MYSQL PROJECT

BY

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SQL

- SQL stands for Structured Query Language.
- SQL is a standard language for accessing and manipulating databases.
- SQL is used to perform operations on the records stored in the database, such as updating records, inserting records, deleting records, creating and modifying database tables, views, etc.

DBMS

- Database management system is a software which is used to manage the database. For example: MySQL, Oracle, etc, are a very popular commercial database which is used in different applications.

- DBMS provides an interface to perform various operations like database creation, storing data in it, updating data, creating a table in the database and a lot more.

DATABASE

- A **database** is an organized collection of data, so that it can be easily accessed and managed.

- The **main purpose** of the database is to operate a large amount of information by storing, retrieving, and managing data.

- There are many **databases available** like MySQL, Sybase, Oracle, MongoDB, Informix, PostgreSQL, SQL Server, etc.

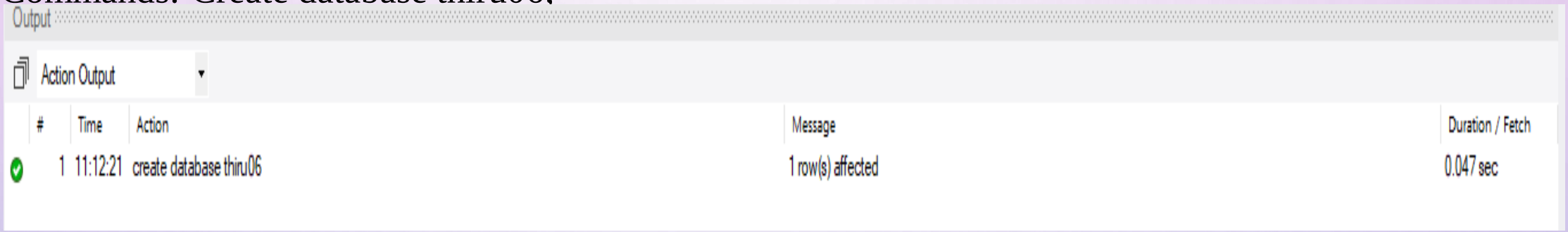
My SQL Main Commands

- Create database (Create a New Database)
- Show Database (View Databases)
- Drop Database
- Alter Database (Modify Database)
- Create Tables
- Show tables
- Insert Values
- Drop Table
- Alter table (For New Column Creation)
- Alter Table Modify
- Alter table Drop (Drop the Column)
- Alter table Rename (Rename the Table)
- Update Table (To change the Values)
- Delete Statement

Create database

The create database statement is used to create a new SQL database.

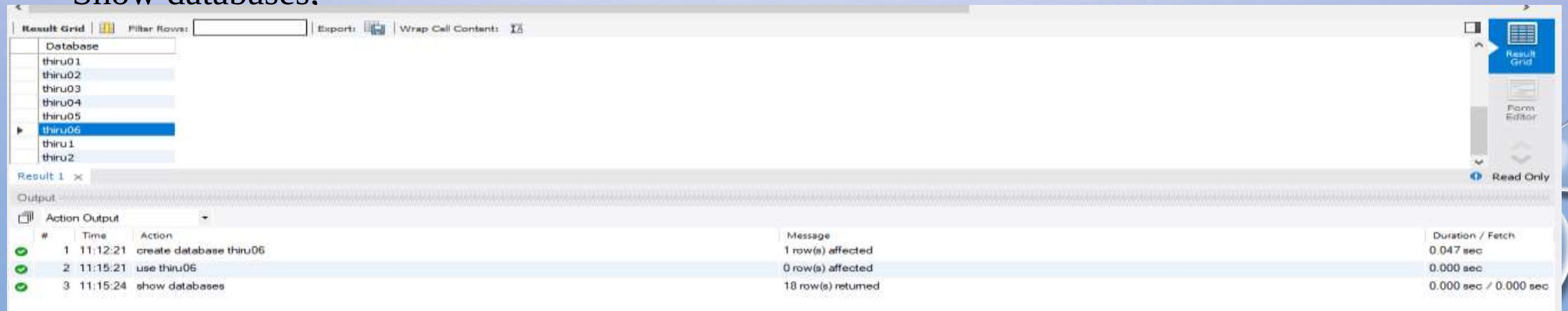
Commands: Create database thiru06;



Show Database

Commands:

- Create database thiru06;
- Use thiru06;
- Show databases;



CREATE TABLE

The CREATE TABLE statement is used to create a new table in a database

Commands:

1. create table Emp_det(Emp_id int, Emp_name varchar(20), Designation_id int, Dep_no int, Date_of_Joining date, primary key (Emp_id));

2. create table Salary_det(Salary_id int,Emp_id int,Salary_Date Date,Branch_id int,Amount int);

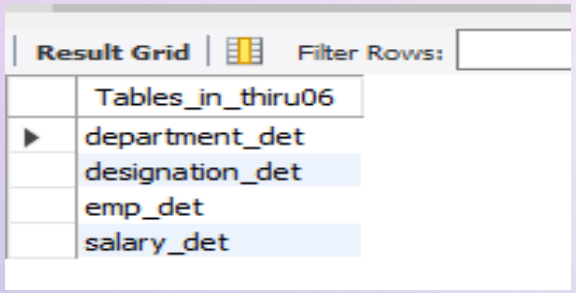
3. create table Designation_det(Designation_id int,Designation varchar(20));

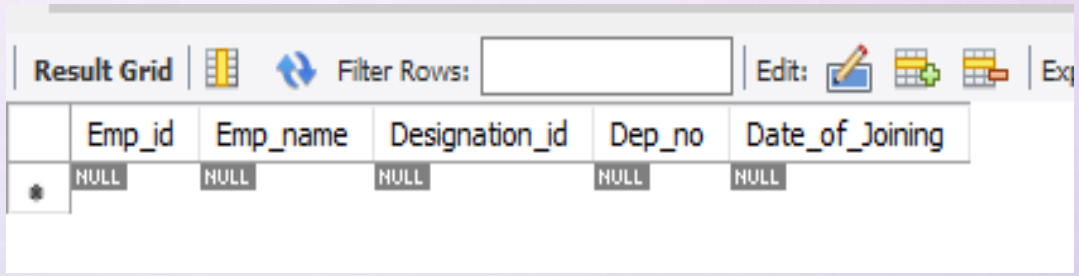
4. create table Department_det(Dep_no int,Dep_name varchar(20),Branch_id int,Branch_name varchar(20));

Show table

Commands:

- Show tables;
- Select * from Emp_det;

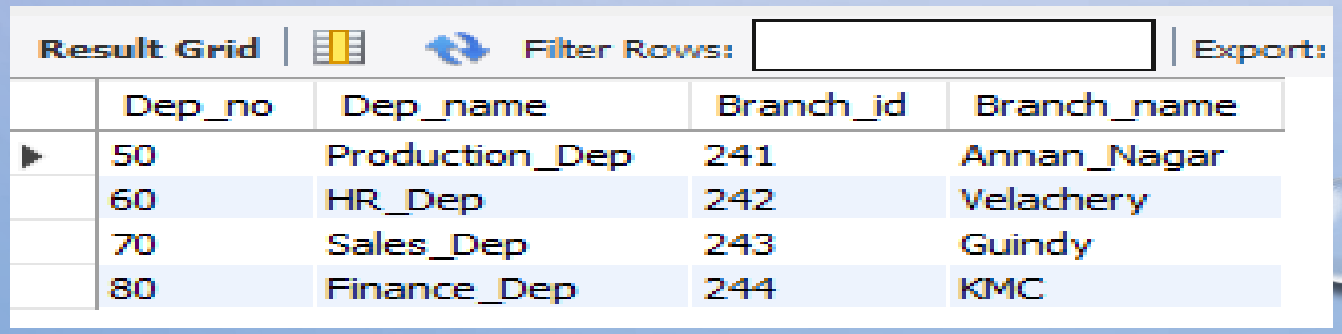




Insert Values

Commands:

- insert into Department_det values
- (50, 'Production_Dep', 241, 'Annan_Nagar'),(60, 'HR_Dep', 242, 'Velachery'),(70, 'Sales_Dep', 243, 'Guindy'),(80, 'Finance_Dep', 244, 'KMC');
- select * from Department_det;

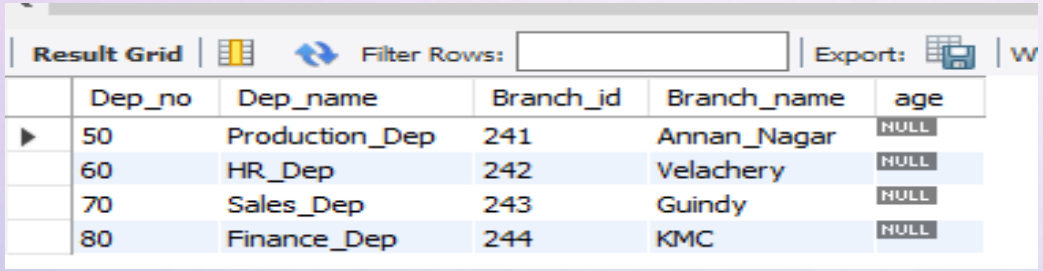


Drop Table

Commands: drop table Department_det;

Alter table

Command : alter table Department_det add age varchar(20);


Result Grid | Filter Rows: | Export: | W

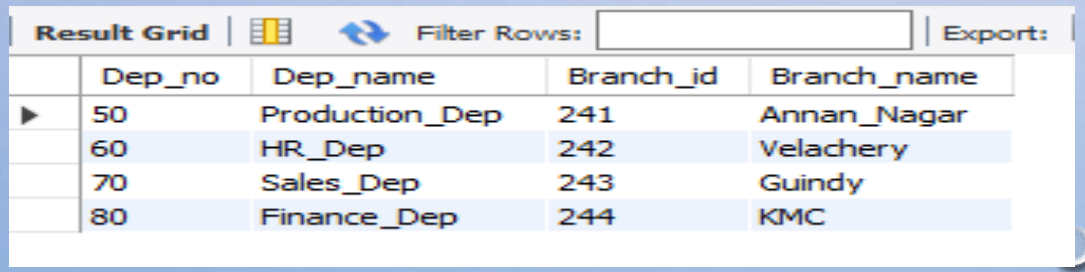
Dep_no	Dep_name	Branch_id	Branch_name	age
50	Production_Dep	241	Annan_Nagar	NULL
60	HR_Dep	242	Velachery	NULL
70	Sales_Dep	243	Guindy	NULL
80	Finance_Dep	244	KMC	NULL

Alter Table Modify:

Command: alter table Department_det modify age varchar(5);

Alter table Drop

Command: alter table Department_det drop column age;


Result Grid | Filter Rows: | Export:

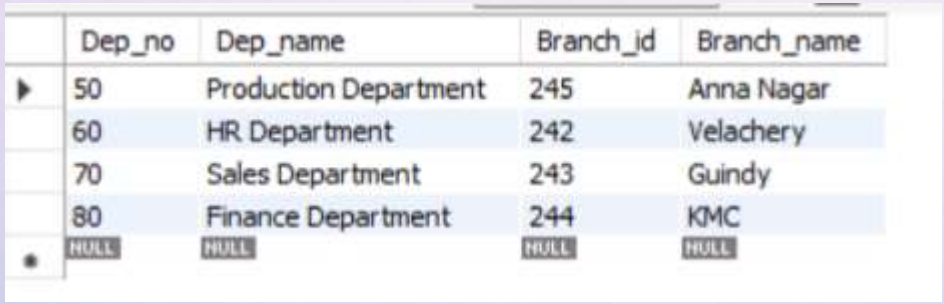
Dep_no	Dep_name	Branch_id	Branch_name
50	Production_Dep	241	Annan_Nagar
60	HR_Dep	242	Velachery
70	Sales_Dep	243	Guindy
80	Finance_Dep	244	KMC

Alter table Rename (Rename the Table)

Command:- alter table Department_det Rename Dep_det;

Update Table (To change the Values)

Command:- update Dep_det set Branch_id = 245 where Dep_no = 50;



Dep_no	Dep_name	Branch_id	Branch_name
50	Production Department	245	Anna Nagar
60	HR Department	242	Velachery
70	Sales Department	243	Guindy
80	Finance Department	244	KMC
NULL	NULL	NULL	NULL

Delete Statement

Command: Delete from Dep_det where Branch_id = 245;

Result Grid | Filter Rows: | Edit:

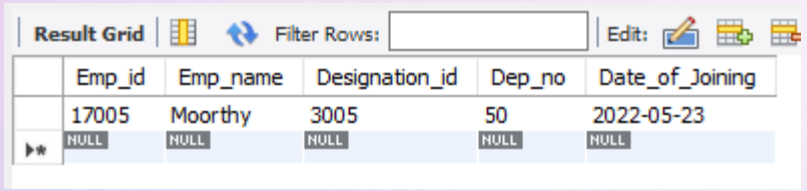
Dep_no	Dep_name	Branch_id	Branch_name
60	HR Department	242	Velachery
70	Sales Department	243	Guindy
80	Finance Department	244	KMC
NULL	NULL	NULL	NULL

My SQL General Functions

- Where
- Or
- In
- >
- <
- >=
- <=
- Not in
- !
- Count
- Distinct
- Count with distinct
- Order by desc
- Order by asc
- Group by
- Limit
- Desc limit
- Like
- Not like
- Between

Where

Command: Select * from Emp_det where Emp_id= 17005;

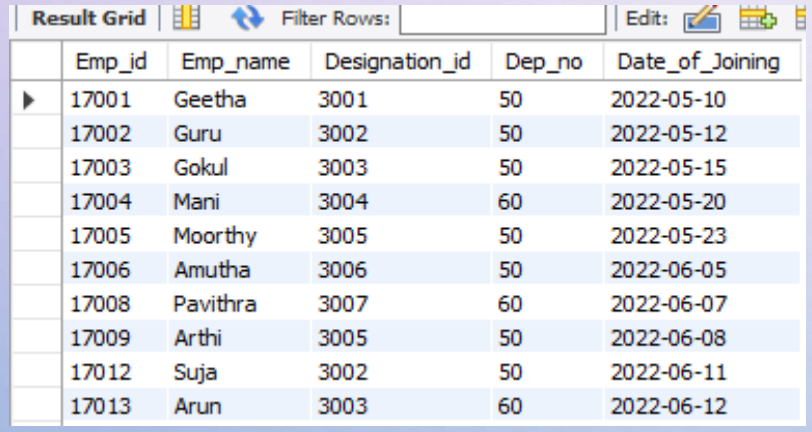


Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17005	Moorthy	3005	50	2022-05-23
NULL	NULL	NULL	NULL	NULL

Or

Command: Select * from Emp_det where Dep_no = 50 or Dep_no = 60;



Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17001	Geetha	3001	50	2022-05-10
17002	Guru	3002	50	2022-05-12
17003	Gokul	3003	50	2022-05-15
17004	Mani	3004	60	2022-05-20
17005	Moorthy	3005	50	2022-05-23
17006	Amutha	3006	50	2022-06-05
17008	Pavithra	3007	60	2022-06-07
17009	Arthi	3005	50	2022-06-08
17012	Suja	3002	50	2022-06-11
17013	Arun	3003	60	2022-06-12

And

Command: Select * from Emp_det where Dep_no = 50 and Designation_id = 3005;

Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17005	Moorthy	3005	50	2022-05-23
17009	Arthi	3005	50	2022-06-08
NULL	NULL	NULL	NULL	NULL

In

Command: select * from Emp_det where Emp_name in('Mani','Arthi');

Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17004	Mani	3004	60	2022-05-20
17009	Arthi	3005	50	2022-06-08
NULL	NULL	NULL	NULL	NULL

Not in

Command: select * from Emp_det where Emp_name Not in ('Mani','Arthi');

Result Grid | Filter Rows: | Edit: | Export

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17001	Geetha	3001	50	2022-05-10
17002	Guru	3002	50	2022-05-12
17003	Gokul	3003	50	2022-05-15
17005	Moorthy	3005	50	2022-05-23
17006	Amutha	3006	50	2022-06-05
17007	Jaga	3003	70	2022-06-06
17008	Pavithra	3007	60	2022-06-07
17010	Kabilan	3006	70	2022-06-09
17011	Manasi	3001	70	2022-06-10

>

Command: select * from Salary_det where Amount > 20000 ;

Result Grid | Filter Rows: | Export:

Salary_id	Emp_id	Salary_Date	Branch_id	Amount
18001	17001	2022-06-10	241	35000
18003	17003	2022-06-15	241	28000
18005	17005	2022-06-23	241	30000
18006	17006	2022-07-06	241	23000
18007	17007	2022-07-07	243	28000
18009	17009	2022-07-09	241	30000
18010	17010	2022-07-10	243	23000
18011	17011	2022-07-11	243	35000

<

Command: select * from Salary_det where Amount < 30000;

Result Grid | Filter Rows: | Export:

Salary_id	Emp_id	Salary_Date	Branch_id	Amount
18002	17002	2022-06-12	241	14000
18003	17003	2022-06-15	241	28000
18004	18003	2022-06-20	242	18000
18006	17006	2022-07-06	241	23000
18007	17007	2022-07-07	243	28000
18008	17008	2022-07-08	242	18000
18010	17010	2022-07-10	243	23000

>= **and** <=

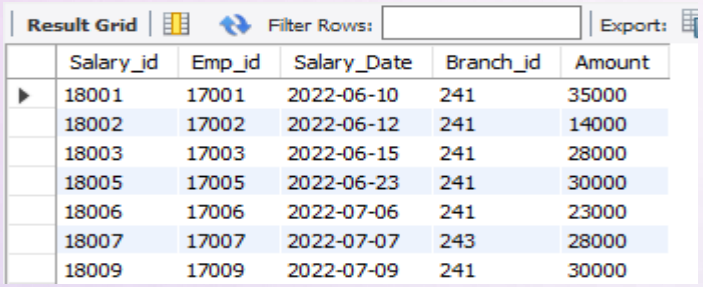
Command: select * from Salary_det where Amount >= 20000 and Amount <=30000;

Result Grid | Filter Rows: | Export:

Salary_id	Emp_id	Salary_Date	Branch_id	Amount
18003	17003	2022-06-15	241	28000
18005	17005	2022-06-23	241	30000
18006	17006	2022-07-06	241	23000
18007	17007	2022-07-07	243	28000
18009	17009	2022-07-09	241	30000
18010	17010	2022-07-10	243	23000
18013	17013	2022-07-13	242	28000

!

Command: Select * from Salary_det where Amount != 18000;

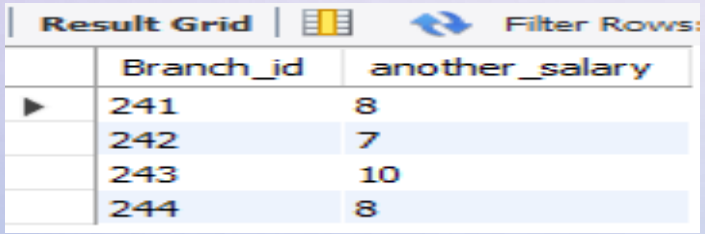


Result Grid | Filter Rows: | Export:

Salary_id	Emp_id	Salary_Date	Branch_id	Amount
18001	17001	2022-06-10	241	35000
18002	17002	2022-06-12	241	14000
18003	17003	2022-06-15	241	28000
18005	17005	2022-06-23	241	30000
18006	17006	2022-07-06	241	23000
18007	17007	2022-07-07	243	28000
18009	17009	2022-07-09	241	30000

Count

Command: select Branch_id, Count(Amount) as another_salary from Salary_det group by Branch_id;

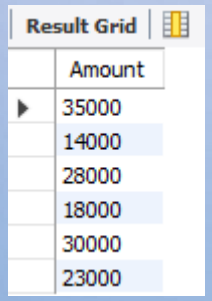


Result Grid | Filter Rows:

Branch_id	another_salary
241	8
242	7
243	10
244	8

Distinct

Command: Select Distinct Amount from Salary_det;



Result Grid

Amount
35000
14000
28000
18000
30000
23000

Count With Distinct

Command: Select count(Distinct Amount) from Salary_det;

Result Grid | Filter Rc

count(Distinct Amount)
6

Order by asc

Command: select * from Emp_det order by Emp_name asc;

Order by desc

Command: select * from Emp_det order by Emp_name desc;

Result Grid | Filter Rows: | Edit:

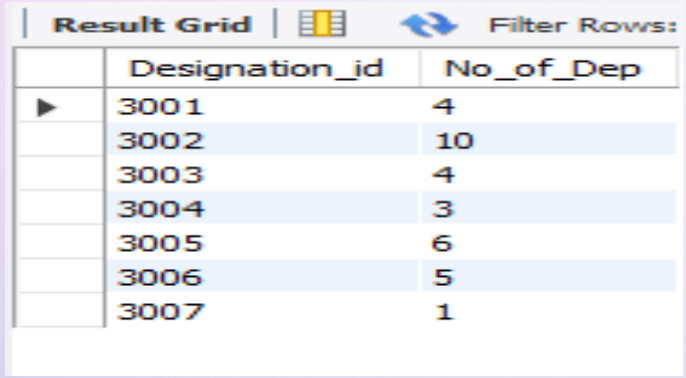
Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17006	Amutha	3006	50	2022-06-05
17009	Arthi	3005	50	2022-06-08
17013	Arun	3003	60	2022-06-12
17014	Deepa	3004	60	2022-06-13
17025	Devan	3006	60	2022-06-24
17024	Devi	3005	70	2022-06-23
17032	ganesan	3006	80	2022-07-01
17001	Geetha	3001	50	2022-05-10

Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17027	Venkatesh	3003	80	2022-06-26
17021	Veeramani	3002	80	2022-06-20
17023	Veera	3002	80	2022-06-22
17017	Swetha	3002	70	2022-06-16
17012	Suja	3002	50	2022-06-11
17031	srinivasan	3005	70	2022-06-30
17015	Sindhu	3005	80	2022-06-14
17018	Selvi	3002	70	2022-06-17

Group By

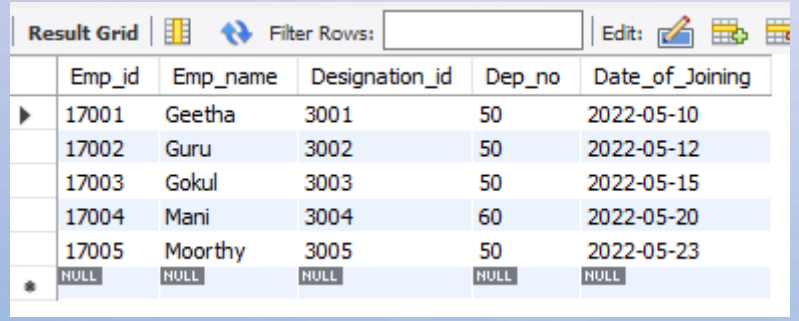
Command: Select Designation_id, count(Dep_no) as No_of_Dep from Emp_det group by Designation_id;



Designation_id	No_of_Dep
3001	4
3002	10
3003	4
3004	3
3005	6
3006	5
3007	1

Limit

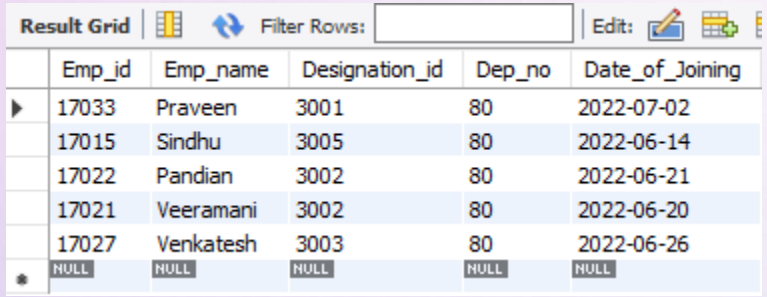
Command: select * from Emp_det limit 0,5;



Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17001	Geetha	3001	50	2022-05-10
17002	Guru	3002	50	2022-05-12
17003	Gokul	3003	50	2022-05-15
17004	Mani	3004	60	2022-05-20
17005	Moorthy	3005	50	2022-05-23
NULL	NULL	NULL	NULL	NULL

Desc Limit

Command: select * from Emp_det order by Dep_no Desc limit 0,5;

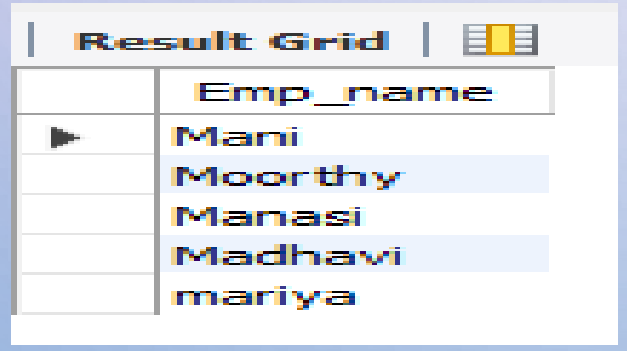


Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17033	Praveen	3001	80	2022-07-02
17015	Sindhu	3005	80	2022-06-14
17022	Pandian	3002	80	2022-06-21
17021	Veeramani	3002	80	2022-06-20
17027	Venkatesh	3003	80	2022-06-26
NULL	NULL	NULL	NULL	NULL

Like (_%)

Command: select Emp_name from Emp_det where Emp_name like‘m%';

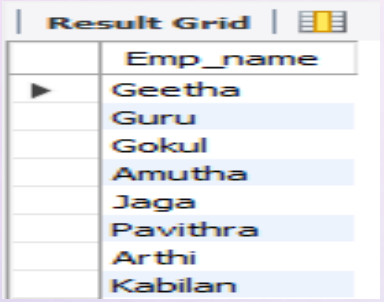


Result Grid

Emp_name
Mani
Moorthy
Manasi
Madhavi
mariya

Not like

Command: select Emp_name from Emp_det where Emp_name not like‘m%';

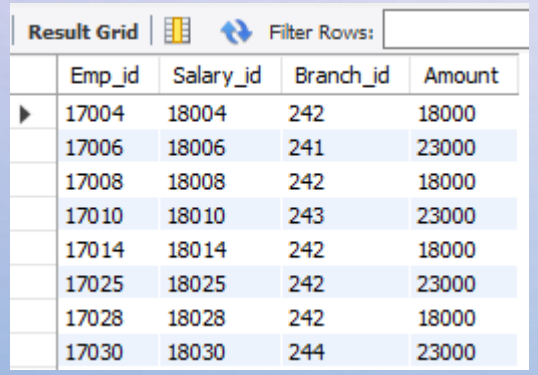


Result Grid

Emp_name
Geetha
Guru
Gokul
Amutha
Jaga
Pavithra
Arthi
Kabilan

Between

Command: select Emp_id,Salary_id, Branch_id, Amount from Salary_det where Amount between 15000 and 25000;



Result Grid Filter Rows:

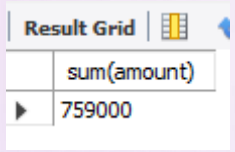
Emp_id	Salary_id	Branch_id	Amount
17004	18004	242	18000
17006	18006	241	23000
17008	18008	242	18000
17010	18010	243	23000
17014	18014	242	18000
17025	18025	242	23000
17028	18028	242	18000
17030	18030	244	23000

My SQL calculate functions

- Sum
- Average
- Min
- Max
- Count

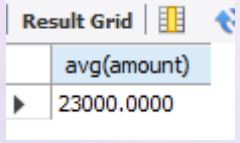
Sum

Command: select sum(amount) from salary_det;



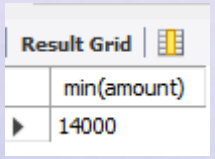
Average

Command: select avg(amount) from salary_det;



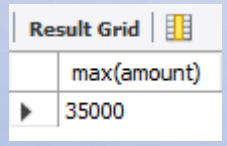
Min

Command: select min(amount) from salary_det;



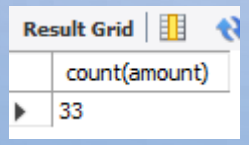
Max

Command: select max(amount) from salary_det;



Count

Command: select count(amount) from salary_det;

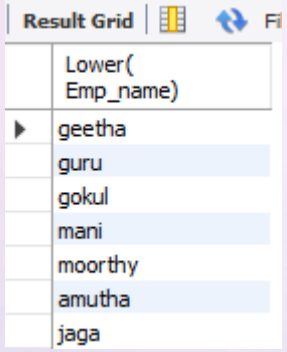


My SQL String Functions

- Lcase
- Ucase
- Left
- Right
- Concat
- Trim
- Char_Length
- Mid
- Length

Lower

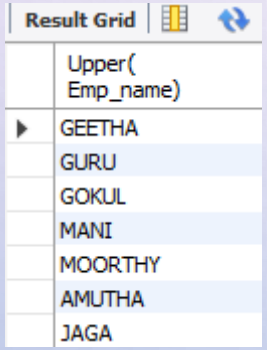
Command: select Lower(Emp_name) from Emp_det;



Lower(Emp_name)
geetha
guru
gokul
mani
moorthy
amutha
jaga

Upper

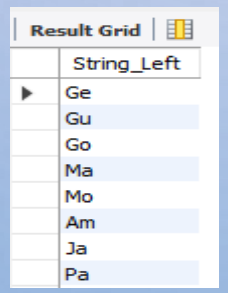
Command: select Upper(Emp_name) from Emp_det;



Upper(Emp_name)
GEETHA
GURU
GOKUL
MANI
MOORTHY
AMUTHA
JAGA

Left

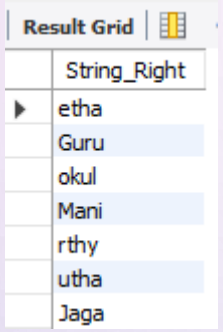
Command: select Left(Emp_name, 2) as String_Left from Emp_det;



String_Left
Ge
Gu
Go
Ma
Mo
Am
Ja
Pa

Right

Command: select Right(Emp_name, 4) as String_Right from Emp_det;

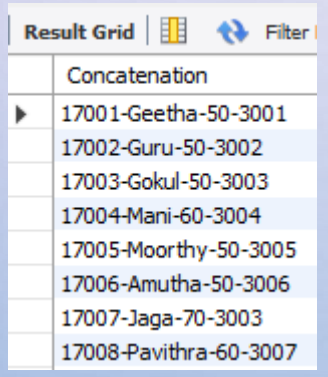


Result Grid

String_Right
etha
Guru
okul
Mani
rthy
utha
Jaga

Concat

Command: select concat(Emp_id,"-", Emp_name,"-", Dep_no,"-",Designation_id) as Concatenation from Emp_det;

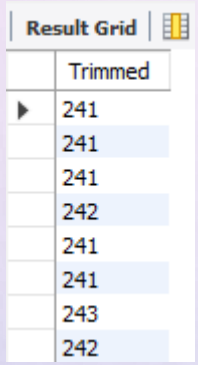


Result Grid Filter

Concatenation
17001-Geetha-50-3001
17002-Guru-50-3002
17003-Gokul-50-3003
17004-Mani-60-3004
17005-Moorthy-50-3005
17006-Amutha-50-3006
17007-Jaga-70-3003
17008-Pavithra-60-3007

Trim

Command: select trim(Branch_id) as Trimmed from Salary_det;

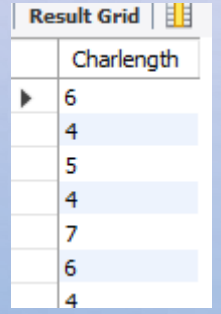


Result Grid

	Trimmed
▶	241
	241
	241
	242
	241
	241
	243
	242

Char_lenght

Command: select char_length(Emp_name) as Charlength from Emp_det;

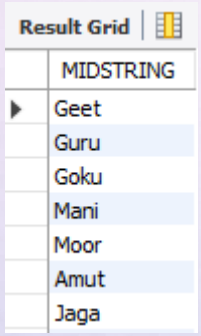


Result Grid

	Charlength
▶	6
	4
	5
	4
	7
	6
	4

Mid

Command: select mid(Emp_name,1, 4) as MIDSTRING from Emp_det;



Result Grid

MIDSTRING
Geet
Guru
Goku
Mani
Moor
Amut
Jaga

Lenght

Command: select length(Emp_name) as Lengthofstring from Emp_det;

Result Grid

Lengthofstring
6
4
5
4
7
6
4

My SQL Date Functions

- Date ADD
- Date diff
- Timestamp Diff
- Date Format
- Year
- Day
- Month
- Now

Date add

Command: select * from Emp_det where(Date_of_joining)='2022/05/12';

Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17002	Guru	3002	50	2022-05-12
NULL	NULL	NULL	NULL	NULL

Month

Command: select * from Emp_det where month(Date_of_joining)='5';

Result Grid | Filter Rows: | Edit:

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining
17001	Geetha	3001	50	2022-05-10
17002	Guru	3002	50	2022-05-12
17003	Gokul	3003	50	2022-05-15
17004	Mani	3004	60	2022-05-20
17005	Moorthy	3005	50	2022-05-23
NULL	NULL	NULL	NULL	NULL

Year

Command: select * , date_add(date_of_joining,interval 2 year) as add_year from emp_det;

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

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining	add_year
17001	Geetha	3001	50	2022-05-10	2024-05-10
17002	Guru	3002	50	2022-05-12	2024-05-12
17003	Gokul	3003	50	2022-05-15	2024-05-15
17004	Mani	3004	60	2022-05-20	2024-05-20
17005	Moorthy	3005	50	2022-05-23	2024-05-23
17006	Amutha	3006	50	2022-06-05	2024-06-05
17007	Jaga	3003	70	2022-06-06	2024-06-06

Now

Command: select * , now() from emp_det;

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

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining	now()
17001	Geetha	3001	50	2022-05-10	2024-01-21 23:27:46
17002	Guru	3002	50	2022-05-12	2024-01-21 23:27:46
17003	Gokul	3003	50	2022-05-15	2024-01-21 23:27:46
17004	Mani	3004	60	2022-05-20	2024-01-21 23:27:46
17005	Moorthy	3005	50	2022-05-23	2024-01-21 23:27:46
17006	Amutha	3006	50	2022-06-05	2024-01-21 23:27:46
17007	Jaga	3003	70	2022-06-06	2024-01-21 23:27:46
17008	Pavithra	3007	60	2022-06-07	2024-01-21 23:27:46

datediff

Command: select *, datediff(curdate(), date_of_join)/365as emp_exp from emp_det;

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

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining	Emp_exp
17001	Geetha	3001	50	2022-05-10	1.7041
17002	Guru	3002	50	2022-05-12	1.6986
17003	Gokul	3003	50	2022-05-15	1.6904
17004	Mani	3004	60	2022-05-20	1.6767
17005	Moorthy	3005	50	2022-05-23	1.6685
17006	Amutha	3006	50	2022-06-05	1.6329
17007	Jaga	3003	70	2022-06-06	1.6301

Timestampdiff

Command: select *, timestampdiff(year, Date_of_joining, sysdate()) as Emp_exp from Emp_det;

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

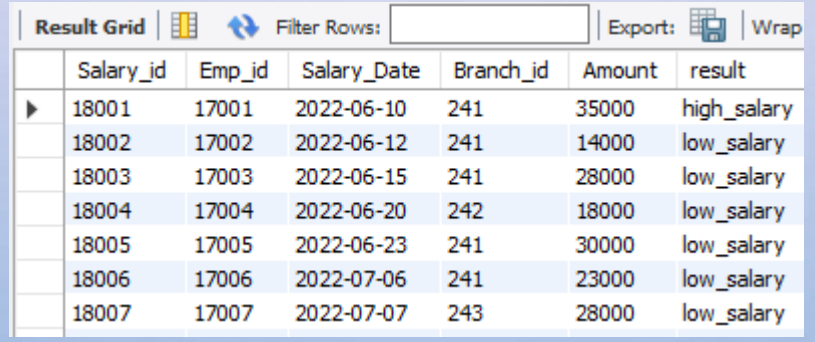
Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining	Emp_exp
17001	Geetha	3001	50	2022-05-10	1
17002	Guru	3002	50	2022-05-12	1
17003	Gokul	3003	50	2022-05-15	1
17004	Mani	3004	60	2022-05-20	1
17005	Moorthy	3005	50	2022-05-23	1
17006	Amutha	3006	50	2022-06-05	1
17007	Jaga	3003	70	2022-06-06	1

Logical Functions

- IF
- If with and conditons
- If with or conditions
- Count If

If

Command: select *, if(amount>=35000,'high_salary','low_salary') as result from Salary_det;

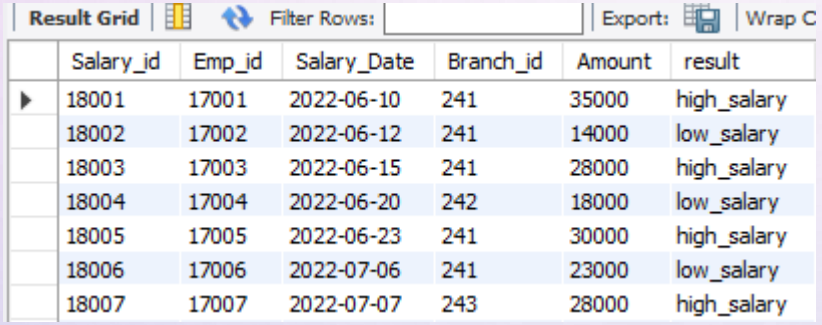


Result Grid | Filter Rows: | Export: | Wrap

Salary_id	Emp_id	Salary_Date	Branch_id	Amount	result
18001	17001	2022-06-10	241	35000	high_salary
18002	17002	2022-06-12	241	14000	low_salary
18003	17003	2022-06-15	241	28000	low_salary
18004	17004	2022-06-20	242	18000	low_salary
18005	17005	2022-06-23	241	30000	low_salary
18006	17006	2022-07-06	241	23000	low_salary
18007	17007	2022-07-07	243	28000	low_salary

If with and condition

Command: Salary_det;select *, if((amount>=25000) and (Branch_id>=241), 'high_salary','low_salary') as result from Salary_det;

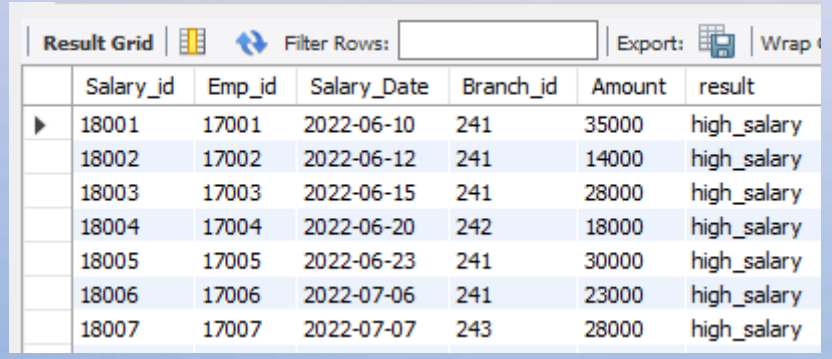


Result Grid | Filter Rows: | Export: | Wrap C

Salary_id	Emp_id	Salary_Date	Branch_id	Amount	result
18001	17001	2022-06-10	241	35000	high_salary
18002	17002	2022-06-12	241	14000	low_salary
18003	17003	2022-06-15	241	28000	high_salary
18004	17004	2022-06-20	242	18000	low_salary
18005	17005	2022-06-23	241	30000	high_salary
18006	17006	2022-07-06	241	23000	low_salary
18007	17007	2022-07-07	243	28000	high_salary

If with or condition

Command: select *, if((amount>=25000) or (Branch_id>=241),'high_salary','low_salary') as result from Salary_det;



Result Grid | Filter Rows: | Export: | Wrap

Salary_id	Emp_id	Salary_Date	Branch_id	Amount	result
18001	17001	2022-06-10	241	35000	high_salary
18002	17002	2022-06-12	241	14000	high_salary
18003	17003	2022-06-15	241	28000	high_salary
18004	17004	2022-06-20	242	18000	high_salary
18005	17005	2022-06-23	241	30000	high_salary
18006	17006	2022-07-06	241	23000	high_salary
18007	17007	2022-07-07	243	28000	high_salary

RDBMS System

- RDBMS stands for Relational Database Management System.
- RDBMS is a program used to maintain a relational database.
- RDBMS is the basis for all modern database systems such as MySQL, Microsoft SQL Server, Oracle, and Microsoft Access.
- RDBMS uses SQL queries to access the data in the database.

- Two table connection
- Three table connection

Two table connection

Command: select Emp_det.Emp_id, Emp_det.emp_name, Salary_det.Salary_id, salary_det.salary_date from Emp_det inner join Salary_det on Emp_det.Emp_id = Salary_det.Emp_id;

Result Grid | Filter Rows:

Emp_id	emp_name	Salary_id	salary_date
17001	Geetha	18001	2022-06-10
17002	Guru	18002	2022-06-12
17003	Gokul	18003	2022-06-15
17004	Mani	18004	2022-06-20
17005	Moorthy	18005	2022-06-23
17006	Amutha	18006	2022-07-06
17007	Jaga	18007	2022-07-07

Three table connection

Command: Select Emp_det.Emp_id,Emp_det.Emp_name,Emp_det.Designation_id,Emp_det.Date_Of_Joining,Salary_det.Salary_id,Salary_det.Salary_Date,Salary_det.Branch_id,Salary_det.Amount,Dep_det.Dep_no,Dep_det.Dep_name,Dep_det.Branch_name from Emp_det inner join Salary_det on Emp_det.Emp_id = Salary_det.Emp_id inner join Dep_det on Emp_det.Dep_no = Dep_det.Dep_no;

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

Emp_id	Emp_name	Designation_id	Date_Of_Joining	Salary_id	Salary_Date	Branch_id	Amount	Dep_no	Dep_name	Branch_name
17001	Geetha	3001	2022-05-10	18001	2022-06-10	241	35000	50	Production_Dep	Annan_Nagar
17002	Guru	3002	2022-05-12	18002	2022-06-12	241	14000	50	Production_Dep	Annan_Nagar
17003	Gokul	3003	2022-05-15	18003	2022-06-15	241	28000	50	Production_Dep	Annan_Nagar
17004	Mani	3004	2022-05-20	18004	2022-06-20	242	18000	60	HR_Dep	Velachery
17005	Moorthy	3005	2022-05-23	18005	2022-06-23	241	30000	50	Production_Dep	Annan_Nagar
17006	Amutha	3006	2022-06-05	18006	2022-07-06	241	23000	50	Production_Dep	Annan_Nagar
17007	Jaga	3003	2022-06-06	18007	2022-07-07	243	28000	70	Sales_Dep	Guindy

Join Queries

- Inner Join
- Left Join
- Right Join
- Cross join
- Full Outer Join
- Case and end
- when
- Then
- double case with end statement
- case with and statement
- case with or statement
- RDBMS with subqueries
- having clause
- basic joins Trigger (Create table after connections)

Inner join

Command: select * from Emp_det inner join Salary_det on Emp_det.Emp_id = Salary_det.Emp_id;

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

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining	Salary_id	Emp_id	Salary_Date	Branch_id	Amount
17001	Geetha	3001	50	2022-05-10	18001	17001	2022-06-10	241	35000
17002	Guru	3002	50	2022-05-12	18002	17002	2022-06-12	241	14000
17003	Gokul	3003	50	2022-05-15	18003	17003	2022-06-15	241	28000
17004	Mani	3004	60	2022-05-20	18004	17004	2022-06-20	242	18000
17005	Moorthy	3005	50	2022-05-23	18005	17005	2022-06-23	241	30000
17006	Amutha	3006	50	2022-06-05	18006	17006	2022-07-06	241	23000

Left join

Command: select * from Emp_det left join Salary_det on Emp_det.Emp_id = Salary_det.Emp_id;

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

emp_id	emp_name	designation_id	dep_no	date_of_join	salary_id	emp_id	salary_date	branch_id	amount
17025	Devan	3006	60	2022-06-24	18025	17025	2022-07-25	242	23000
17026	Keerthi	3001	60	2022-06-25	18026	17026	2022-07-26	242	35000
17027	Venkatesh	3003	80	2022-06-26	18027	17027	2022-07-27	244	28000
17028	Raja	3004	60	2022-06-27	18028	17028	2022-07-28	242	18000
17029	Priya	3005	70	2022-06-28	18029	17029	2022-07-29	243	30000
17030	mariya	3006	80	2022-06-29	18030	17030	2022-07-30	244	23000
17031	srinivasan	3005	70	2022-06-30	NULL	NULL	NULL	NULL	NULL

Right join

Command: select * from Emp_det right join Salary_det on Emp_det.Emp_id = Salary_det.Emp_id;

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

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining	Salary_id	Emp_id	Salary_Date	Branch_id	Amount
17001	Geetha	3001	50	2022-05-10	18001	17001	2022-06-10	241	35000
17002	Guru	3002	50	2022-05-12	18002	17002	2022-06-12	241	14000
17003	Gokul	3003	50	2022-05-15	18003	17003	2022-06-15	241	28000
17004	Mani	3004	60	2022-05-20	18004	17004	2022-06-20	242	18000
17005	Moorthy	3005	50	2022-05-23	18005	17005	2022-06-23	241	30000
17006	Amutha	3006	50	2022-06-05	18006	17006	2022-07-06	241	23000

Full outer join

- Command: (select * from Emp_det left join Salary_det on Emp_det.Emp_id = Salary_det.Emp_id) union(select * from Emp_det right join Salary_det on Emp_det.Emp_id = Salary_det.Emp_id);

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

Emp_id	Emp_name	Designation_id	Dep_no	Date_of_Joining	Salary_id	Emp_id	Salary_Date	Branch_id	Amount
17001	Geetha	3001	50	2022-05-10	18001	17001	2022-06-10	241	35000
17002	Guru	3002	50	2022-05-12	18002	17002	2022-06-12	241	14000
17003	Gokul	3003	50	2022-05-15	18003	17003	2022-06-15	241	28000
17004	Mani	3004	60	2022-05-20	18004	17004	2022-06-20	242	18000
17005	Moorthy	3005	50	2022-05-23	18005	17005	2022-06-23	241	30000
17006	Amutha	3006	50	2022-06-05	18006	17006	2022-07-06	241	23000

Procedures concepts

- Procedure creation
- Begins & end
- call Procedures
- Alter procedures
- Declering variables
- Store variables

Procedures concepts

Command:

```
delimiter //
create procedure Store_data2()
Begin
select *,case
when amount >= 35000 then ‘High salary’
when amount >= 25000 then ‘Average salary’
when amount >= 15000 then ‘low salary’
when amount >= 1000 then ‘Very Low salary
end as Salary_gradefrom Salary_det;
select * from Salary_det where amount = 30000;
select * from Salary_det where amount <= 15000;
end //
delimiter ;
call Store_data2;
```

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

Salary_id	Emp_id	Salary_Date	Branch_id	Amount	Salary_grade
18001	17001	2022-06-10	241	35000	High salary
18002	17002	2022-06-12	241	14000	Very Low salary
18003	17003	2022-06-15	241	28000	Average salary
18004	17004	2022-06-20	242	18000	low salary
18005	17005	2022-06-23	241	30000	Average salary
18006	17006	2022-07-06	241	23000	low salary
18007	17007	2022-07-07	243	28000	Average salary

Result Grid | Filter Rows: | Export:

Salary_id	Emp_id	Salary_Date	Branch_id	Amount
18005	17005	2022-06-23	241	30000
18009	17009	2022-07-09	241	30000
18015	17015	2022-07-15	244	30000
18024	17024	2022-07-24	243	30000
18029	17029	2022-07-29	243	30000
18031	17031	2022-07-31	243	30000

Result Grid | Filter Rows: | Export:

Salary_id	Emp_id	Salary_Date	Branch_id	Amount
18002	17002	2022-06-12	241	14000
18012	17012	2022-07-12	241	14000
18016	17016	2022-07-16	241	14000
18017	17017	2022-07-17	243	14000
18018	17018	2022-07-18	243	14000
18019	17019	2022-07-19	243	14000
18020	17020	2022-07-20	243	14000

Triggers

What is trigger

A database trigger is a stored program which is automatically fired or executed when *some events occur.*

Types of Trigger

- Row level Trigger - A event is triggered at row level for each row updated, inserted or deleted.

- Statement Level trigger - An event is triggered at table Level for each sql statement executed

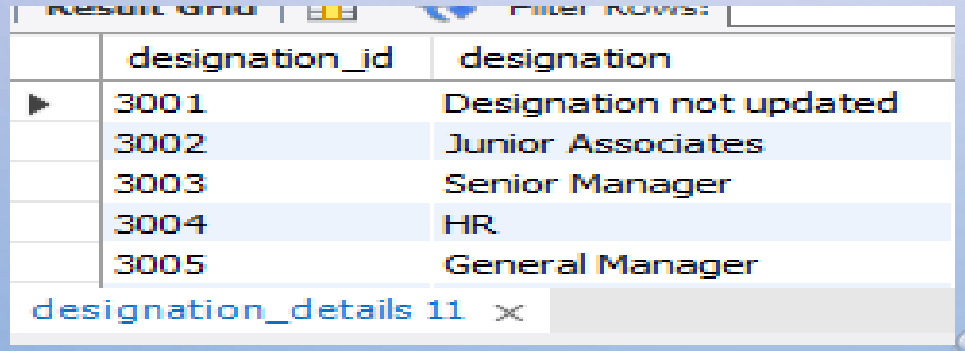
Triggers Timing

- before insert
- after insert
- before update
- after update
- before delete
- after delete

Before insert

Command: delimiter //

```
create trigger Emp_det
 before insert on Designation_det
for each row
 if new.Designation is null then set new.Designation= "Designation not updated";
end if //
delimiter ;
 delete from Designation_det where Designation_id (3001,3002);
 insert into Designation_det values (3001, null),(3002,null);
select * from Designation_det;
drop trigger Emp_det;
```



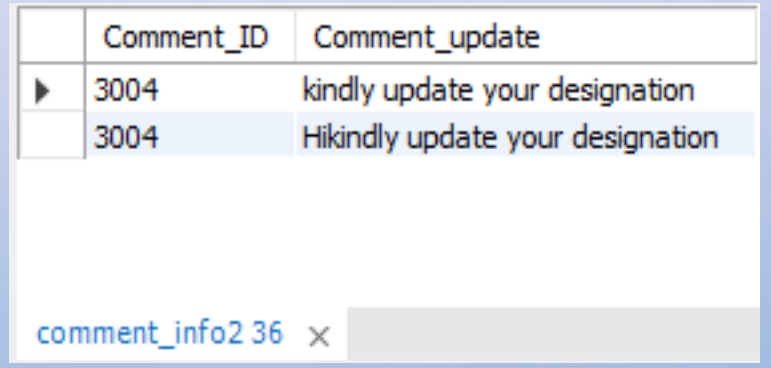
designation_id	designation
3001	Designation not updated
3002	Junior Associates
3003	Senior Manager
3004	HR
3005	General Manager

designation_details 11

After insert

Command: delete from des_det where designation_id in(3003,3004,3005);

```
create table Comment_info(Comment_ID int, Comment_update varchar(100));
delimiter //
create trigger designation_update after insert on des_det for each row
begin
if new.designation is null then insert into Comment_info (Comment_id,Comment_update) values
(new.designation_id,concat('Hi','kindly update your designation'));
end if;
end //
delimiter ;
insert into des_det values (3003,'Senior Manager'),(3004, null),(3005,'General Manager');
select * from des_det;
select * from comment_info;
```



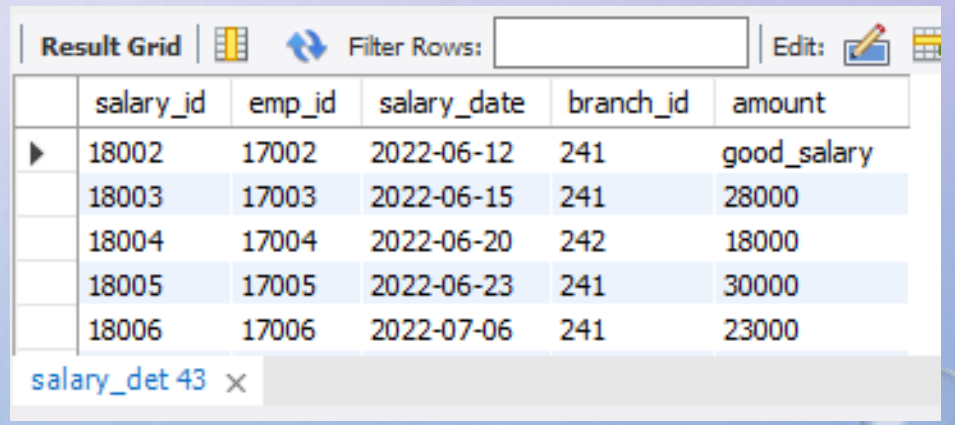
Comment_ID	Comment_update
3004	kindly update your designation
3004	Hikindly update your designation

comment_info2 36

Before update

Command: drop table sal_det;

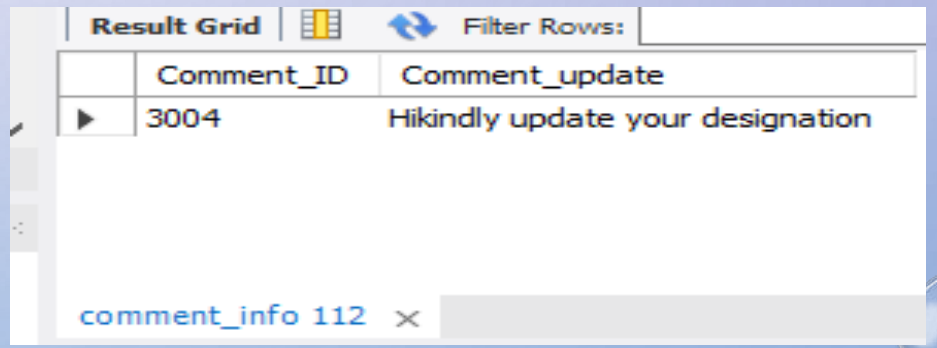
```
select * from sal_det;
delimiter //
create trigger Update_sal before updateon sal_det for each row
Begin
if new.amount >=35000 then set new.amount = "High_salary";
elseif new.amount >= 20000 thenset new.amount = "good_salary";
elseif new.amount >= 10000 thenset new.amount= "average_salary";
elseif new.amount >= 0 thenset new.amount = "low_salary";
end if;
end//
delimiter ;
update sal_det set amount = 20000 where salary_id = 18002;
select * from sal_det;
```



After update

Command: create table Salary_grade1 (sal_id int, grade varchar(100));

```
delimiter //
 create trigger Update_salary1 after updateon sal_det for each row
Begin
if new.amount >=40000 then insert into salary_grade1 (sal_id, grade) values(new.emp_id,"High_salary");
elseif new.amount >=35000 then insert into salary_grade1 (sal_id, grade)
values(new.emp_id,"Good_salary");
elseif new.amount >=15000 then insert into salary_grade1 (sal_id,
grade)values(new.emp_id,"avg_salary");
elseif new.amount >= 0 then insert into salary_grade1(sal_id, grade)values(new.emp_id,"Low_salary");
end if;
end //
delimiter ;
update sal_det set amount = 45000 where emp_id = 17004;
select * from sal_det;
select * from salary_grade1;
```



Before delete

Command: create table dep_det1(dep_no int,dep_name varchar(20),branch_id int,branch_name varchar(20),primary key(dep_no));

alter table dep_det modify dep_name varchar(40);

delimiter //

create trigger del_department3 before delete on dep_det for each row

BEGIN

insert into dep_det1(dep_no,dep_name,branch_id,branch_name)values(old.dep_no,old.dep_name,old.branch_id,old.branch_name);

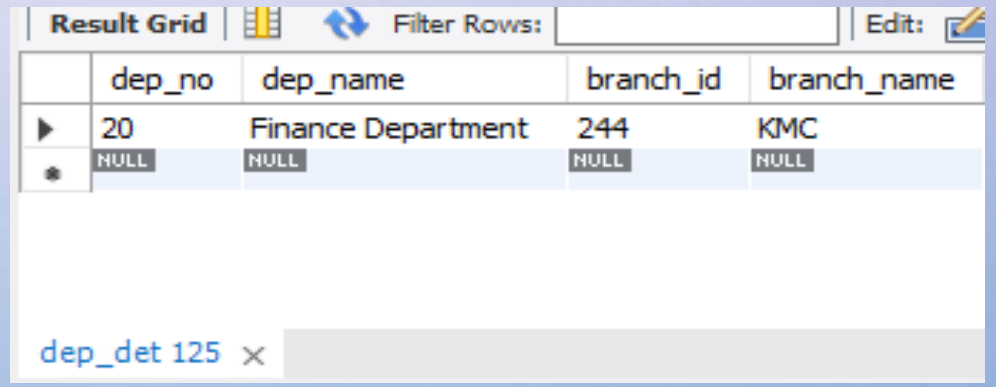
end //

delimiter ;

select * from dep_det;

select * from dep_det1;

delete from dep_det where dep_no = 60;



After delete

Command: create table dep_det2(dep_no int,dep_name varchar(20),branch_id int,branch_name varchar(20),primary key(dep_no));

```
delimiter //
create trigger del_dept1 after delete on dep_det for each row
BEGIN
insert into
dep_det2(dep_no,dep_name,branch_id,branch_name)values(old.dep_no,old.dep_name,old.branch_id,old.branch_name);
end //
delimiter ;
select * from dep_det;
select * from dep_det2;
delete from dep_det where dep_no = 70;
```

THANK YOU