MYSQL PROJECT

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What is SQL?

- SQL stands for Structured Query Language

- SQL lets you access and manipulate databases

- Therefore, SQL is the underlying programming language for all relational database management systems (RDBMS) such as MySQL, Oracle, and Sybase, among others.

What is DBMS?

- The database is a collection of inter-related data which is used to retrieve, insert and delete the data efficiently. It is also used to organize the data in the form of a table, schema, views, and reports, etc.

- For example : The college Database organizes the data about the admin, staff, students and faculty etc.

- Using the database, you can easily retrieve, insert, and delete the information

Difference between DBMS & RDBMS?

DBMS	RDBMS
• DBMS stands for "Database Management System".	• RDBMS stands for "Relational Database Management System".
• DBMS technology stores the data in the form of files.	• RDBMS stores the data in the form of tables.
• DBMS is designed to handle small amounts of data.	• RDBMS is designed to deal with vast amount of data.
• DBMS provides support only for a single user at a time.	• RDBMS provides support for multiple users at a time.

SQL Server Types

- Oracle server (commonly used)
- My Sql Workbench
- Mango DB server
- Navigation (old)
- Microsoft Server
- No Sql

SQL Commands

- Show Databse (View Databases)
- Create database (Create a New Database)
- Drop Database
- - Alter Database (Modify Database)
- Create Tables
- Show tables
- Insert Values
- Drop Table

SQL Commands

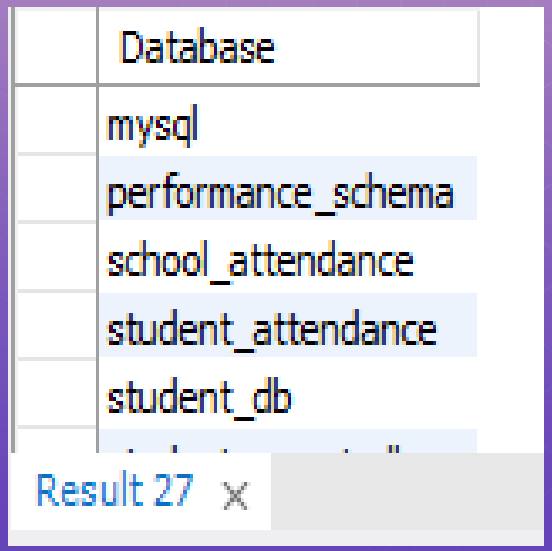
- Alter table (For New Column Creation)
- Alter Table Modify
- Alter table Drop (Drop the Column)
- ALter table Rename (Rename the Table)
- Update Table (To change the Values)
- Delete Statement

Create Database

```
Create Databse myproject;
```

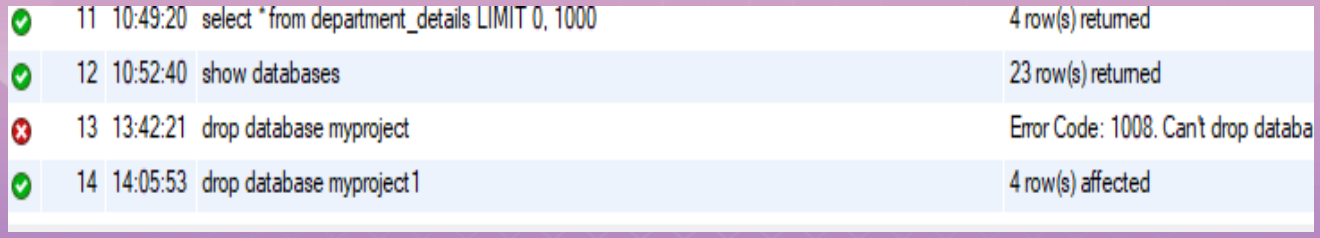
Show Database

```
Show databases;
```



Drop Database

```
Drop Database myproject ;
```



✓	11	10:49:20	select * from department_details LIMIT 0, 1000	4 row(s) returned
✓	12	10:52:40	show databases	23 row(s) returned
✗	13	13:42:21	drop database myproject	Error Code: 1008. Can't drop databa
✓	14	14:05:53	drop database myproject1	4 row(s) affected

Create table

```
create table Emp_details(emp_id int,emp_name
varchar(20),designation_id int,dep_no
int,date_of_join date, primary key(emp_id));
```

Insert values into table

```
insert into emp_det values
(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'),
```

```
insert into emp_details values
(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'),
(17007,'Jaga'   ,3003   ,70 ,'2022-06-06'),
(17008,'Pavithra',  3007,   60, '2022-06-07'),
(17009,'Arthi'  ,3005   ,50 ,'2022-06-08'),
(17010,'Kabilan'    ,3006   ,70 ,'2022-06-09'),
```

To View inserted values

```
select * from emp_det ;
```

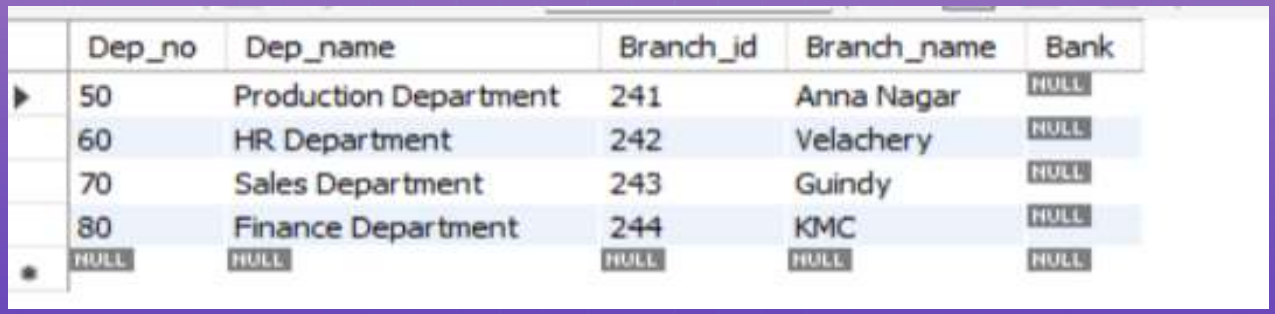
emp_id	emp_name	designation_id	dep_no	date_of_join
17001	Geetha	3001	50	2022-05-10
17002	Guru	3002	50	2022-05-12
17003	Gokul	3003	50	2022-05-15
17004	Mani	3004	60	2022-05-20
17005	Moorthy	3005	50	2022-05-23
17006	Amutha	3006	50	2022-06-05
17007	Jaga	3003	70	2022-06-06
17008	Pavithra	3007	60	2022-06-07
17009	Arthi	3005	50	2022-06-08
17010	Kabilan	3006	70	2022-06-09

Drop Table

```
Drop table emp_det;
```

Alter Table

```
alter table Department_det add Bank varchar(20);
```



Dep_no	Dep_name	Branch_id	Branch_name	Bank
50	Production Department	241	Anna Nagar	NULL
60	HR Department	242	Velachery	NULL
70	Sales Department	243	Guindy	NULL
80	Finance Department	244	KMC	NULL
NULL	NULL	NULL	NULL	NULL

Alter Table (add new coloumn)

```
alter table Department_det modify Bank varchar(5);
```

Alter Table (Drop column)

```
alter table Department_det drop column Bank;
```

Dep_no	Dep_name	Branch_id	Branch_name
50	Production Department	241	Anna Nagar
60	HR Department	242	Velachery
70	Sales Department	243	Guindy
80	Finance Department	244	KMC
NULL	NULL	NULL	NULL

Alter name(rename)

```
alter table Department_det Rename Dep_detail;
```

Update Table (To change the Values)

```
update Department_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

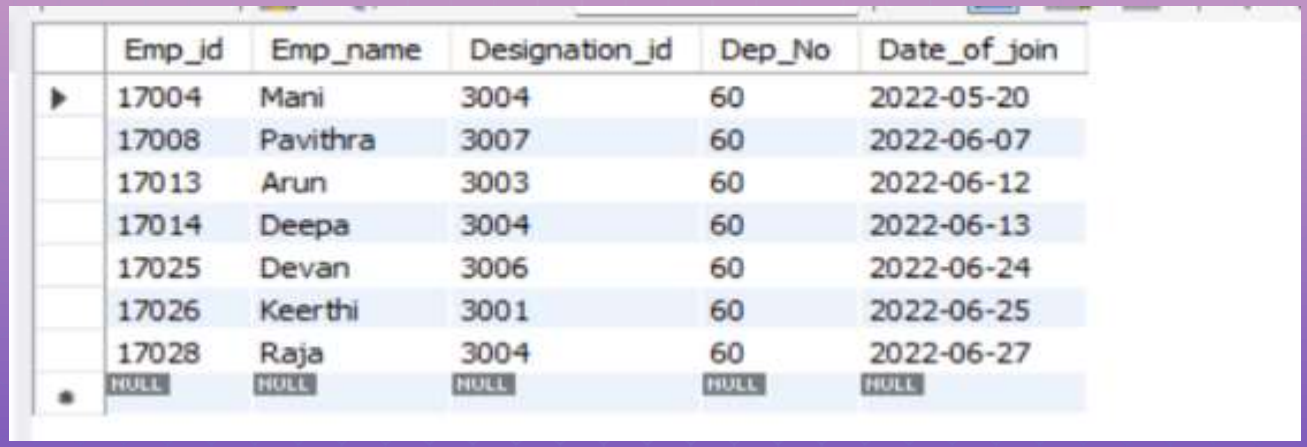
```
Delete from Department_det  where Branch_id = 245;
```

- Here, It deletes the particular values using (Branch_id)

MySQL General Functions

Where

```
Select * from Emp_det  where Dep_no = 60;
```



Emp_id	Emp_name	Designation_id	Dep_No	Date_of_join
17004	Mani	3004	60	2022-05-20
17008	Pavithra	3007	60	2022-06-07
17013	Arun	3003	60	2022-06-12
17014	Deepa	3004	60	2022-06-13
17025	Devan	3006	60	2022-06-24
17026	Keerthi	3001	60	2022-06-25
17028	Raja	3004	60	2022-06-27
NULL	NULL	NULL	NULL	NULL

Or :

- Display both the values mentioned in the Or statement if the values are present in the table

```
Select Emp_id, Emp_name, Dep_no from Emp_det where
Dep_no = 60 or Dep_no = 80;
```

Emp_id	Emp_name	Dep_no
17004	Mani	60
17008	Pavithra	60
17013	Arun	60
17014	Deepa	60
17015	Sindhu	80
17021	Veeramani	80
17022	Pandian	80
17023	Veera	80
17025	Devan	60
17026	Keerthi	60
17027	Venkatesh	80

And :

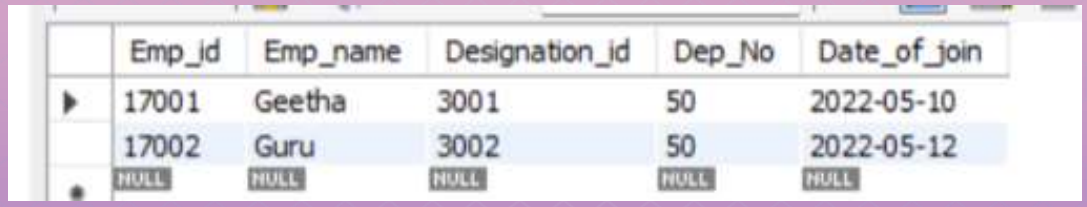
- Display the Values by comparing the column depends upon the and command is used

```
Select Emp_id, Emp_name, Dep_no from Emp_det  where
Dep_no = 60 or Dep_no = 80;
```

Emp_id	Emp_name	Dep_no	Designation_id
17002	Guru	50	3002
17012	Suja	50	3002
17016	Madhavi	50	3002
NULL	NULL	NULL	NULL

In : Represent the values presented inside the In command alone.

```
select * from Emp_det where Emp_name in('Geetha','Guru');
```



Emp_id	Emp_name	Designation_id	Dep_No	Date_of_join
17001	Geetha	3001	50	2022-05-10
17002	Guru	3002	50	2022-05-12
NULL	NULL	NULL	NULL	NULL

Not In : Represent the values which are not present the not in commands.

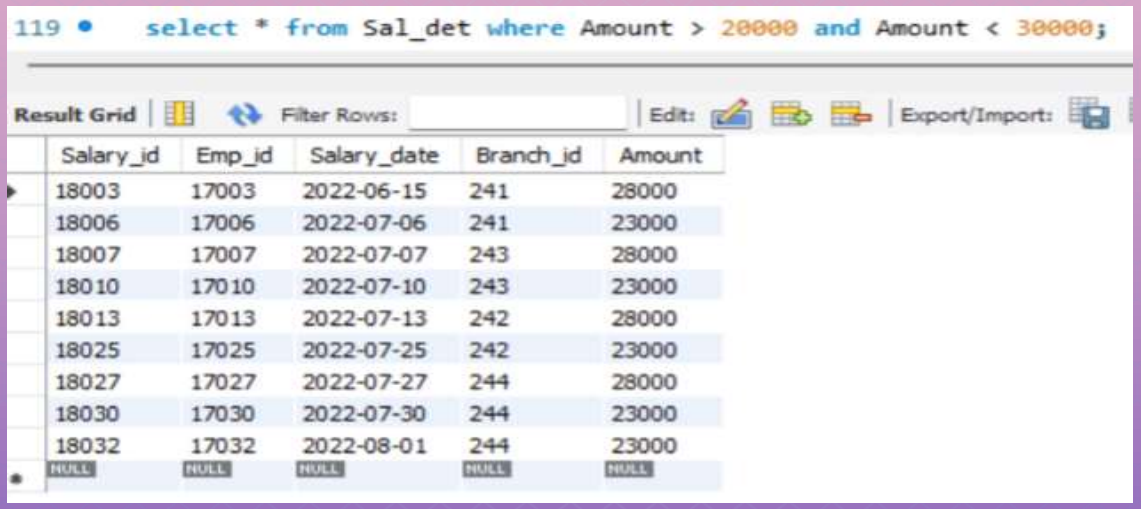
```
select * from Emp_det where Emp_name  not in('Geetha','Guru');
```

Emp_id	Emp_name	Designation_id	Dep_No	Date_of_join
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
17007	Jaga	3003	70	2022-06-06

Emp_det 126

Greater than / Less Than

```
select * from Sal_det where Amount > 20000 and Amount < 30000;
```



```
119 •   select * from Sal_det where Amount > 20000 and Amount < 30000;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

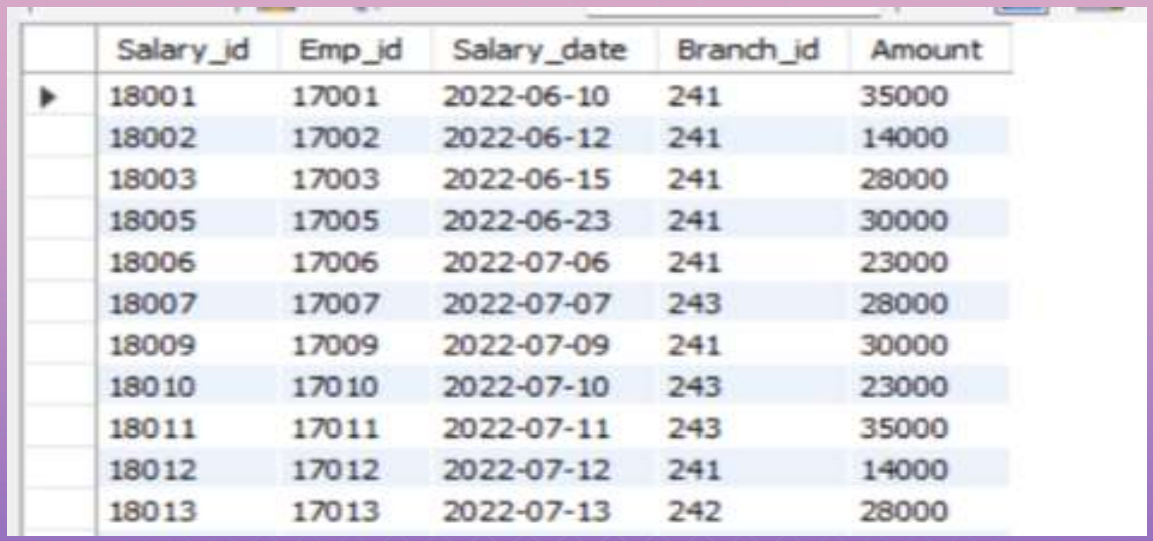
Salary_id	Emp_id	Salary_date	Branch_id	Amount
18003	17003	2022-06-15	241	28000
18006	17006	2022-07-06	241	23000
18007	17007	2022-07-07	243	28000
18010	17010	2022-07-10	243	23000
18013	17013	2022-07-13	242	28000
18025	17025	2022-07-25	242	23000
18027	17027	2022-07-27	244	28000
18030	17030	2022-07-30	244	23000
18032	17032	2022-08-01	244	23000
NULL	NULL	NULL	NULL	NULL

<> (Not in): Represent the value other than the value mentioned in the not in command.

```
Select * from Sal_det where Amount <> 30000;
```

!= : Acts as not in

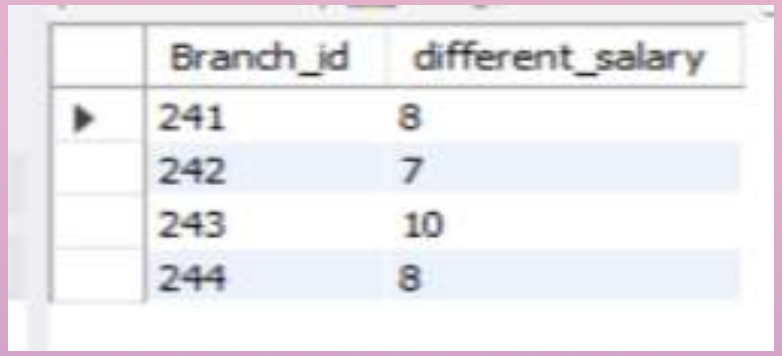
```
Select * from Sal_det where Amount != 18000;
```



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
18010	17010	2022-07-10	243	23000
18011	17011	2022-07-11	243	35000
18012	17012	2022-07-12	241	14000
18013	17013	2022-07-13	242	28000

Count : Represents the number of values in the column or mentioned values.

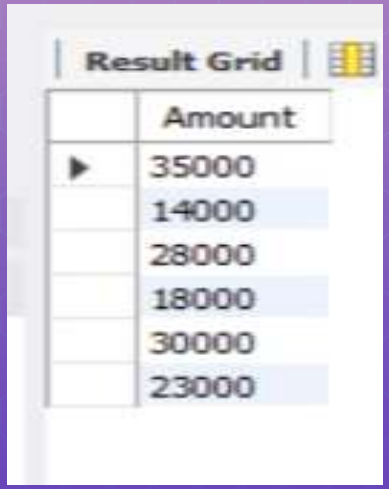
```
select Branch_id, Count(Amount)as different_salary from
Sal_det  group by Branch_id;
```



Branch_id	different_salary
241	8
242	7
243	10
244	8

Distinct : Avoids repeated values from the column.

```
Select Distinct (Amount )as unique_amt  from sal_det;
```



Result Grid

Amount
35000
14000
28000
18000
30000
23000

Ascending / Descending

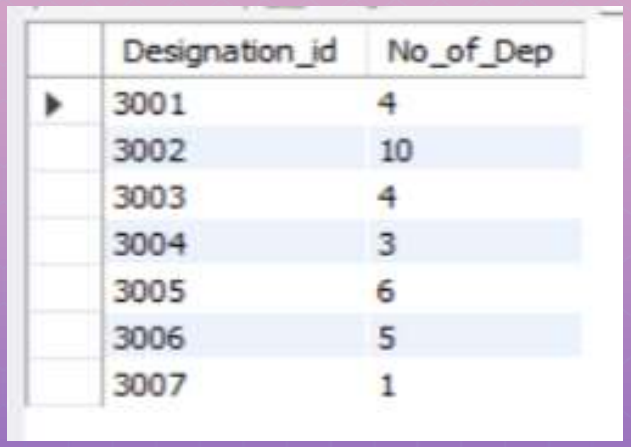
```
select * from Sal_det order by Branch_id asc;
```

```
select * from Sal_det order by Branch_id desc;
```

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
18009	17009	2022-07-09	241	30000
18016	17016	2022-07-16	241	14000
18012	17012	2022-07-12	241	14000
18004	17004	2022-06-20	242	18000
18014	17014	2022-07-14	242	18000
18008	17008	2022-07-08	242	18000
18025	17025	2022-07-25	242	23000
18013	17013	2022-07-13	242	28000
18026	17026	2022-07-26	242	35000

Group By

```
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 - sets initial and end value of rows

```
select * from Des_det limit 0,4;
```

Designation_id	Designation
3001	Manager
3002	Junior Associates
3003	Senior Manager
3004	HR
NULL	NULL

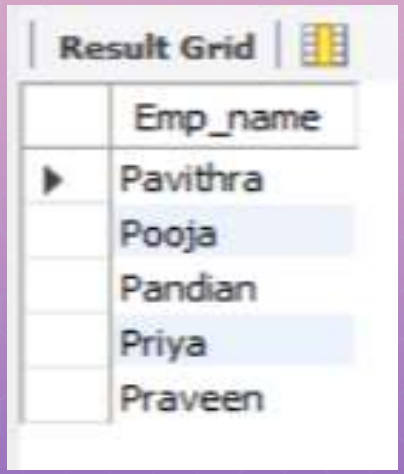
Desc Limit :

```
select * from Emp_det order by Dep_no Desc limit 0,15;
```

Emp_id	Emp_name	Designation_id	Dep_No	Date_of_join
17021	Veeramani	3002	80	2022-06-20
17033	Praveen	3001	80	2022-07-02
17027	Venkatesh	3003	80	2022-06-26
17023	Veera	3002	80	2022-06-22
17022	Pandian	3002	80	2022-06-21
17030	mariya	3006	80	2022-06-29
17032	ganesan	3006	80	2022-07-01
17015	Sindhu	3005	80	2022-06-14
17020	Lakshmi	3002	70	2022-06-19
17019	Pooja	3002	70	2022-06-18
17007	Jaga	3003	70	2022-06-06
17029	Priya	3005	70	2022-06-28
17010	Kabilan	3006	70	2022-06-09
17011	Manasi	3001	70	2022-06-10

Like % - name starts with P

```
select Emp_name from Emp_det where Emp_name like'p%‘;
```



Not Like % - name not starts with P

```
select Emp_name from Emp_det where Emp_name not like'p%';
```

Result Grid

Emp_name
Geetha
Guru
Gokul
Mani
Moorthy
Amutha
Jaga
Arthi
Kabilan
Manasi
Suja
Arun
Deepa
Sindhu

Between : Ranges between two values

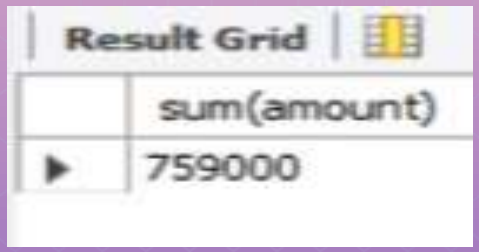
```
select salary_Id, Branch_id, Amount from Sal_det where Amount between 20000 and 30000;
```

salary_Id	Branch_id	Amount
18003	241	28000
18005	241	30000
18006	241	23000
18007	243	28000
18009	241	30000
18010	243	23000
18013	242	28000
18015	244	30000
18024	243	30000
18025	242	23000
18027	244	28000
18029	243	30000
18030	244	23000
18031	243	30000

MySql calculate functions

Sum: Calculates the total sum of the values by adding all the values.

```
select sum(amount) from sal_det;
```

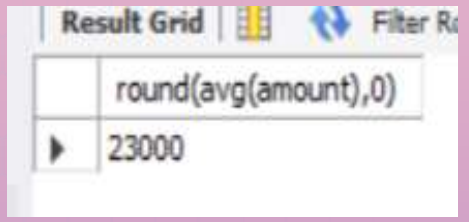


Average: Add all the values and divide by the number of values added.

```
select sum(amount) from sal_det;
```

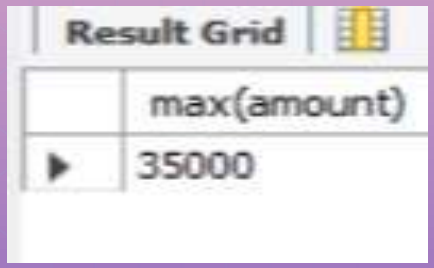
Round : Round off the decimal values:

```
select round(avg(amount),0) from sal_det;
```



Max

```
select max(amount) from sal_det;
```



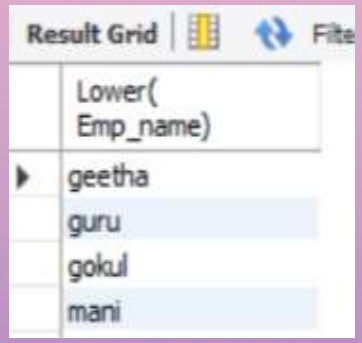
Min

```
select min(amount) from sal_det;
```

My SQL String Functions

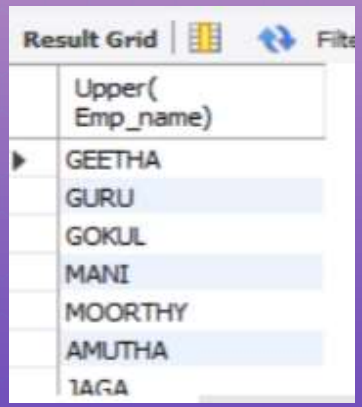
Lcase :

```
select Lower( Emp_name) from Emp_det;
```



Ucase :

```
select  Upper( Emp_name) from Emp_det;
```

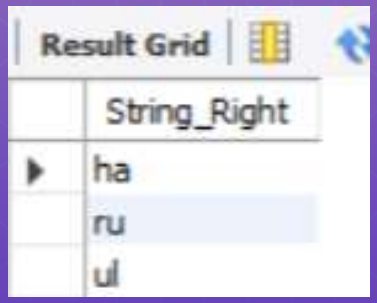


Left :

```
select Left(Emp_name, 3) as String_Left from Emp_det;
```

Right :

```
select  right(Emp_name, 3) as String_Left  from Emp_det;
```

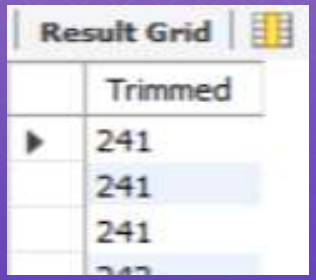


Concatenate :

```
select concat(Emp_name,"-", Emp_id,"-", Dep_no) as
Concatenation from Emp_det;
```

Trim :

```
select trim(Branch_id) as Trimmed from Sal_det;
```



Char_Length

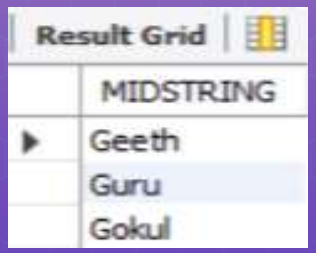
```
select char_length(Emp_name) as Charlength  from Emp_det;
```

Result Grid

	Charlength
▶	6
	4
	5
	4

Mid

```
select mid(Emp_name,1, 5) as MIDSTRING  from Emp_det;
```



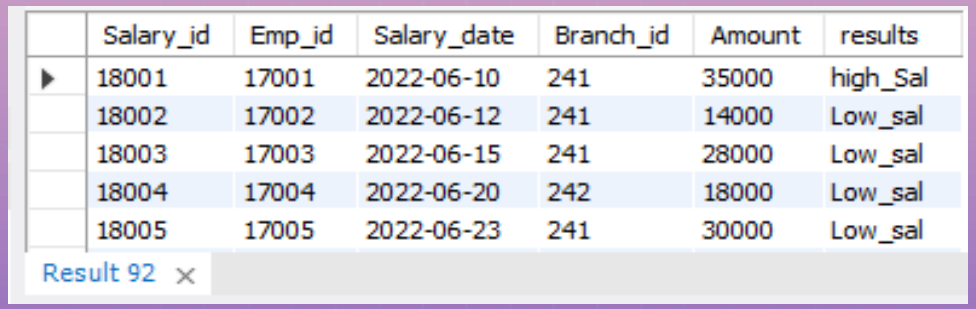
Result Grid

	MIDSTRING
▶	Geeth
	Guru
	Gokul

Logical Functions

If Statement

```
select *, If(amount >=35000, 'high_Sal', 'Low_sal')as results from sal_det;
```



Salary_id	Emp_id	Salary_date	Branch_id	Amount	results
18001	17001	2022-06-10	241	35000	high_Sal
18002	17002	2022-06-12	241	14000	Low_sal
18003	17003	2022-06-15	241	28000	Low_sal
18004	17004	2022-06-20	242	18000	Low_sal
18005	17005	2022-06-23	241	30000	Low_sal

Result 92

If with and

```
select *,if((amount <=35000) and (amount >=20000),'High_sal','low_sal')
as results from sal_det;
```

Result Grid | Filter Rows: | Export: | Wr

Salary_id	Emp_id	Salary_date	Branch_id	Amount	results
18001	17001	2022-06-10	241	35000	High_sal
18002	17002	2022-06-12	241	14000	low_sal
18003	17003	2022-06-15	241	28000	High_sal
18004	17004	2022-06-20	242	18000	low_sal
18005	17005	2022-06-23	241	30000	High_sal

Result 91

If with Or

```
select *,if((amount >=35000) or (amount >=20000),'High_sal','low_sal')as results from sal_det;
```

Salary_id	Emp_id	Salary_date	Branch_id	Amount	results
18001	17001	2022-06-10	241	35000	High_sal
18002	17002	2022-06-12	241	14000	low_sal
18003	17003	2022-06-15	241	28000	High_sal
18004	17004	2022-06-20	242	18000	low_sal
18005	17005	2022-06-23	241	30000	High_sal

Result 90

Date Functions

- **Date add() +after 5years**

```
select *,date_add(date_of_join,interval 5 year)as
After_5years from Emp_det;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	After_5years
17001	Geetha	3001	50	2022-05-10	2027-05-10
17002	Guru	3002	50	2022-05-12	2027-05-12
17003	Gokul	3003	50	2022-05-15	2027-05-15
17004	Mani	3004	60	2022-05-20	2027-05-20
17005	Moorthy	3005	50	2022-05-23	2027-05-23
17006	Amutha	3006	50	2022-06-05	2027-06-05

➢ Date add() -Before 5years

```
select *,date_add(date_of_join,interval -5 year) as
Before_5years from Emp_det;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	Before_5years
17001	Geetha	3001	50	2022-05-10	2017-05-10
17002	Guru	3002	50	2022-05-12	2017-05-12
17003	Gokul	3003	50	2022-05-15	2017-05-15
17004	Mani	3004	60	2022-05-20	2017-05-20
17005	Moorthy	3005	50	2022-05-23	2017-05-23
17006	Amutha	3006	50	2022-06-05	2017-06-05

➢Date format()

```
select *, date_format(date_of_join, '%b') as month_name
from emp_det
where  Date_format(date_of_join, '%b')like '_a%';
```

emp_id	emp_name	designation_id	dep_no	date_of_join	month_name
17001	Geetha	3001	50	2022-05-10	May
17002	Guru	3002	50	2022-05-12	May
17003	Gokul	3003	50	2022-05-15	May
17004	Mani	3004	60	2022-05-20	May
17005	Moorthy	3005	50	2022-05-23	May

➢ Timestampdiff ()

```
select *, timestampdiff(year, date_of_join, sysdate())as emp_exp from emp_det;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	emp_exp
17024	Devi	3005	70	2022-06-23	1
17025	Devan	3006	60	2022-06-24	1
17026	Keerthi	3001	60	2022-06-25	1
17027	Venkatesh	3003	80	2022-06-26	1
17028	Raja	3004	60	2022-06-27	1
17029	Priya	3005	70	2022-06-28	1
17030	mariya	3006	80	2022-06-29	1

➢ Datediff()

Calculate Experience In year

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

emp_id	emp_name	designation_id	dep_no	date_of_join	emp_exp
17001	Geetha	3001	50	2022-05-10	1.6959
17002	Guru	3002	50	2022-05-12	1.6904
17003	Gokul	3003	50	2022-05-15	1.6822

Calculate Experience In Months

```
select *, datediff(curdate(), date_of_join)/31as emp_exp
from emp_det;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	emp_exp
17001	Geetha	3001	50	2022-05-10	19.9677
17002	Guru	3002	50	2022-05-12	19.9032
17003	Gokul	3003	50	2022-05-15	19.8065
17004	Mani	3004	60	2022-05-20	19.6452

Calculate Experience In Days

```
select *, datediff(curdate(), date_of_join)as emp_exp
from emp_det;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	emp_exp
17001	Geetha	3001	50	2022-05-10	619
17002	Guru	3002	50	2022-05-12	617
17003	Gokul	3003	50	2022-05-15	614
17004	Mani	3004	60	2022-05-20	609

➢ now()

```
select * ,now() from emp_det;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	now()
17001	Geetha	3001	50	2022-05-10	2024-01-19 16:12:09
17002	Guru	3002	50	2022-05-12	2024-01-19 16:12:09
17003	Gokul	3003	50	2022-05-15	2024-01-19 16:12:09
17004	Mani	3004	60	2022-05-20	2024-01-19 16:12:09

Procedure (SQL Automation)

```
delimiter //
create procedure Store_data4()
Begin
select *,
casewhen 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_grade
from salary_det;
select * from salary_det where amount = 35000;
select * from salary_det where amount <= 14000;
end //
delimiter ;
call store_data4;
```

Result 1 :

salary_id	emp_id	salary_date	branch_id	amount	Salary_grade
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

Result 24 | Result 25 | Result 26

Result 2 :

salary_id	emp_id	salary_date	branch_id	amount
18011	17011	2022-07-11	243	35000
18026	17026	2022-07-26	242	35000
18033	17033	2022-08-02	244	35000
18801	17001	2022-06-10	241	35000

Result 24 | Result 25 | Result 26

Result 3 :

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

Result 24 | Result 25 | Result 26

Triggers in SQL

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

Before Insert

```
select * from des_det;
alter table des_det modify designation varchar(60);

 delimiter //
 create trigger emp_role
 before insert on des_det
 for each row

 if new.designation is null then set new.designation = "Designation not updated";
 end if; //
delimiter ;
delete from des_det where designation_id in(3001,3002);
 insert into des_det values
 (3001, null),
(3002,null);
select * from des_det;
```

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

designation_details 11

After Insert

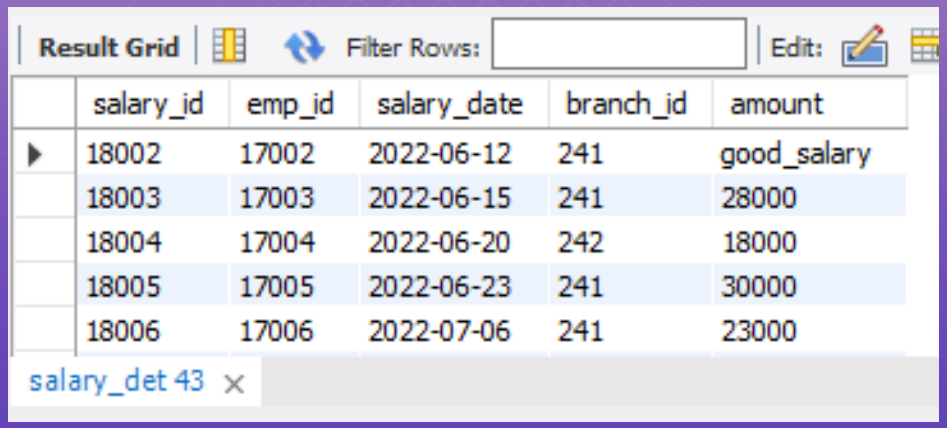
```
delimiter //
    create trigger designation_update after insert
 on des_det for each row
 begin
 if new.designation is null then
 insert into Comment_info (Comment_id,Comment_update)
 values
 (new.designation_id,concat('Hi','kindly update your designation'));
 end if;
 end //
delimiter ;
insert into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

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

comment_info2 36 ×

Before Update

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



salary_id	emp_id	salary_date	branch_id	amount
18002	17002	2022-06-12	241	good_salary
18003	17003	2022-06-15	241	28000
18004	17004	2022-06-20	242	18000
18005	17005	2022-06-23	241	30000
18006	17006	2022-07-06	241	23000

After Update

```
delimiter //
create trigger Update_sal8 after update
on sal_det for each row
begin
if new.amount >=40000 then
update Salary_grade1 set grade = "High_salary" ;
elseif new.amount >= 35000 then
update Salary_grade1 set grade = "good_salary" ;
elseif new.amount >= 15000 then
update salary_grade1 set grade = "average_salary" ;
elseif new.amount >= 0 then
update Salary_grade1 set grade = "low_salary" ;
end if;
end //
delimiter ;
update sal_det set amount = 15000 where emp_id =17003;
select * from sal_det;
select * from salary_grade1;
```

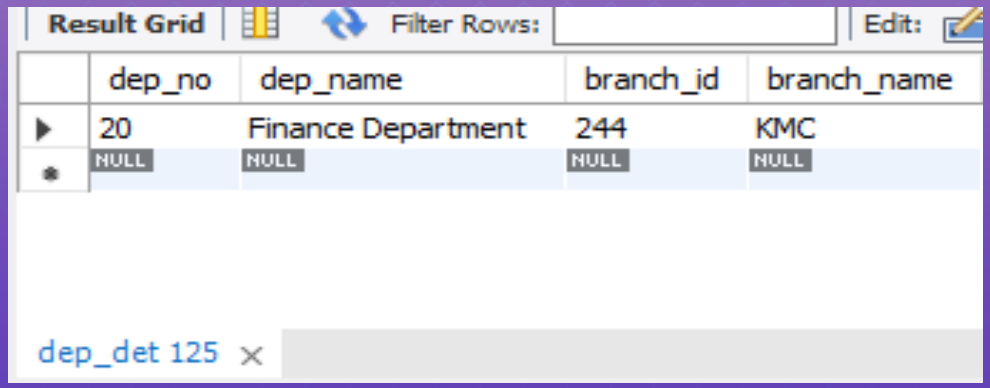
Result Grid | Filter Rows:

Comment_ID	Comment_update
3004	Hikindly update your designation

comment_info 112

Before Delete

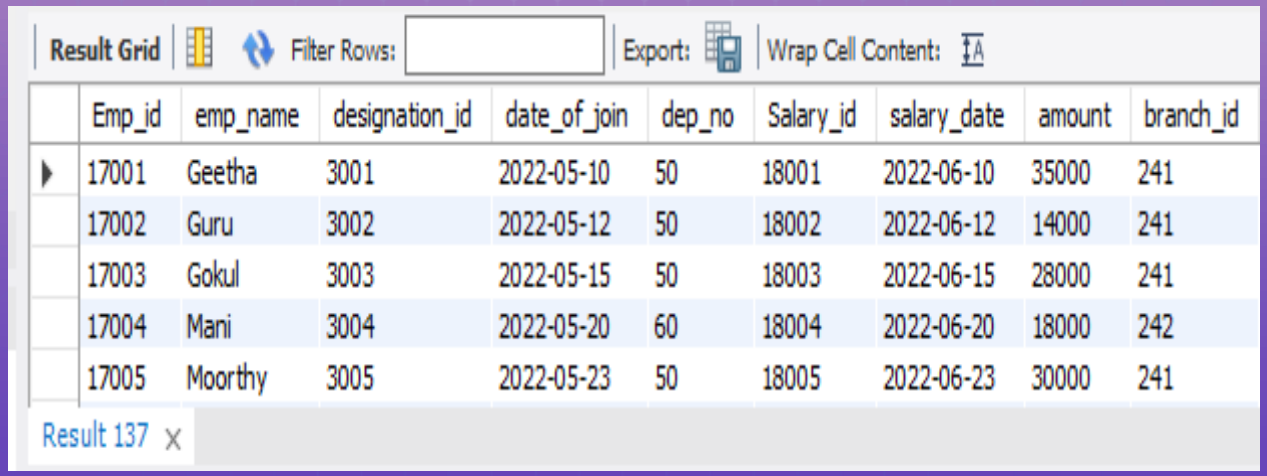
```
delimiter //
create trigger del_department2 before delete on dep_det for each row
BEGIN
insert into dep_det1
(dep_no,dep_name,branch_id,branch_name)
values
(old.dep_no,old.dep_name,old.branch_id,old.branch_name);
end //
delimiter ;

select * from dep_det;
select * from dep_det1;
delete from dep_det where dep_no = 10;
```



RDBMS SYSTEM

Two Table connection

```
select Emp_det.Emp_id, Emp_det.emp_name,
emp_det.designation_id,emp_det.date_of_join,emp_det.d
ep_no,
Sal_det.Salary_id,
sal_det.salary_date,sal_det.amount,sal_det.branch_id
from Emp_det  inner join
Sal_det on  Sal_det.Emp_id = Emp_det.Emp_id ;
```


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

Emp_id	emp_name	designation_id	date_of_join	dep_no	Salary_id	salary_date	amount	branch_id
17001	Geetha	3001	2022-05-10	50	18001	2022-06-10	35000	241
17002	Guru	3002	2022-05-12	50	18002	2022-06-12	14000	241
17003	Gokul	3003	2022-05-15	50	18003	2022-06-15	28000	241
17004	Mani	3004	2022-05-20	60	18004	2022-06-20	18000	242
17005	Moorthy	3005	2022-05-23	50	18005	2022-06-23	30000	241

Result 137

Three table connection

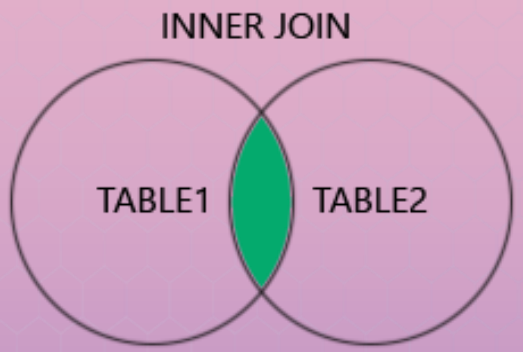
```
select Emp_det.Emp_id,Emp_det.Emp_name,Emp_det.Designation_id,Emp_det.Date_Of_Join,
Sal_det.Salary_id,Sal_det.Salary_Date,Sal_det.Branch_id,Sal_det.Amount,
Dep_det.Dep_no,Dep_det.Dep_name,Dep_det.Branch_name
from Emp_det
inner join
Sal_det on Emp_det.Emp_id = Sal_det.Emp_id
inner join
Dep_det on Emp_det.Dep_no = Dep_det.Dep_no;
```

Emp_id	Emp_name	Designation_id	Date_Of_Join	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 Department	Anna Nagar
17002	Guru	3002	2022-05-12	18002	2022-06-12	241	14000	50	Production Department	Anna Nagar
17003	Gokul	3003	2022-05-15	18003	2022-06-15	241	28000	50	Production Department	Anna Nagar
17005	Moorthy	3005	2022-05-23	18005	2022-06-23	241	30000	50	Production Department	Anna Nagar
17006	Amutha	3006	2022-06-05	18006	2022-07-06	241	23000	50	Production Department	Anna Nagar
17009	Arthi	3005	2022-06-08	18009	2022-07-09	241	30000	50	Production Department	Anna Nagar
17012	Suja	3002	2022-06-11	18012	2022-07-12	241	14000	50	Production Department	Anna Nagar
17016	Madhavi	3002	2022-06-15	18016	2022-07-16	241	14000	50	Production Department	Anna Nagar

Result 143 ×

JOINS

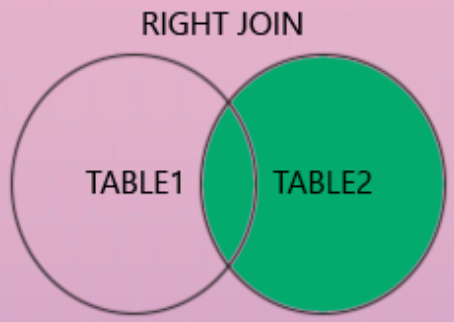
Inner Joins :




```
Select
emp_det.emp_id,emp_det.emp_name,emp_det.designation_id,e
mp_det.dep_no,emp_det.date_of_join,dep_det.dep_name,dep_d
et.branch_id,dep_det.branch_name,sal_det.salary_id,sal_det.sal
ary_date,sal_det.amount,des_det.designation
from emp_det
inner join
 sal_det on emp_det.emp_id =sal_det.emp_id
inner join
dep_det on sal_det.branch_id= dep_det.branch_id
inner join des_det on
emp_det.designation_id=des_det.designation_id;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	dep_name	branch_id	branch_name	salary_id	salary_date	amount	designation
17007	Jaga	3003	70	2022-06-06	Sales Department	243	Guindy	18007	2022-07-07	28000	Senior Manager
17010	Kabilan	3006	70	2022-06-09	Sales Department	243	Guindy	18010	2022-07-10	23000	Team Lead
17011	Manasi	3001	70	2022-06-10	Sales Department	243	Guindy	18011	2022-07-11	35000	Manager
17015	Sindhu	3005	80	2022-06-14	Finance Department	244	KMC	18015	2022-07-15	30000	General Manager
17024	Devi	3005	70	2022-06-23	Sales Department	243	Guindy	18024	2022-07-24	30000	General Manager
17027	Venkatesh	3003	80	2022-06-26	Finance Department	244	KMC	18027	2022-07-27	28000	Senior Manager
17029	Priya	3005	70	2022-06-28	Sales Department	243	Guindy	18029	2022-07-29	30000	General Manager
17030	mariya	3006	80	2022-06-29	Finance Department	244	KMC	18030	2022-07-30	23000	Team Lead
17031	srinivasan	3005	70	2022-06-30	Sales Department	243	Guindy	18031	2022-07-31	30000	General Manager
17032	ganesan	3006	80	2022-07-01	Finance Department	244	KMC	18032	2022-08-01	23000	Team Lead

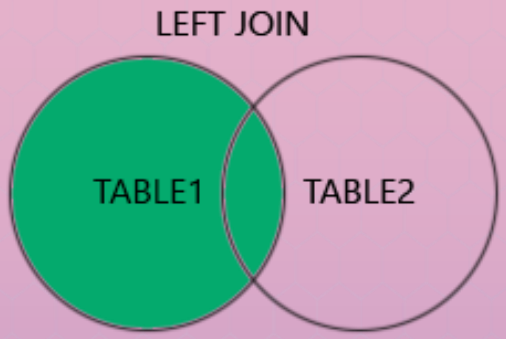
Right Join




```
delete from emp_det where designation_id=3004;
select emp_det.emp_id,emp_det.emp_name,
emp_det.designation_id,emp_det.dep_no,
emp_det.date_of_join,des_det.designationfrom emp_det
right join
 des_det on emp_det.designation_id = des_det.designation_id;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	designation
17001	Geetha	3001	50	2022-05-10	Manager
17003	Gokul	3003	50	2022-05-15	Senior Manager
17005	Moorthy	3005	50	2022-05-23	General Manager
17006	Amutha	3006	50	2022-06-05	Team Lead
17007	Jaga	3003	70	2022-06-06	Senior Manager
17008	Pavithra	3007	60	2022-06-07	Senior HR
17009	Arthi	3005	50	2022-06-08	General Manager
17010	Kabilan	3006	70	2022-06-09	Team Lead
17011	Manasi	3001	70	2022-06-10	Manager
17013	Arun	3003	60	2022-06-12	Senior Manager

Left Join

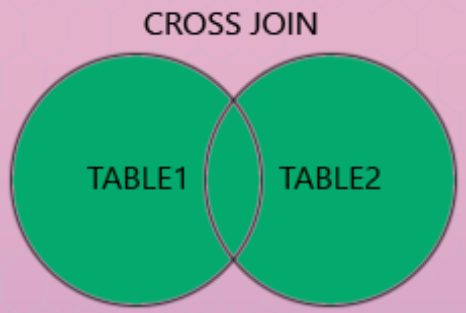



```
delete from dep_det where branch_id =242;select
sal_det.salary_id,sal_det.salary_date,sal_det.amount,
dep_det.dep_name,dep_det.branch_id,dep_det.branch_namefrom
sal_detleft join dep_det on sal_det.branch_id = dep_det.branch_id;
```

salary_id	salary_date	amount	dep_name	branch_id	branch_name
18030	2022-07-30	23000	Finance Department	244	KMC
18032	2022-08-01	23000	Finance Department	244	KMC
18033	2022-08-02	35000	Finance Department	244	KMC
18004	2022-06-20	18000	NULL	NULL	NULL
18008	2022-07-08	18000	NULL	NULL	NULL
18013	2022-07-13	28000	NULL	NULL	NULL
18014	2022-07-14	18000	NULL	NULL	NULL
18025	2022-07-25	23000	NULL	NULL	NULL
18026	2022-07-26	35000	NULL	NULL	NULL
18028	2022-07-28	18000	NULL	NULL	NULL

Result 102

Cross Join




```
select
emp_det.emp_id,emp_det.emp_name,emp_det.date_of_join,
dep_det.dep_name,dep_det.branch_id,dep_det.branch_name
from emp_det  cross join dep_det;
```

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

emp_id	emp_name	designation_id	dep_no	date_of_join	dep_name	branch_id	branch_name
17001	Geetha	3001	50	2022-05-10	Production Department	241	Anna Nagar
17001	Geetha	3001	50	2022-05-10	Sales Department	243	Guindy
17001	Geetha	3001	50	2022-05-10	Finance Department	244	KMC
17002	Guru	3002	50	2022-05-12	Production Department	241	Anna Nagar
17002	Guru	3002	50	2022-05-12	Sales Department	243	Guindy
17002	Guru	3002	50	2022-05-12	Finance Department	244	KMC
17003	Gokul	3003	50	2022-05-15	Production Department	241	Anna Nagar
17003	Gokul	3003	50	2022-05-15	Sales Department	243	Guindy
17003	Gokul	3003	50	2022-05-15	Finance Department	244	KMC
17005	Moorthy	3005	50	2022-05-23	Production Department	241	Anna Nagar

Full Outer Join

```
(select emp_det.emp_id,emp_det.emp_name,emp_det.designation_id,emp_det.dep_no,emp_det.date_of_join,des_det.designationfrom emp_detleft join des_det on emp_det.designation_id = des_det.designation_id)union(select sal_det.salary_id,sal_det.salary_date,sal_det.amount,dep_det.dep_name,dep_det.branch_id,dep_det.branch_namefrom sal_detleft join dep_det on sal_det.branch_id = dep_det.branch_id);
```

emp_id	emp_name	designation_id	dep_no	date_of_join	designation
17001	Geetha	3001	50	2022-05-10	Manager
17002	Guru	3002	50	2022-05-12	NULL
17003	Gokul	3003	50	2022-05-15	Senior Manager
17005	Moorthy	3005	50	2022-05-23	General Manager
17006	Amutha	3006	50	2022-06-05	Team Lead
17007	Jaga	3003	70	2022-06-06	Senior Manager
17008	Pavithra	3007	60	2022-06-07	Senior HR
17009	Arthi	3005	50	2022-06-08	General Manager
17010	Kabilan	3006	70	2022-06-09	Team Lead
17011	Manasi	3001	70	2022-06-10	Manager

Table Creation after joining

```
create table Salary_rep
as select emp_det.emp_id,emp_det.emp_name,emp_det.designation_id,emp_det.dep_no,emp_det.date_of_join,
dep_det.dep_name,dep_det.branch_id,dep_det.branch_name,
sal_det.salary_id,sal_det.salary_date,sal_det.amount
from emp_det
 inner join sal_det on emp_det.emp_id =sal_det.emp_id
inner join dep_det on  sal_det.branch_id = dep_det.branch_id ;
select * from salary_rep;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	dep_name	branch_id	branch_name	salary_id	salary_date	amount
17007	Jaga	3003	70	2022-06-06	Sales Department	243	Guindy	18007	2022-07-07	28000
17010	Kabilan	3006	70	2022-06-09	Sales Department	243	Guindy	18010	2022-07-10	23000
17011	Manasi	3001	70	2022-06-10	Sales Department	243	Guindy	18011	2022-07-11	35000
17015	Sindhu	3005	80	2022-06-14	Finance Department	244	KMC	18015	2022-07-15	30000
17017	Swetha	3002	70	2022-06-16	Sales Department	243	Guindy	18017	2022-07-17	14000
17018	Selvi	3002	70	2022-06-17	Sales Department	243	Guindy	18018	2022-07-18	14000
17019	Pooja	3002	70	2022-06-18	Sales Department	243	Guindy	18019	2022-07-19	14000
17020	Lakshmi	3002	70	2022-06-19	Sales Department	243	Guindy	18020	2022-07-20	14000
17021	Veeramani	3002	80	2022-06-20	Finance Department	244	KMC	18021	2022-07-21	14000
17022	Pandian	3002	80	2022-06-21	Finance Department	244	KMC	18022	2022-07-22	14000

Single case When end

```
select emp_det.emp_id,emp_det.emp_name,emp_det.designation_id,emp_det.dep_no,emp_det.date_of_join,
dep_det.dep_name,dep_det.branch_id,dep_det.branch_name,
sal_det.salary_id,sal_det.salary_date,sal_det.amount,
Case
when sal_Det.amount >=35000 Then
 'High Salary'
Else
'Low_salary'

End as Result

from emp_det
 inner join sal_det on emp_det.emp_id =sal_det.emp_id
inner join dep_det on  sal_det.branch_id = dep_det.branch_id;
 select * from salary_report;
```

emp_id	emp_name	designation_id	dep_no	date_of_join	dep_name	branch_id	branch_name	salary_id	salary_date	amount	sal_result	Sal_grades
17001	Geetha	3001	50	2022-05-10	Production Department	241	Anna Nagar	18001	2022-06-10	35000	High Salary	High_salary
17002	Guru	3002	50	2022-05-12	Production Department	241	Anna Nagar	18002	2022-06-12	14000	Low_salary	Low_salary
17003	Gokul	3003	50	2022-05-15	Production Department	241	Anna Nagar	18003	2022-06-15	28000	Low_salary	Good_salary
17004	Mani	3004	60	2022-05-20	HR Department	242	Velachery	18004	2022-06-20	18000	Low_salary	average_salary
17005	Moorthy	3005	50	2022-05-23	Production Department	241	Anna Nagar	18005	2022-06-23	30000	Low_salary	Good_salary

salary_report 54 X

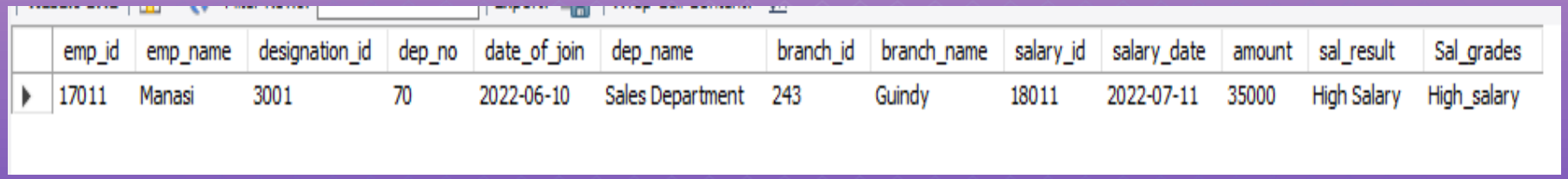
Double case When end

```
create table Salary_reports1
as select emp_det.emp_id,emp_det.emp_name,emp_det.designation_id,emp_det.dep_no,emp_det.date_of_join,
dep_det.dep_name,dep_det.branch_id,dep_det.branch_name,
sal_det.salary_id,sal_det.salary_date,sal_det.amount,
Case
when sal_Det.amount >=35000 Then 'High Salary'
Else 'Low_salary'

End as sal_result,

case

when sal_det.amount <=50000 and sal_det.amount >=35000 then 'High_salary'
when sal_det.amount <=35000 and sal_det.amount >=25000 then 'Good_salary'
when sal_det.amount <=25000 and sal_det.amount >=15000 then 'average_salary'
when sal_det.amount <=15000 and sal_det.amount >=10000 then 'Low_salary'
else "Not a good salary"
```

emp_id	emp_name	designation_id	dep_no	date_of_join	dep_name	branch_id	branch_name	salary_id	salary_date	amount	sal_result	Sal_grades
17007	Jaga	3003	70	2022-06-06	Sales Department	243	Guindy	18007	2022-07-07	28000	Low_salary	Good_salary
17010	Kabilan	3006	70	2022-06-09	Sales Department	243	Guindy	18010	2022-07-10	23000	Low_salary	average_salary
17011	Manasi	3001	70	2022-06-10	Sales Department	243	Guindy	18011	2022-07-11	35000	High Salary	High_salary
17015	Sindhu	3005	80	2022-06-14	Finance Department	244	KMC	18015	2022-07-15	30000	Low_salary	Good_salary
17017	Swetha	3002	70	2022-06-16	Sales Department	243	Guindy	18017	2022-07-17	14000	Low_salary	Low_salary
17018	Selvi	3002	70	2022-06-17	Sales Department	243	Guindy	18018	2022-07-18	14000	Low_salary	Low_salary
17019	Pooja	3002	70	2022-06-18	Sales Department	243	Guindy	18019	2022-07-19	14000	Low_salary	Low_salary
17020	Lakshmi	3002	70	2022-06-19	Sales Department	243	Guindy	18020	2022-07-20	14000	Low_salary	Low_salary
17021	Veeramani	3002	80	2022-06-20	Finance Department	244	KMC	18021	2022-07-21	14000	Low_salary	Low_salary
17022	Pandian	3002	80	2022-06-21	Finance Department	244	KMC	18022	2022-07-22	14000	Low_salary	Low_salary

Case When end having clause

```
from emp_det inner join sal_det on
emp_det.emp_id=sal_det.emp_idinner join dep_det on
sal_det.branch_id = dep_det.branch_id
where dep_det.dep_name ='Sales Department' having
sal_grades='high_salary';
```



emp_id	emp_name	designation_id	dep_no	date_of_join	dep_name	branch_id	branch_name	salary_id	salary_date	amount	sal_result	Sal_grades
17011	Manasi	3001	70	2022-06-10	Sales Department	243	Guindy	18011	2022-07-11	35000	High Salary	High_salary

THANK YOU