
  
```

**Result Grid**

acnumber	custid	bid	opening_balance	aod	atype	astatus	custid	fname	mname	lname	city	mobilenr
A00004	C00002	B00005	1000	2013-01-27	Saving	Active	C00002	Avinash	Sunder	Minha	Delhi	9876532109
A00005	C00006	B00006	1000	2012-12-17	Saving	Active	C00006	Chitresh	NULL	Barwe	Mumbai	7651298321
A00006	C00007	B00007	1000	2010-08-12	Saving	Suspended	C00007	Amit	Kumar	Borkar	Mumbai	9875189761
A00007	C00007	B00001	1000	2012-10-02	Saving	Active	C00007	Amit	Kumar	Borkar	Mumbai	9875189761

Result 15 X

Output:

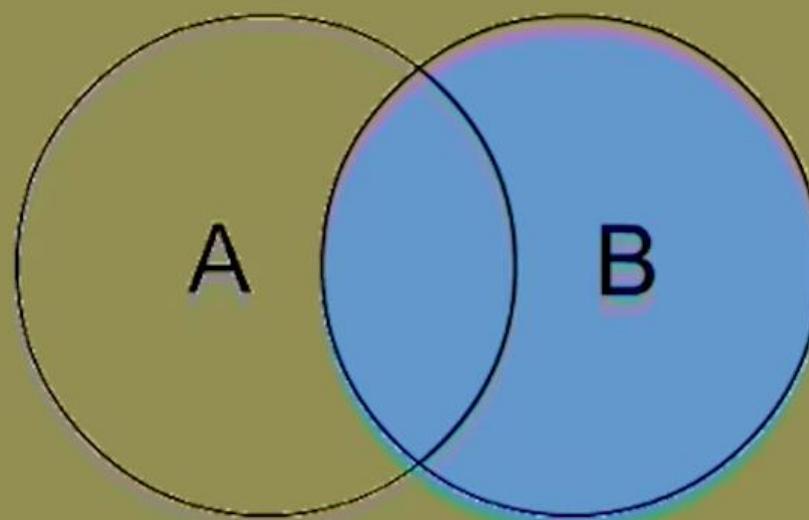
Action Output

#	Time	Action	Message	Duration / Fetch
90	14:19:07	SELECT * FROM customer LEFT JOIN account ON customer.custid = account.custid LIMIT...	14 row(s) returned	0.000 sec / 0.000 sec
91	14:20:11	SELECT * FROM account LEFT JOIN customer ON account.custid = customer.custid LIMIT...	10 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Subscribe

The **RIGHT JOIN** helps to fetch all records from the right table and the matched records from the left table



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Navigator Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* X SQLAdditions

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Information No object selected Result 19 X Output Action Output Message Duration / Fetch

```

88
89
90 •   SELECT * FROM account
91   LEFT JOIN customer
92     ON account.custid = customer.custid;
93
94 •   show tables;
95
96
97 •   SELECT * FROM account
98   right JOIN customer
99     ON customer.custid = account.custid;

```

Result Grid Filter Rows: Export: Wrap Cell Content: □ Read Only Context Help Snippets

acnnumber	custid	bid	opening_balance	ad	atype	astatus	custid	fname	mname	lname	city	mobilenr
A00001	C00001	B00001	1000	2012-12-15	Saving	Active	C00001	Ramesh	Chandra	Sharma	Delhi	9543198345
A00008	C00001	B00003	1000	2009-11-09	Saving	Terminated	C00001	Ramesh	Chandra	Sharma	Delhi	9543198345
A00002	C00002	B00001	1000	2012-06-12	Saving	Active	C00002	Avinash	Sunder	Minha	Delhi	9876532109
A00004	C00002	B00005	1000	2013-01-27	Saving	Active	C00002	Avinash	Sunder	Minha	Delhi	9876532109

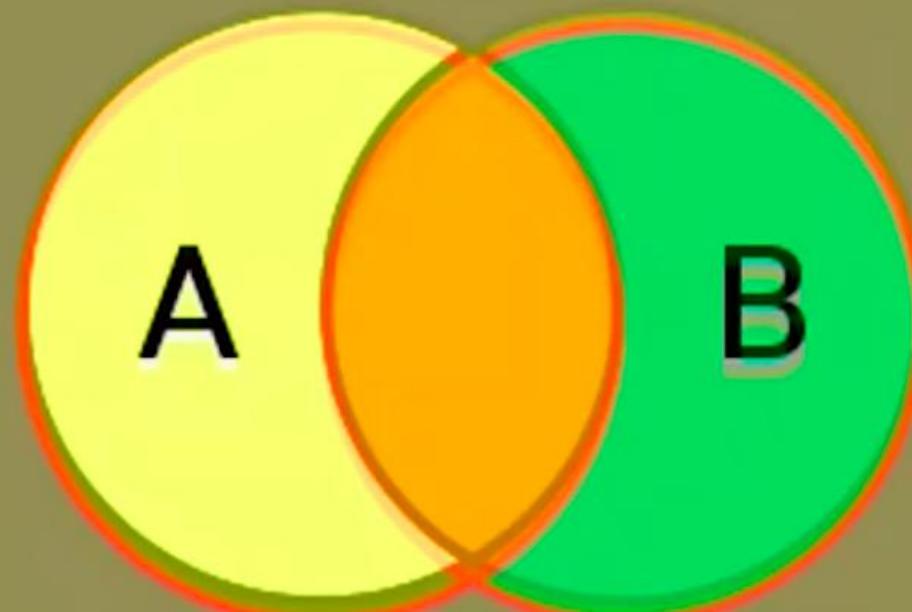
3 row(s) returned

0.000 sec / 0.000 sec

0.000 sec / 0.000 sec

Object Info Session

The FULL OUTER JOIN helps to fetch all the records from both the table whether there is a match or not



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Information

No object selected

Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* ×

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

```

88
89
90 •   SELECT * FROM account
91   LEFT JOIN customer
92     ON account.custid = customer.custid;
93
94 •   show tables;
95
96
97 •   SELECT * FROM customer
98   right JOIN account
99     ON account.custid = customer.custid;
100
101
102 •   SELECT * FROM account
103   LEFT JOIN customer ON account.custid = customer.custid
104 UNION
105   SELECT * FROM account
106   RIGHT JOIN customer ON account.custid = customer.custid;

```

Context Help Snippets

Output

Action Output

Time	Action	Message	Duration / Fetch
115 18:12:01	SELECT * FROM account LEFT JOIN customer ON account.custid = customer.custid UNION select * from account full join customer on account.custid = customer.custid	14 row(s) returned	0.500 sec / 0.000 sec
116 18:15:55		Error Code: 1054. Unknown column 'account.custid' in 'on clause'	0.000 sec

Object Info Session

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Information

No object selected

Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* x

Dont Limit

91 LEFT JOIN customer  
92 ON account.custid = customer.custid;  
93  
94 \* show tables;  
95  
96  
97 \* SELECT \* FROM customer  
98 right JOIN account  
99 ON account.custid = customer.custid;  
100  
101  
102 \* SELECT \* FROM account

Result Grid | Filter Rows: [ ] Export: [ ] Wrap Cell Contents: [ ]

acnumber	custid	bid	opening_balance	sd	atype	astatus	custid	fname	mname	lname	city	mobilenr
A00008	C00001	B00003	1000	2009-11-09	Saving	Terminated	C00001	Ramesh	Chandra	Sharma	Delhi	9543198345
A00009	C00003	B00007	1000	2008-11-30	Saving	Terminated	C00003	Rahul		Rastogi	Delhi	9765178901
A00010	C00004	B00002	1000	2013-03-01	Saving	Active	C00004	Parul		Gandhi	Delhi	9876532109
							C00005	Naveen	Chandra	Aedekar	Mumbai	8976523190

Result 3 x

Output

Action Output

Time	Action	Message	Duration / Fetch
116 18:15:55	select * from account full join customer on account.custid = customer.custid;	Error Code: 1054. Unknown column 'account.custid' in 'on clause'	0.000 sec
117 18:18:06	SELECT * FROM account LEFT JOIN customer ON account.custid = customer.custid UNION ...	14 row(s) returned	0.031 sec / 0.000 sec

Object Info Session

3:59:29 / 9:02:44 • Joins in MYSQL >

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

## SELF JOIN

A self helps to join with itself

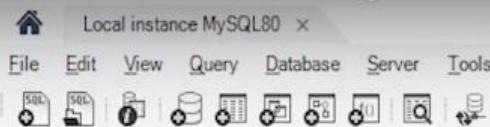
Table join with itself



# SQL Tutorial for Beginners | SQL Full Course | Learn SQL for Beginners | Great Learning



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Power Ahead



Navigator: Query 1 Mysql tutorial\_practical\* Mysql tutorial\_practical\* left\_join\* x

## MANAGEMENT

- Server Status
- Client Connections
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- Status and System Variables
- Data Export
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## INSTANCE

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- Server Logs
- Options File

## PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

```
105    SELECT * FROM account
106    RIGHT JOIN customer ON account.custid = customer.custid;
107
108 • CREATE TABLE student
109   (
110     student_id VARCHAR(6),
111     name VARCHAR(30),
112     course_id VARCHAR(30),
113     duration int(4)
114   );
115
116 • drop table student;
117 • INSERT INTO student VALUES('1','Asif',2,4);
118 • INSERT INTO student VALUES('2','Atul',1,4);
119 • INSERT INTO student VALUES('1','Asif',1,4);
120 • INSERT INTO student VALUES('2','Atul',3,4);
121 • INSERT INTO student VALUES('5','Jasmin',1,4);
122 • INSERT INTO student VALUES('6','Adhiti',1,4);
123
124 • SELECT s1.student_id, s1.name
```

SQLAdditions



Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
137	18:53:23	SELECT s1.student_id, s1.name FROM student AS s1,student s2 WHERE s1.student_id... 4 row(s) returned	4 row(s) returned	0.000 sec / 0.000 sec
138	18:53:45	use my_demo_database2	0 row(s) affected	0.000 sec



Object Types Session

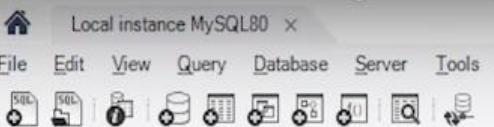
4:01:31 / 9:02:44 • Joins in MYSQL >



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Power Ahead



Navigator      Query 1      Mysql tutorial\_practical\*      Mysql tutorial\_practical\*      left\_join\*     

## MANAGEMENT

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Administration      Schemas

Information

No object selected

```
111     name VARCHAR(30),
112     course_id VARCHAR(30),
113     duration int(4)
114   );
115
116 • drop table student;
117 • INSERT INTO student VALUES('1','Asif',2,4);
118 • INSERT INTO student VALUES('2','Atul',1,4);
119 • INSERT INTO student VALUES('1','Asif',1,4);
120 • INSERT INTO student VALUES('2','Atul',3,4);
121 • INSERT INTO student VALUES('5','Jasmin',1,4);
122 • INSERT INTO student VALUES('6','Adhiti',1,4);
123
124 • SELECT s1.student_id, s1.name
125   FROM student AS s1, student s2
126  WHERE s1.student_id=s2.student_id and s1.course_id>s2.course_id ;
127
128
129
```

SQLAdditions

<    >    ?    Jump to

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help      Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
138	18:53:45	use my_demo_database2	0 row(s) affected	0.000 sec
139	18:59:44	CREATE TABLE student ( student_id VARCHAR(6), name VARCHAR(30), course_id int(4) )	0 row(s) affected, 1 warning(s): 1681 Integer display width is deprecated and will be removed ...	0.938 sec



Object Type      Session

▶    ▷    🔊    4:01:54 / 9:02:44 • Joins in MYSQL >

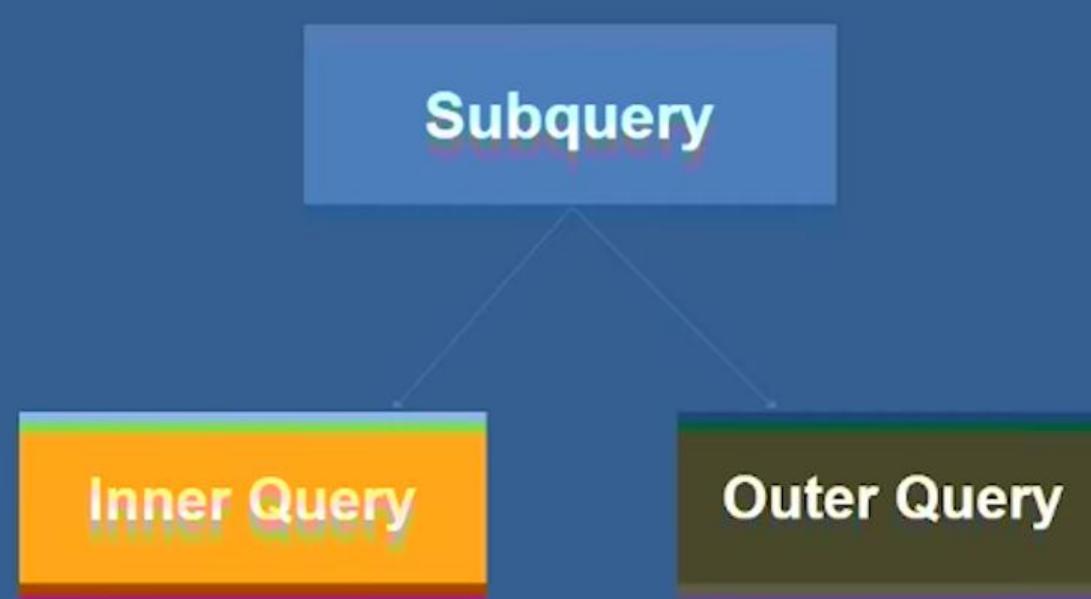


## What is subquery?

**Subquery is a SQL command which is nothing but select query that contain another query inside**



How many parts are there in a subquery?



## How subquery executes?

First inner query get executed



Get the result from inner query



Output of inner query added to the outer query



Outer query will get executed to get the final  
result



## Types of subquery

- **Nested subquery:** Nested subquery first executes the inner SELECT query and then with the returning values executes the outer query
- **Correlated subquery:** A correlated subquery reads every row in a table and comparing values in each row against related data



MySQL Workbench

Local instance MySQL80 X

File Edit View Query Database Server Tools Scripting Help

Navigator Query 1 join\_table\* Demo\_file3\* SQLAdditions

Dont Limit Jump to

MANAGEMENT

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PERFORMANCE

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Administration Schemas

Information

No object selected

```

50 * CREATE TABLE customer
51   (
52     custid VARCHAR(6) PRIMARY KEY,
53     fname VARCHAR(50),
54     mname VARCHAR(30),
55     lname VARCHAR(30),
56     city VARCHAR(15),
57     age int(10),
58     mobileno VARCHAR(10),
59     occupation VARCHAR(10),
60     dob DATE
61
62   );
63
64 * show tables;
65
66 * INSERT INTO customer
67   SELECT * FROM democustomer
68   WHERE age>=45;

```

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
153	10:42:27	show tables	2 row(s) returned	0.078 sec / 0.000 sec
154	10:43:51	INSERT INTO customer SELECT * FROM democustomer WHERE age>=45	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.297 sec

Object Info Session



MySQL Workbench

Local instance MySQL80 X

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 join\_table\* Demo\_file3\* X

Dont Limit

MANAGEMENT

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INSTANCE

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Administration Schemas

Information

No object selected

Result Grid | Filter Rows: [ ] | Edit: [ ] | Export/Import: [ ] | Wrap Cell Content: [ ]

custid	fname	mname	lname	city	age	mobilenr	occupation	dob
C00001	Ramesh	Chandra	Sharma	Delhi	45	9543198345	Service	1976-12-06
C00004	Parul		Gandhi	Delhi	46	9876532109	Housewife	1976-11-03
C00007	Amit	Kumar	Borkar	Mumbai	76	9875189761	Student	1981-09-06
C00009	Abhishek		Dutta	Kokata	67	9856198761	Service	1973-05-22
C00010	Shankar		Nair	Chennai	90	8765489076	Service	1976-07-12
*	HELL	HELL	HELL	HELL	HELL	HELL	HELL	HELL

customer 14 X

Output

Action Output

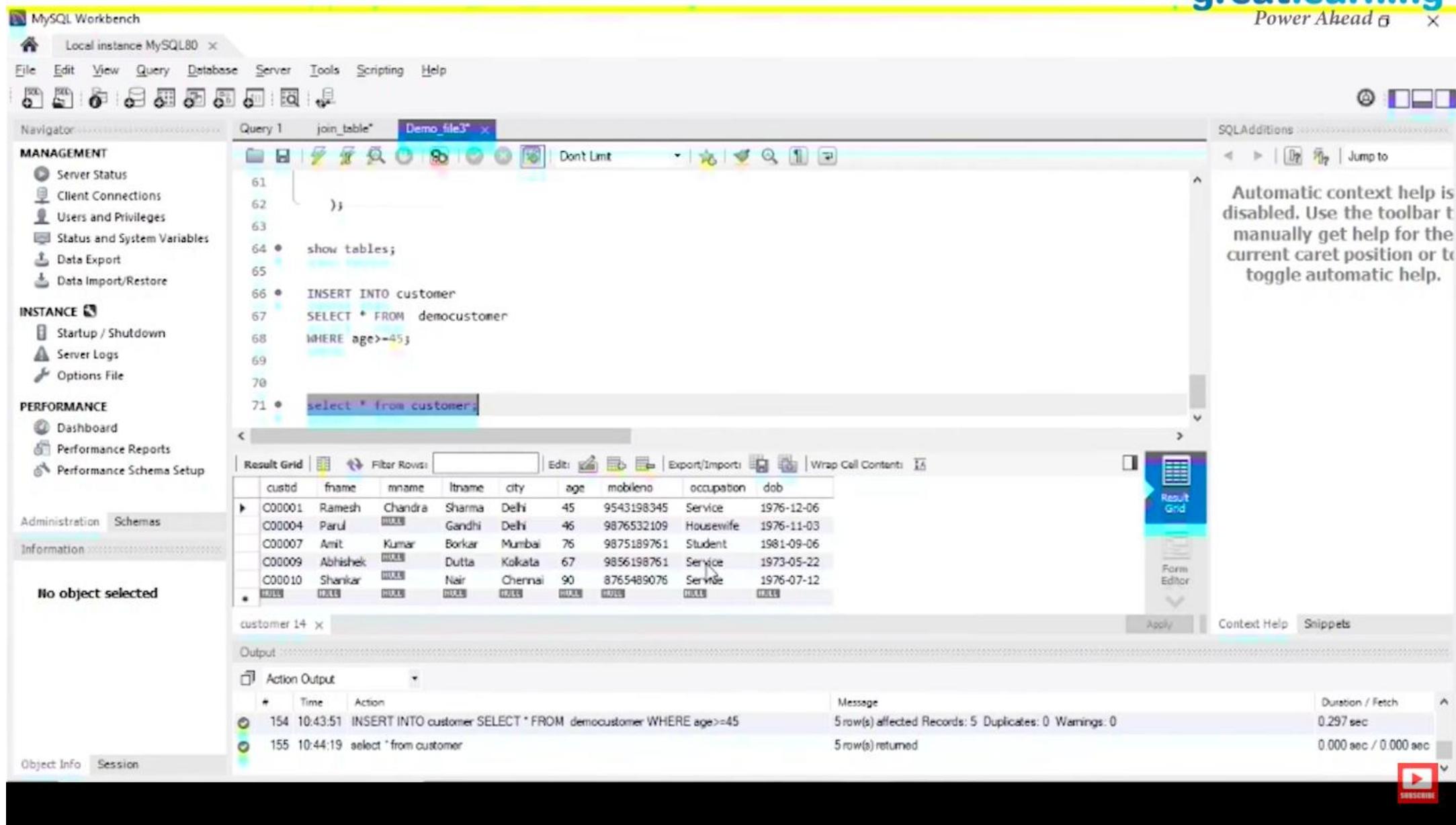
#	Time	Action	Message	Duration / Fetch
154	10:43:51	INSERT INTO customer SELECT * FROM democustomer WHERE age>=45	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.297 sec
155	10:44:19	select * from customer	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Context Help Snippets

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.



MySQL Workbench

Local instance MySQL80 X

File Edit View Query Database Server Tools Scripting Help

Navigator Query 1 join\_table\* Demo\_file3\* SQLAdditions

Dont Limit Jump to

**MANAGEMENT**

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**PERFORMANCE**

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- Performance Schema Setup

Administration Schemas

Information

No object selected

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

custid	fname	mname	lname	city	age	mobilenr	occupation	dob
C00001	Ramesh	Chandra	Sharma	Delhi	47	9543198345	Service	1976-12-06
C00004	Parul		Gandhi	Delhi	48	9876532109	Housewife	1976-11-03
C00007	Amit	Kumar	Borkar	Mumbai	78	9875189761	Student	1981-09-06
C00009	Abhishek		Dutta	Kokata	69	9856198761	Service	1973-05-22
C00010	Shankar		Nair	Chennai	92	8765489076	Service	1976-07-12
*	HELL	HELL	HELL	HELL	HELL	HELL	HELL	HELL

customer 15 X Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
158	10:47:10	UPDATE customer SET age = age+2 WHERE age in (select age from democustomer wh...	5 row(s) affected Rows matched: 5 Changed: 5 Warnings: 0	0.110 sec
159	10:47:25	select *from customer	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

## Operators: ANY (Used with clause)

The ANY operator only fetch the values if any of the subquery values meet the condition.



MySQL Workbench

Local instance MySQL80 X

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 join table\* Demo\_file3 bank\_database\*

SQLAdditions

MANAGEMENT

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PERFORMANCE

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- Performance Schema Setup

Administration Schemas

Information

No object selected

Dont Limit

```

31 • INSERT INTO dataofcustomer VALUES('C00007','Amit','Kumar','Borkar','Mumbai',76,'9875189761',^
32 • INSERT INTO dataofcustomer VALUES('C00008','Nisha',null,'Damle','Mumbai',43,'7954198761','Se
33 • INSERT INTO dataofcustomer VALUES('C00009','Abhishek',null,'Dutta','Kolkata',67,'9856198761'
34 • INSERT INTO dataofcustomer VALUES('C00010','Shankar',null,'Nair','Chennai',90,'8765489076',
35
36 • show tables;
37
38 • select * from dataofcustomer;
39
40 • select min(id) from dataofcustomer;
    
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: | Result Grid | Form Editor | Context Help | Snippets

custid	fname	mname	lname	city	age	mobilenr	occupation	dob
C00005	Naveen	Chandra	Aedekar	Mumbai	23	8976523190	Service	1976-09-19
C00006	Chitresh		Barwe	Mumbai	18	7651298321	Student	1992-11-06
C00007	Amit	Kumar	Borkar	Mumbai	76	9875189761	Student	1981-09-06
C00008	Nisha		Damle	Mumbai	43	7954198761	Service	1975-12-03
C00009	Abhishek		Dutta	Kolkata	67	9856198761	Service	1973-05-22
C00010	Shankar		Nair	Chennai	90	8765489076	Service	1976-07-12

dataofcustomer 19 X

Output

Action Output

#	Time	Action	Message	Duration / Fetch
62	13:39:05	INSERT INTO dataofcustomer VALUES('C00010','Shankar',null,'Nair','Chennai',90,'8765489...)	1 row(s) affected	0.125 sec
63	13:39:37	select * from dataofcustomer	10 row(s) returned	0.032 sec / 0.000 sec

Object Info Session

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Demo\_file3 bank\_database\*

Query 1: join table\*

MANAGEMENT

- Server Status
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- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

- Dashboard
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- Performance Schema Setup

Administration Schemas

Information: No object selected

197

198 • select custid from account where custid = any (select custid from dataofcustomer where city = 'Delhi')

199

200 • select \* from account where custid = any (select custid from dataofcustomer where city = 'Delhi')

201

202

203 • select custid from account where custid = all (select custid from dataofcustomer where city = 'Delhi')

204

205

206 • select custid from dataofcustomer where city = 'Delhi';

207

208 • select \* from account;

209

210

Output

Action Output

Time	Action	Message	Duration / Fetch
82 13:45:29	select custid from account where custid = any (select custid from dataofcustomer where city ...	7 row(s) returned	0.000 sec / 0.00
83 13:45:54	select * from account where custid = any (select custid from dataofcustomer where city = 'Delhi')	7 row(s) returned	0.000 sec / 0.00

4:35:48 / 9:02:44 • Subquery in SQL >

The ALL operator only fetch the values if all of the subquery values meet the condition.



MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Demo\_file3 bank\_database\*

Query 1: join\_table\*

MANAGEMENT

- Server Status
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- Users and Privileges
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INSTANCE

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PERFORMANCE

- Dashboard
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- Performance Schema Setup

Administration Schemas

No object selected

account 30

Output

Action Output

Time	Action	Message	Duration / Fetch
84 13:46:29	select custid from account where custid = any (select custid from dataofcustomer where city ...	7 row(s) returned	0.000 sec / 0.00
85 13:49:40	select custid from account where custid = all (select custid from dataofcustomer where city ...	0 row(s) returned	0.000 sec / 0.00

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Result Grid

Form Editor

Read Only Context Help Snippets

4:38:57 / 9:02:44 • Subquery in SQL >

- First the CASE statement reads through all the conditions and returns a value when the first condition is met like an IF-THEN-ELSE statement
- When a condition is true, automatically it will stop reading and return the result
- If no conditions are true then it will return the value in the ELSE clause
- If there is no ELSE part and no conditions are true, it returns NULL



MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Query 1 join table\* Demo\_file3 bank\_database\*

SQLAdditions

MANAGEMENT

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- Data Import/Restore

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PERFORMANCE

- Dashboard
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- Performance Schema Setup

Administration Schemas

No object selected

account.30

Output

Action Output

#	Time	Action	Message	Duration / Fetch
84	13:46:29	select custid from account where custid = any (select custid from dataofcustomer where city ...	7 row(s) returned	0.000 sec / 0.000 sec
85	13:49:40	select custid from account where custid = all (select custid from dataofcustomer where city = ...	0 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Result Grid Form Editor

Read Only Context Help Snippets

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator Query 1 join table\* Demo\_file3 bank\_database\*

SQLAdditions

MANAGEMENT

- Server Status
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Administration Schemas

Information

No object selected

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

custid	fname	age	Age
C00001	Ramesh	45	The age is greater than 30
C00002	Avinash	32	The age is greater than 30
C00003	Rahul	24	The age is not group of 30
C00004	Parul	46	The age is greater than 30
C00005	Naveen	23	The age is not group of 30
C00006	Chitresh	18	The age is not group of 30

Result 31

Output

Action Output

#	Time	Action	Message	Duration / Fetch
85	13:49:40	select custid from account where custid = all (select custid from dataofcustomer where city = ...)	0 row(s) returned	0.000 sec / 0.000 sec
86	13:56:16	SELECT custid,fname,age,CASE WHEN age > 30 THEN 'The age is greater than 30' ...	10 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Read Only Context Help Snippets

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator Query 1 join table\* Demo\_file3 bank\_database\*

SQLAdditions

MANAGEMENT

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Administration Schemas

Information

No object selected

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

custid	fname	age	Age_Information
C00005	Naveen	23	The age is not group of 30
C00006	Chitresh	18	The age is not group of 30
C00007	Amit	76	The age is greater than 30
C00008	Nisha	43	The age is greater than 30
C00009	Abhishek	67	The age is greater than 30
C00010	Shankar	90	The age is greater than 30

Result 32 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
86	13:56:16	SELECT custid, fname, age, CASE WHEN age > 30 THEN 'The age is greater than 30' ELSE 'The age is not group of 30' END AS Age_Information FROM dataofcustomer	... 10 row(s) returned	0.000 sec / 0.000 sec
87	13:56:37	SELECT custid, fname, age, CASE WHEN age > 30 THEN 'The age is greater than 30' ELSE 'The age is not group of 30' END AS Age_Information FROM dataofcustomer	... 10 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Subscribe

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

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Administration Schemas

Information

No object selected

Query 1 join table\* Demo\_file3 bank\_database\*

236 • `select * from Agoodcustomers;`  
Execute the selected portion of the script or everything, if there is no selection

237

238

239 • `SELECT custid, fname, age, occupation,`

240 `CASE`

241     `WHEN occupation = "Service" THEN 'The person works in an organization'`

242     `WHEN occupation = "Student" THEN 'The person is a student'`

243     `ELSE 'The other occupation'`

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

custid	fname	age	occupation	occupation_information
C00001	Ramesh	45	Service	The person works in an organization
C00002	Avinash	32	Service	The person works in an organization
C00003	Rahul	24	Student	The person is a student
C00004	Parul	46	Housewife	The other occupation
C00005	Naveen	23	Service	The person works in an organization
C00006	Chitresh	18	Student	The person is a student

Result 35 ×

Output

Action Output

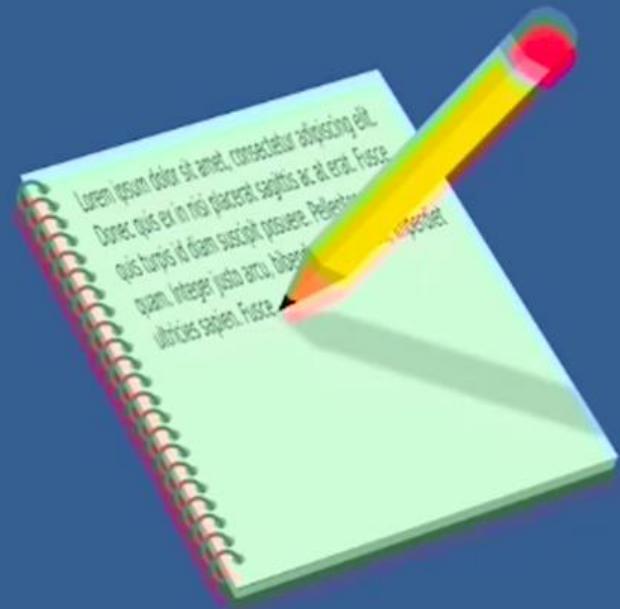
#	Time	Action	Message	Duration / Fetch
89	13:59:34	select * from dataofcustomer	10 row(s) returned	0.000 sec / 0.000 sec
90	14:02:16	SELECT custid, fname, age, occupation, CASE WHEN occupation = "Service" THEN Th...	10 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

- **View stands for virtual table which is based on the result-set of an SQL statement**
- **Normally in view, it contains rows and columns which is like a real table.**
- **The fields in a view are fields from one or more real tables in the database.**



MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator Query 1 join table\* Demo\_file3 bank\_database\*

SQLAdditions

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Information

No object selected

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

custid	fname	age	occupation	occupation_information
C00005	Naveen	23	Service	The person works in an organization
C00006	Chitresh	18	Student	The person is a student
C00007	Amit	76	Student	The person is a student
C00008	Nisha	43	Service	The person works in an organization
C00009	Abhishek	67	Service	The person works in an organization
C00010	Shankar	90	Service	The person works in an organization

Result 35 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
89	13:59:34	select * from dataofcustomer	10 row(s) returned	0.000 sec / 0.000 sec
90	14:02:16	SELECT custid, fname, age, occupation, CASE WHEN occupation = "Service" THEN "The person works in an organization" WHEN occupation = "Student" THEN "The person is a student" ELSE "The person works in an organization" END AS occupation_information FROM dataofcustomer	10 row(s) returned	0.000 sec / 0.000 sec

Object Info Session