MYSQL PRESENTATION

BY KRISHNAMOORTHI K

MY SQL DATABASE

- SQL = Structured Query Language Program

- SQL Programming language used to manage and manipulate relational databases.

- Data is organized into tables with rows and columns.

- It provides efficient storage and retrieval of structured data.

- It as commonly used in various applications and systems.

MY SQL WORKBENCH

- My SQL Workbench is a visual tool for database developers

- It provides data modeling, SQL development, and comprehensive tools for server configuration, user administration, backup.

My SQL WORKBENCH 8.0 CE.........

MySQL
Workbench

SQL SERVERS

- Microsoft SQL Server
- My SQL Server Workbench
- Navigation
- Oracle Database
- IBM Db2

Difference Between SQL & MYSQL

SQL	MYSQL
➢ It as a Structured Query Language	➢ SQL is based on ANSI SQL Standard
➢ Not a specific database system, but a language standard	➢ A specific relational database management systems (RDBMS)
➢ Widely used in various database systems and platforms	➢ One of the most popular open-source RDBMS, especially for web applications.
➢ Used for database management across different platforms and systems.	➢Primarily used as the backend database for web applications, especially those using PHP

DATATYPE OF MYSQL

- String Data type
- Timestamp Data type
- Date Time Data type
- Integers Data type
- Numeric Data type

KEYS IN DBMS

- Super Key
- Candidate Key
- Primary Key
- Alternate Key
- Secondary Key
- Foreign Key

PRIMARY KEY

- A table / relation can have only one primary key allowed
- No Null Values
- No Duplicate Values
- Ex: emp_id.

SUPER KEY

- Set of one or more attributes that allows identifying an entity unique
- (Ex: student_id, student_name, roll_no, mail_id,)
- Duplicate can allow

CANDIDATE KEY

- Candidate keys are a subset of super key
- No repeated attributes
- (Ex: student_id, roll_no)

ALTERNATE KEY OR SECONDARY KEY

- Primary Key – Candidate Key

FOREIGN KEY

- A Foreign Key is a reference key.
- It used to linked two tables together.
- It maintain relationship between two tables.

CONTENTS

MYSQL General Commands

- **SELECT** - extracts data from a database
- **UPDATE** - updates data in a database
- **DELETE -** deletes data from a database
- **INSERT INTO** - inserts new data into a database
- **CREATE DATABASE** - creates a new database
- **ALTER DATABASE** - modifies a database
- **CREATE TABALE** - creates a new table
- **ALTER DATABASE** - modifies a database
- **DROP TABLE** - deletes a table

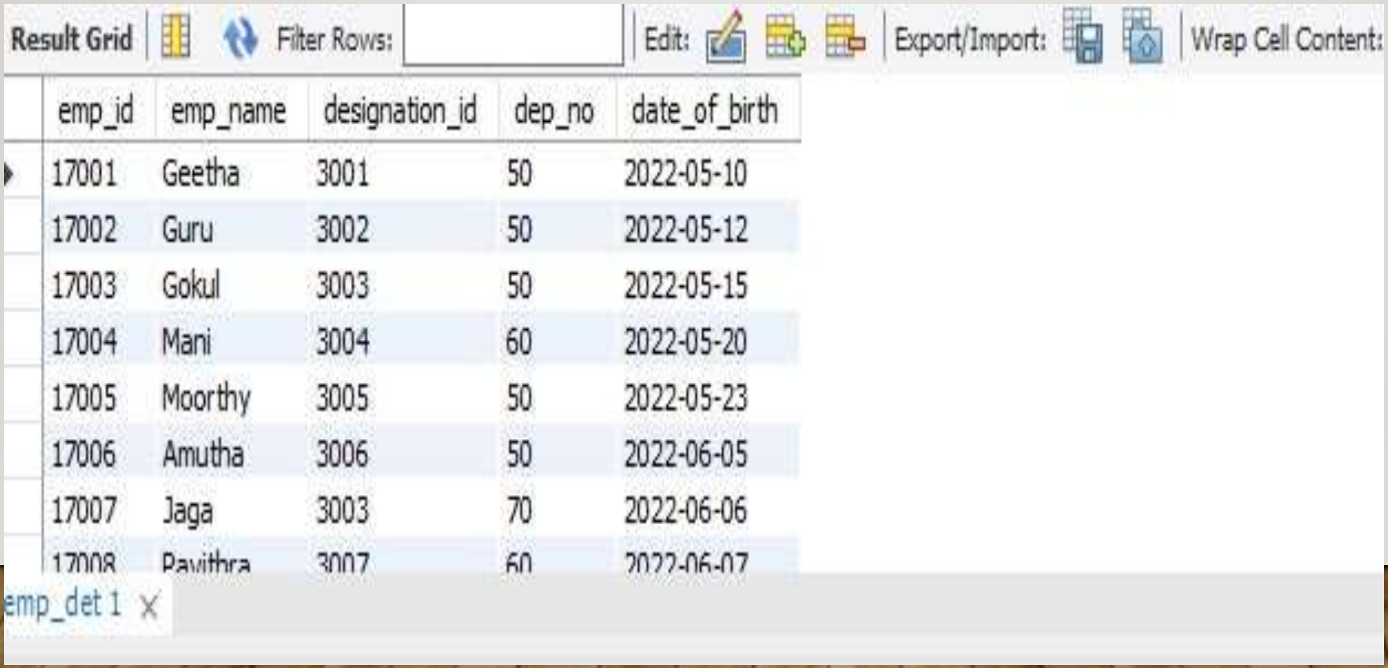
MYSQL GENERAL COMMANDS

- **DDL** - DATA DEFINITION LANGUAGE
- **DML** - DATA MANIPULATION LANGUAGE
- **DQL** - DATA QUERY LANGUAGE
- **DCL** - DATA CONTROL LANGUAGE
- **TCL** - TRANSACTION CONTROL LANGUAGE

DDL	DML	DQL	DCL	TCL
▪ Create ▪ Alter ▪ Drop ▪ Truncate ▪ Rename	▪ Select ▪ Insert ▪ Update ▪ Delete ▪ Merge	▪ Select ▪ From	▪ Grand ▪ Revoke	▪ Commit ▪ Rollback ▪ Save point

TABLE CREATIONS
TABLE 1

- create table emp_det (emp_id int, emp_name varchar(45), designation_id int, dep_no int, date_of_birth date,primary key(emp_id));

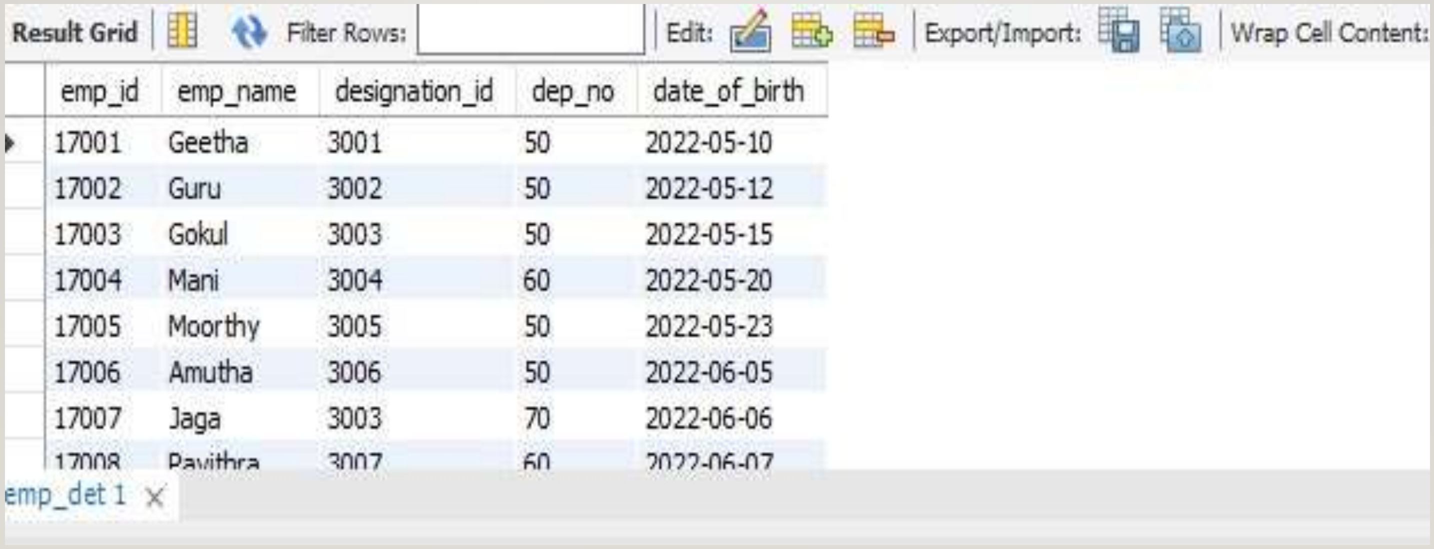


emp_id	emp_name	designation_id	dep_no	date_of_birth
17001	Geetha	3001	50	2022-05-10
17002	Guru	3002	50	2022-05-12
17003	Gokul	3003	50	2022-05-15
17004	Mani	3004	60	2022-05-20
17005	Moorthy	3005	50	2022-05-23
17006	Amutha	3006	50	2022-06-05
17007	Jaga	3003	70	2022-06-06
17008	Pavithra	3007	60	2022-06-07

TABLE 2

- **QUERY** : create table salary_det(salary_id int,emp_date int,salary_date date,branch_id int,amount int, primary key (salary_id));

  Output :



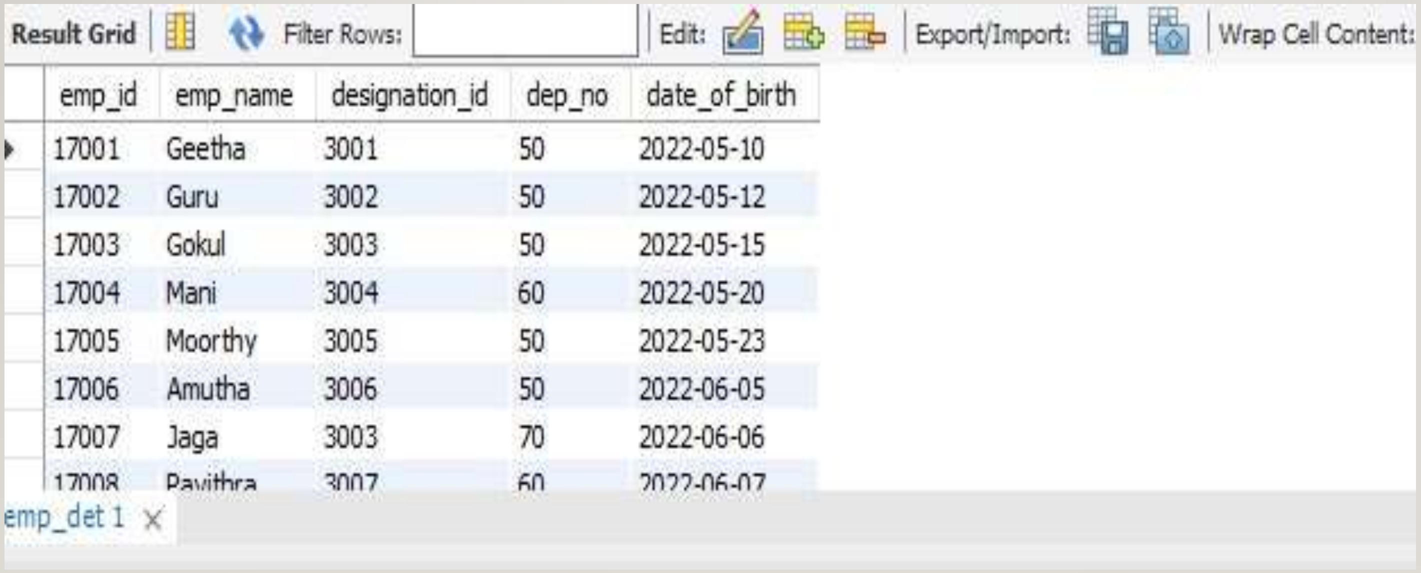
Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

emp_id	emp_name	designation_id	dep_no	date_of_birth
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

emp_det 1

TABLE 3

create table designation_det(designation_id int,designation varchar(45), primary key(designation_id));



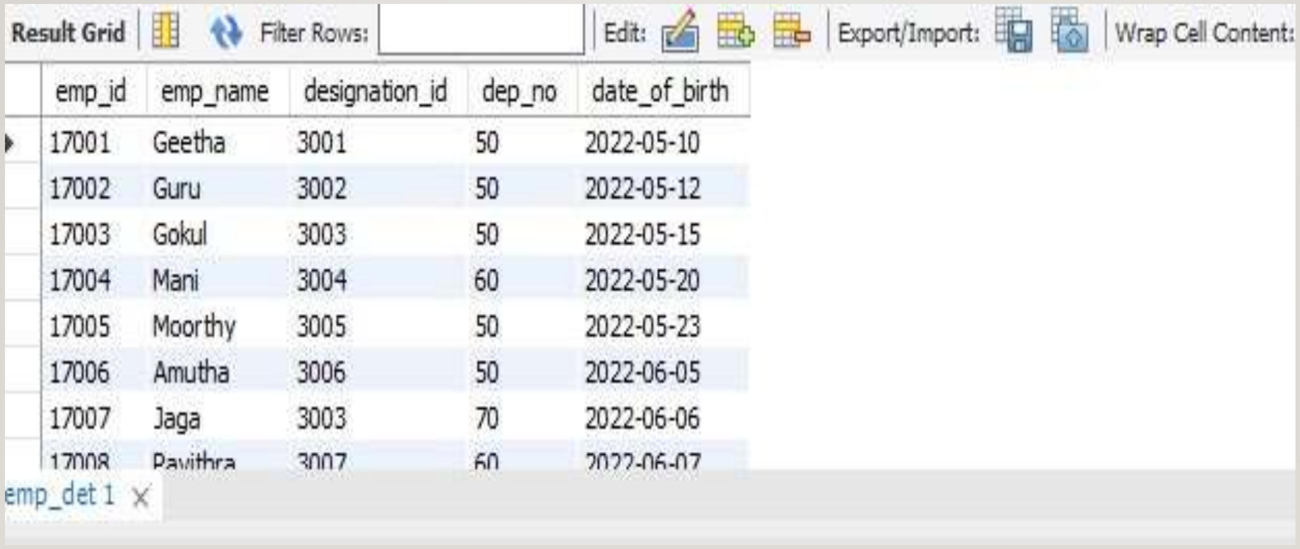
Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

emp_id	emp_name	designation_id	dep_no	date_of_birth
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

emp_det 1 ×

TABLLE 4

create table salary_det(salary_id int,emp_date int,salary_date date,branch_id int,amount int, primary key (salary_id));



emp_id	emp_name	designation_id	dep_no	date_of_birth
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

MYSQL GENERAL FUNCTION

- where
- or
- and
- in
- not in
- >
- <
- >=
- <=
- <> (not in)
- !

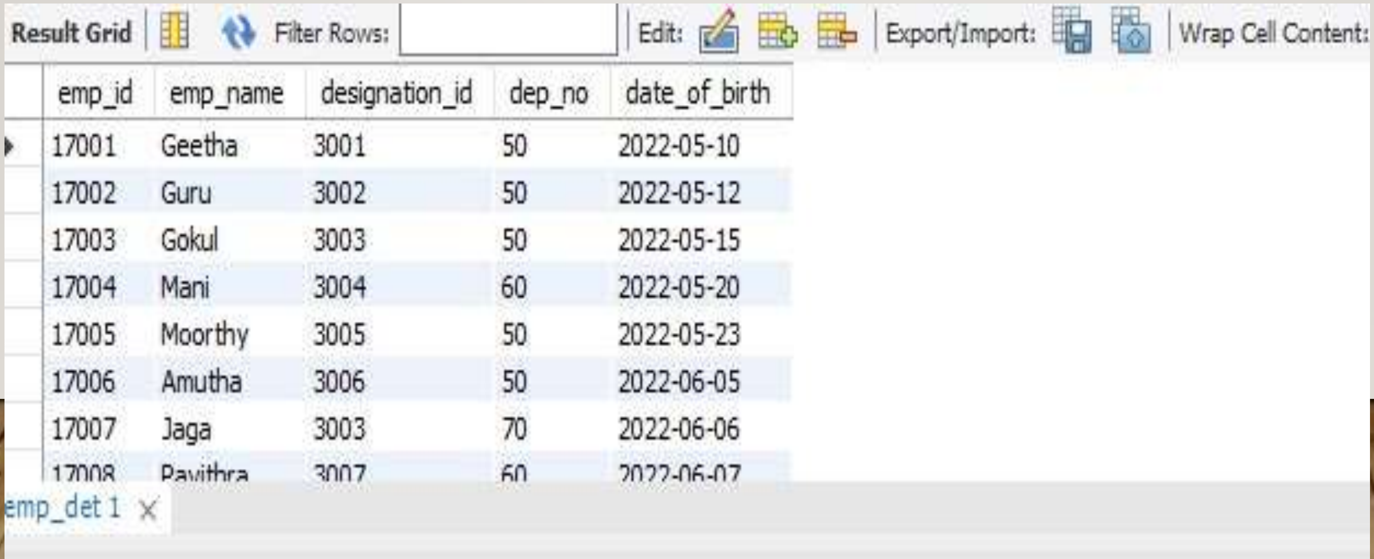
- count
- Distinct
- count with discount
- order by Asc
- order by Desc
- Group by
- Limit
- Desc Limit
- Like (_%)
- not like
- between

WHERE

- The WHERE Clause is used to filter records.
- It is used to extract only those records that fulfil a specified condition.

- **QUERY**: select*from emp_det where designation_id=3005;

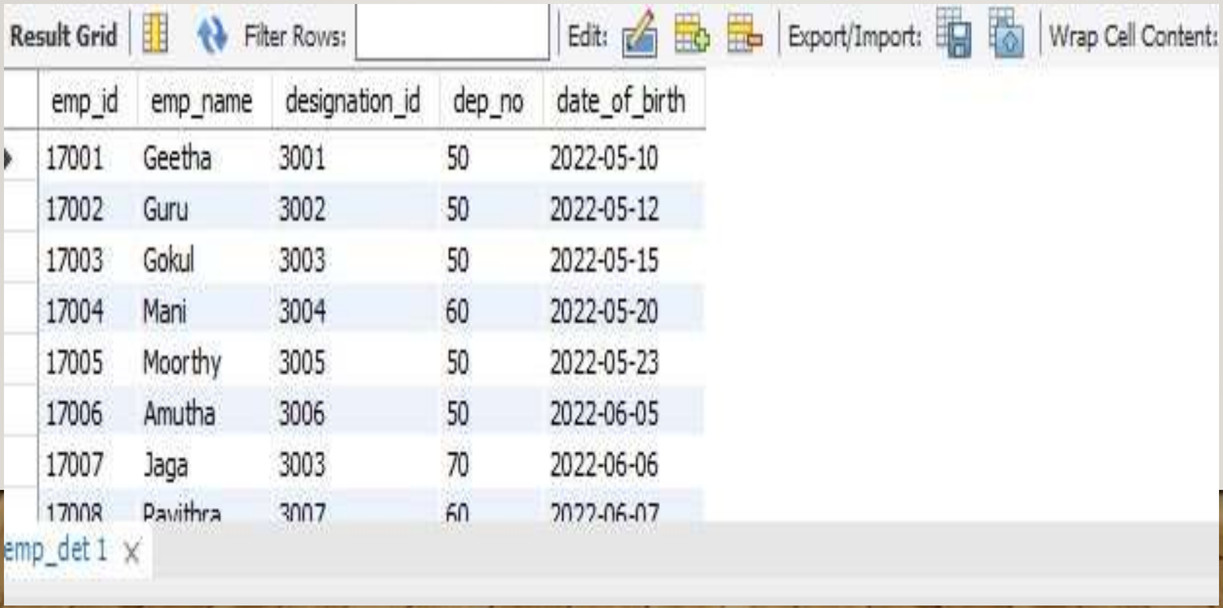
- **OUTPUT**



emp_id	emp_name	designation_id	dep_no	date_of_birth
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

OR

- The OR operator displays a record if any of the conditions separated by OR is TRUE
- **QUERY**: select* from emp_det where dep_no=50 or dep_no=80;
- **OUTPUT**



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

emp_id	emp_name	designation_id	dep_no	date_of_birth
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

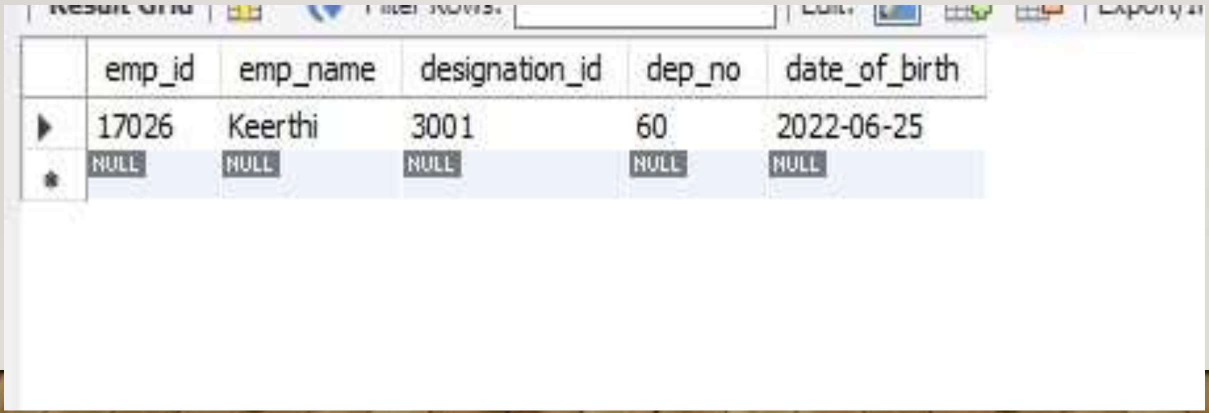
emp_det 1

AND

- The AND operator displays a record if all the conditions seprated by AND are TRUE

- **QUERY** : select*from emp_det where designation_id=3001 and dep_no=60;

- **OUTPUT**



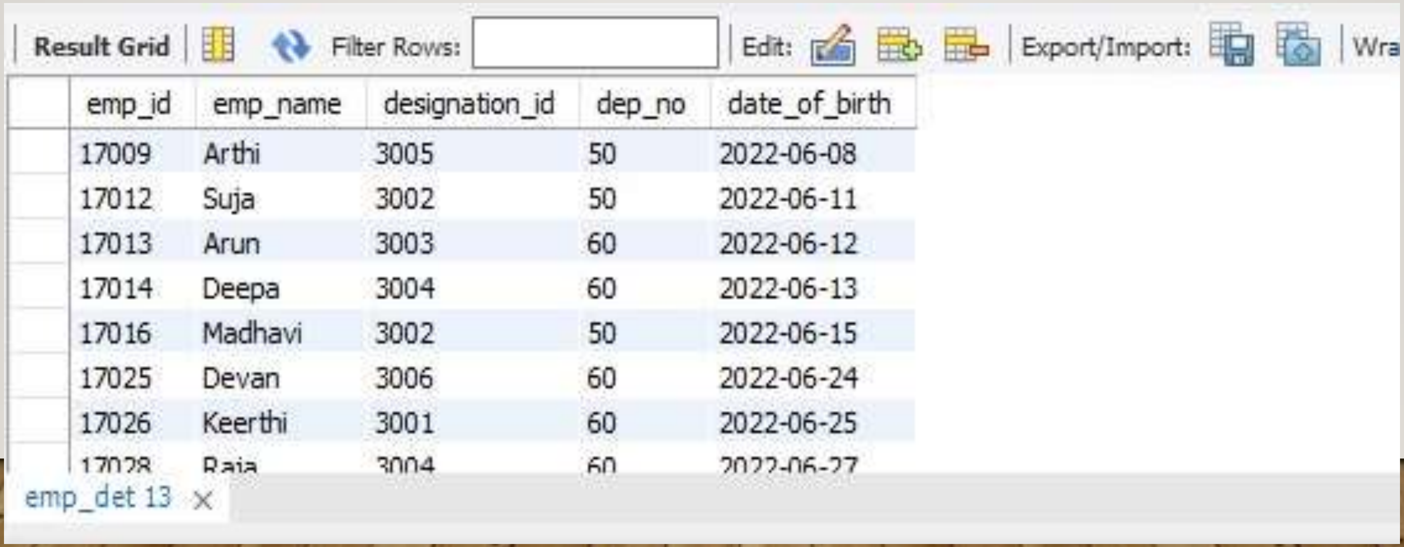
emp_id	emp_name	designation_id	dep_no	date_of_birth
17026	Keerthi	3001	60	2022-06-25
NULL	NULL	NULL	NULL	NULL

IN

- The IN operator allows you to specify multiple values in a WHERE clause.

- **QUERY** : select *from emp_det where dep_no in (50,60);

- **OUTPUT**



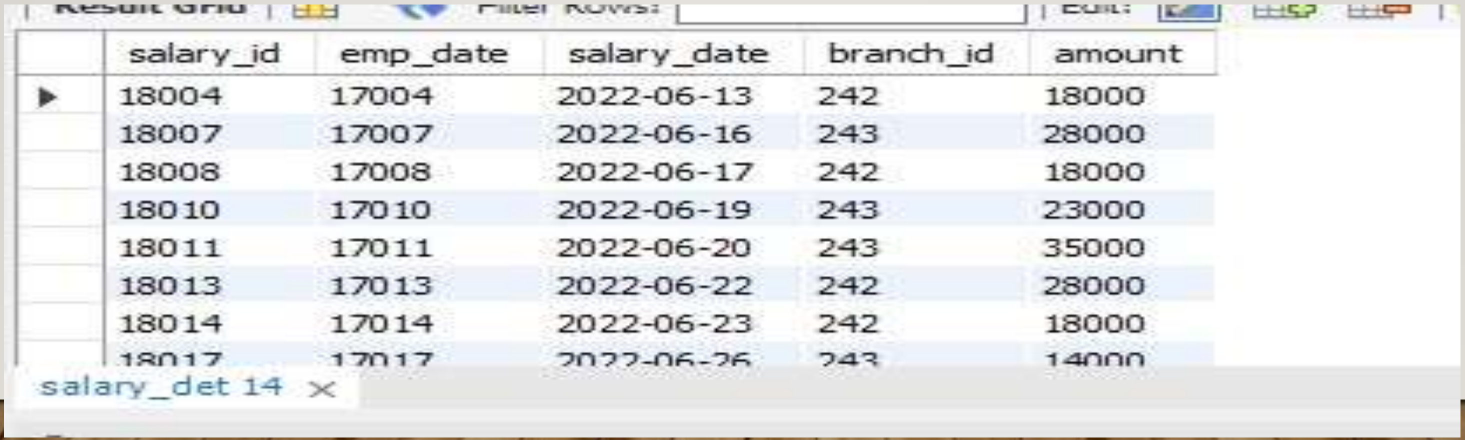
emp_id	emp_name	designation_id	dep_no	date_of_birth
17009	Arthi	3005	50	2022-06-08
17012	Suja	3002	50	2022-06-11
17013	Arun	3003	60	2022-06-12
17014	Deepa	3004	60	2022-06-13
17016	Madhavi	3002	50	2022-06-15
17025	Devan	3006	60	2022-06-24
17026	Keerthi	3001	60	2022-06-25
17028	Raja	3004	60	2022-06-27

NOT IN

- The NOT IN operators does not allows you to specify multiple values in a WHERE clause

- **QUERY** : select* from salary_det where branch_id not in (241,244);

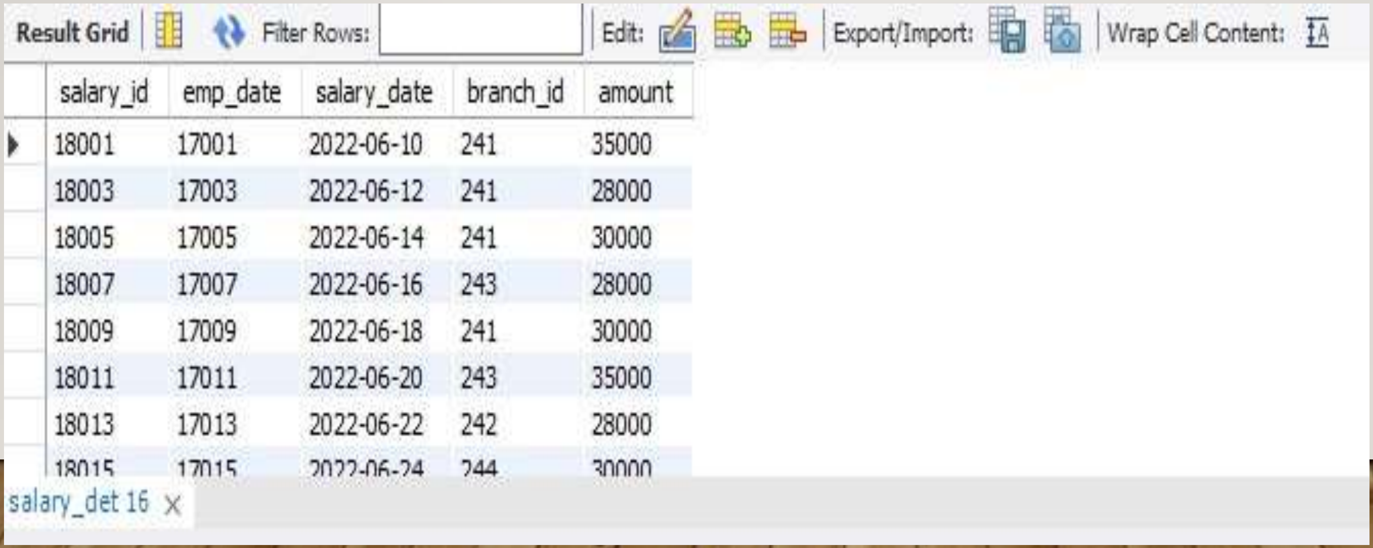
- **OUTPUT**



salary_id	emp_date	salary_date	branch_id	amount
18004	17004	2022-06-13	242	18000
18007	17007	2022-06-16	243	28000
18008	17008	2022-06-17	242	18000
18010	17010	2022-06-19	243	23000
18011	17011	2022-06-20	243	35000
18013	17013	2022-06-22	242	28000
18014	17014	2022-06-23	242	18000
18017	17017	2022-06-26	243	14000

GREATER THAN

- The GREATHER THAN operator is used to show the higher values
- **QUERY** : select*from salary_det where amount >25000;
- **OUTPUT**



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

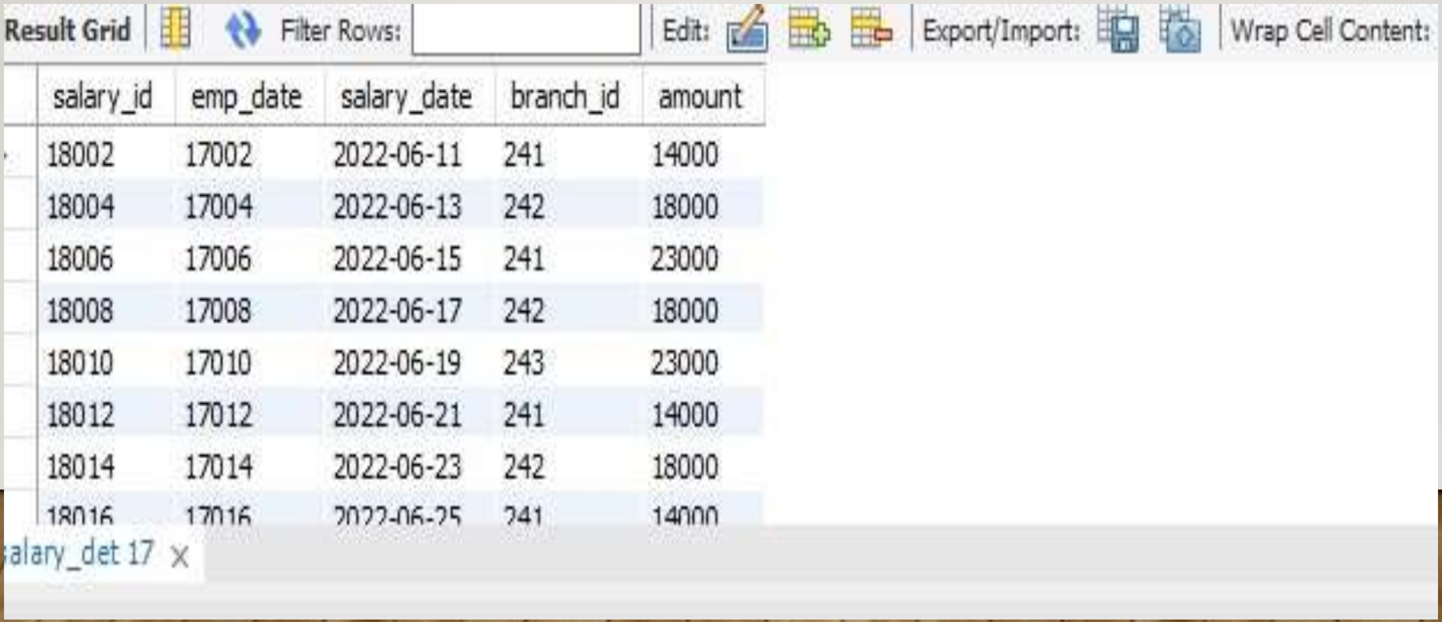
salary_id	emp_date	salary_date	branch_id	amount
18001	17001	2022-06-10	241	35000
18003	17003	2022-06-12	241	28000
18005	17005	2022-06-14	241	30000
18007	17007	2022-06-16	243	28000
18009	17009	2022-06-18	241	30000
18011	17011	2022-06-20	243	35000
18013	17013	2022-06-22	242	28000
18015	17015	2022-06-24	244	30000

salary_det 16 ×

LESSER THAN

The LESSER THAN operator is used to show the lower values.

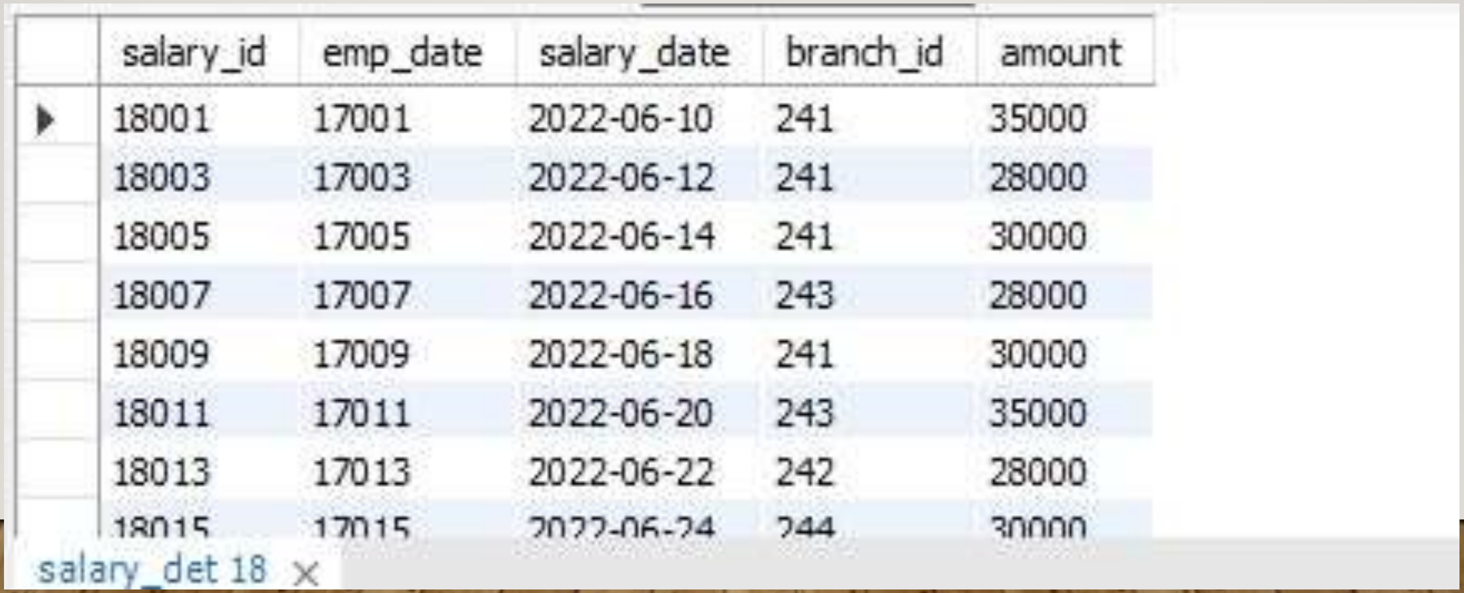
- **QUERY** : Select*from salary_det where amount <25000;
- **OUTPUT**



salary_id	emp_date	salary_date	branch_id	amount
18002	17002	2022-06-11	241	14000
18004	17004	2022-06-13	242	18000
18006	17006	2022-06-15	241	23000
18008	17008	2022-06-17	242	18000
18010	17010	2022-06-19	243	23000
18012	17012	2022-06-21	241	14000
18014	17014	2022-06-23	242	18000
18016	17016	2022-06-25	241	14000

GREATER EQUAL

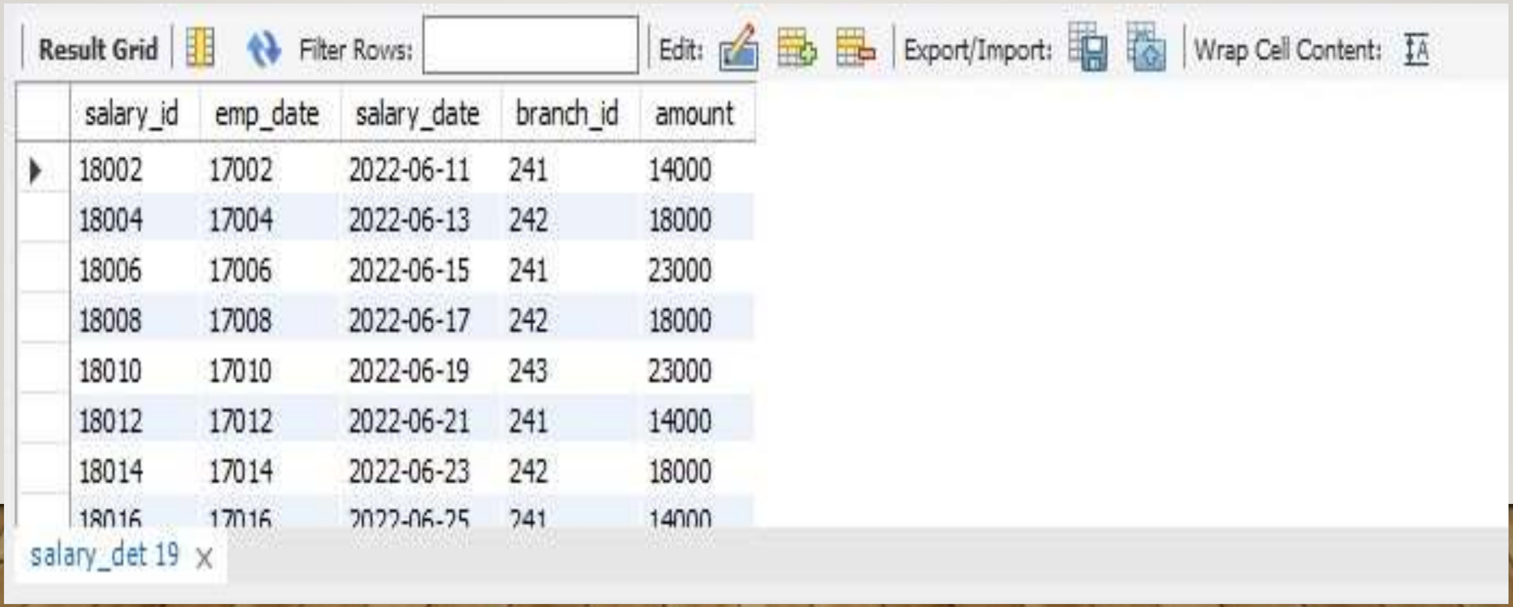
- The GREATER EQUAL is used to show the higher value and also the equal to values
- **QUERY :** select*from salary_det where amount >=25000**;**
- **OUTPUT**



	salary_id	emp_date	salary_date	branch_id	amount
▶	18001	17001	2022-06-10	241	35000
	18003	17003	2022-06-12	241	28000
	18005	17005	2022-06-14	241	30000
	18007	17007	2022-06-16	243	28000
	18009	17009	2022-06-18	241	30000
	18011	17011	2022-06-20	243	35000
	18013	17013	2022-06-22	242	28000
	18015	17015	2022-06-24	244	30000

LESSER EQUAL

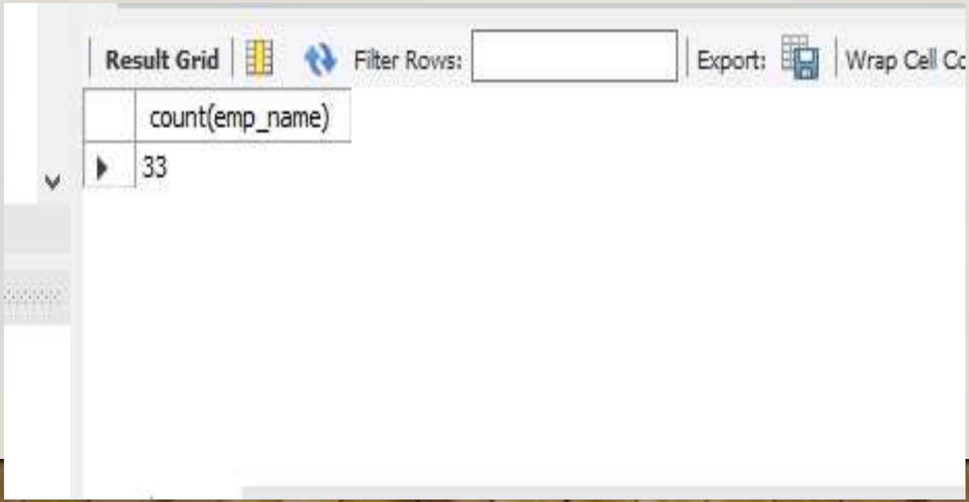
-
- **QUERY** : select*from salary_det where amount <=25000;
- **OUTPUT**



salary_id	emp_date	salary_date	branch_id	amount
18002	17002	2022-06-11	241	14000
18004	17004	2022-06-13	242	18000
18006	17006	2022-06-15	241	23000
18008	17008	2022-06-17	242	18000
18010	17010	2022-06-19	243	23000
18012	17012	2022-06-21	241	14000
18014	17014	2022-06-23	242	18000
18016	17016	2022-06-25	241	14000

COUNT

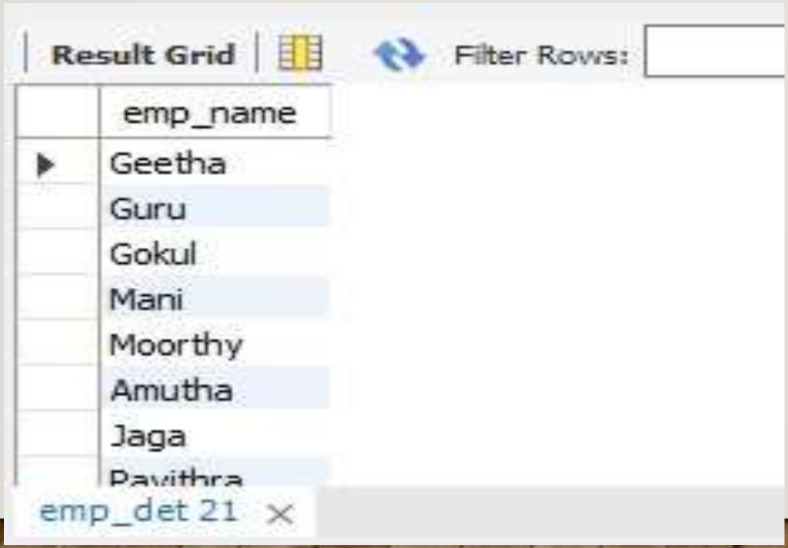
- The COUNT() functions returns the number of rows that matches a specified criterion
- **QUERY** : select count(emp_name) from emp_det;
- **OUTPUT**



```
count(emp_name)
33
```

DISTINCT

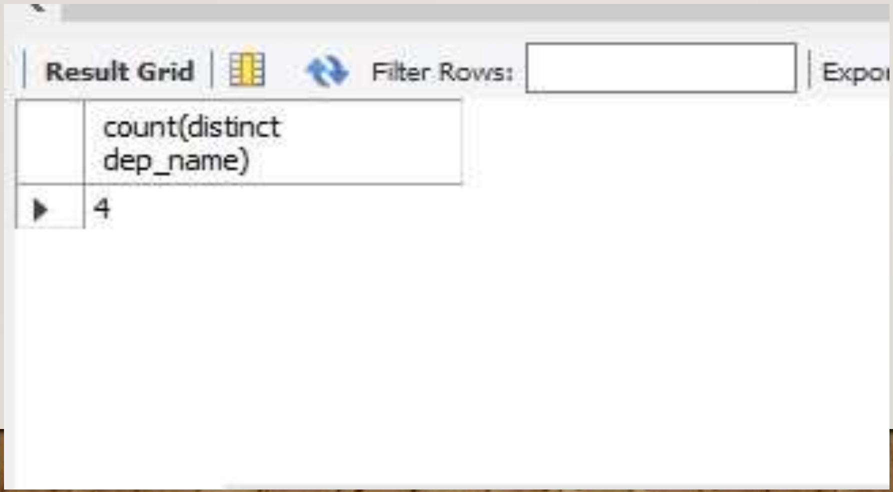
- To SELECT DISTINCT statement is used to return only DISTINCT (different) values
- **QUERY** : select distinct emp_name from emp_det;
- **OUTPUT**



```
emp_name
Geetha
Guru
Gokul
Mani
Moorthy
Amutha
Jaga
Pavithra
```

COUNT WITH DISTINCT

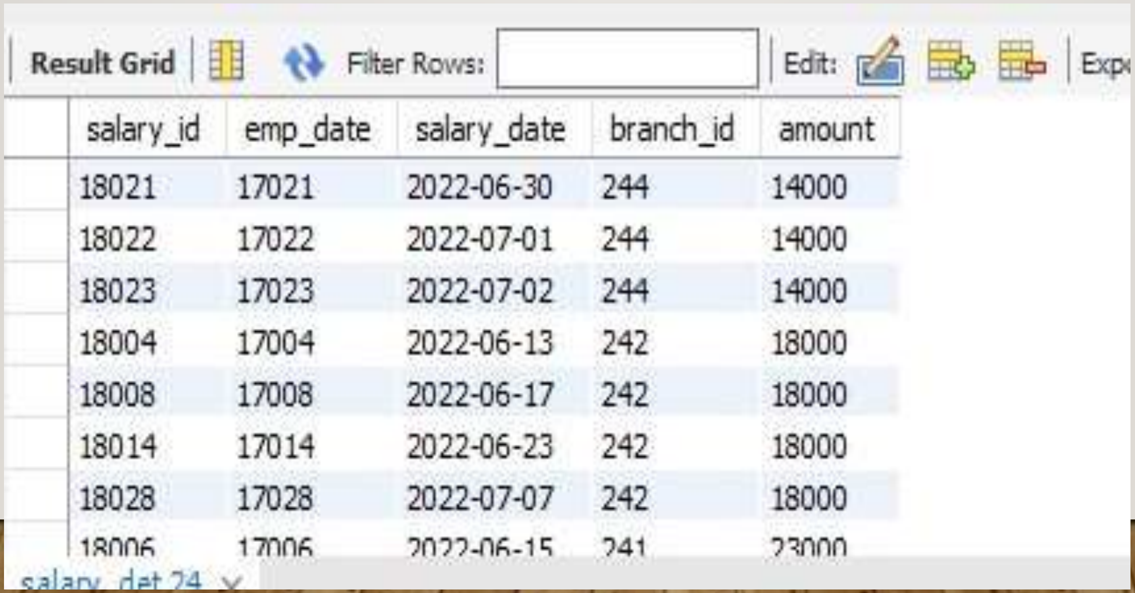
- This is used to find the count values of DISTINCT values
- **Query** : select count(distinct dep_name) from department_det7;
- **OUTPUT**



```
count(distinct
dep_name)
4
```

ORDER BY ASCENDING

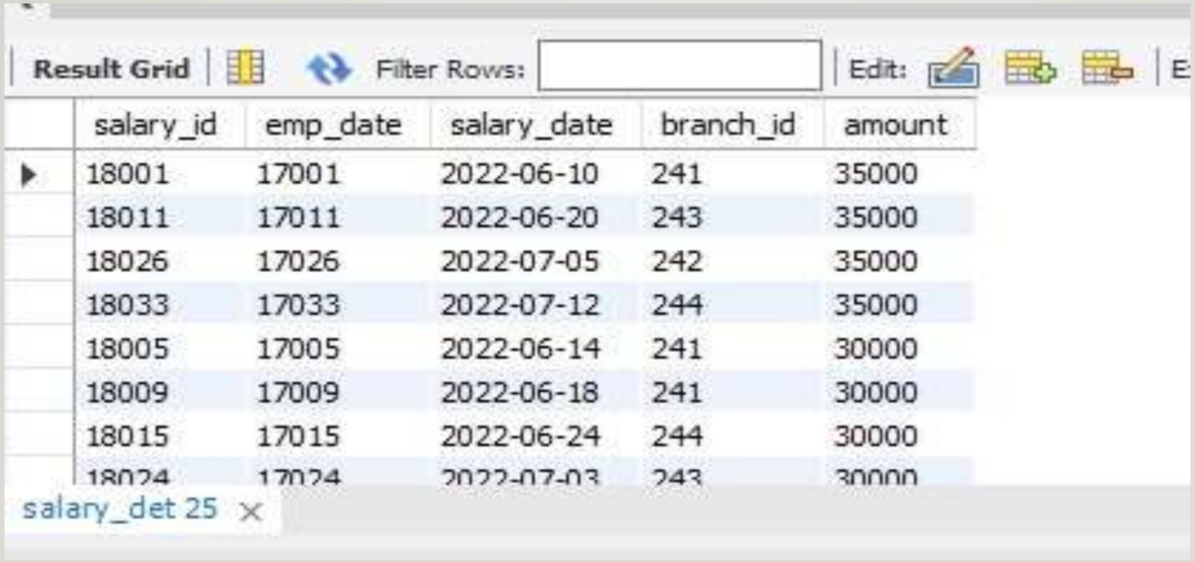
- Select * from salary_details where amount between 10000 and 20000
- **QUERY :** select* from salary_det order by amount asc;
- **OUTPUT**



salary_id	emp_date	salary_date	branch_id	amount
18021	17021	2022-06-30	244	14000
18022	17022	2022-07-01	244	14000
18023	17023	2022-07-02	244	14000
18004	17004	2022-06-13	242	18000
18008	17008	2022-06-17	242	18000
18014	17014	2022-06-23	242	18000
18028	17028	2022-07-07	242	18000
18006	17006	2022-06-15	241	23000

ORDER BY DESCENDING

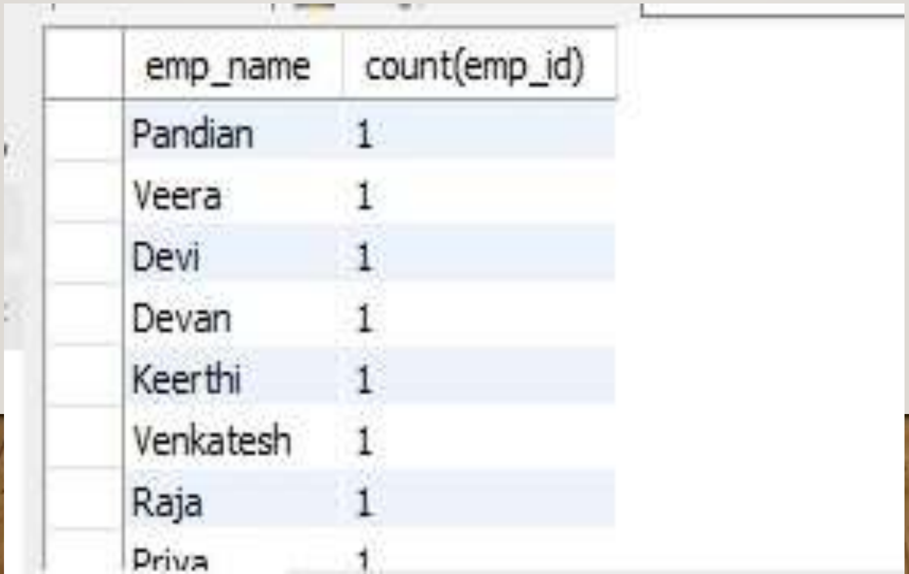
- **QUERY** : select* from salary_det order by amount desc;
- **OUTPUT**



salary_id	emp_date	salary_date	branch_id	amount
18001	17001	2022-06-10	241	35000
18011	17011	2022-06-20	243	35000
18026	17026	2022-07-05	242	35000
18033	17033	2022-07-12	244	35000
18005	17005	2022-06-14	241	30000
18009	17009	2022-06-18	241	30000
18015	17015	2022-06-24	244	30000
18024	17024	2022-07-03	243	30000

GROUP BY

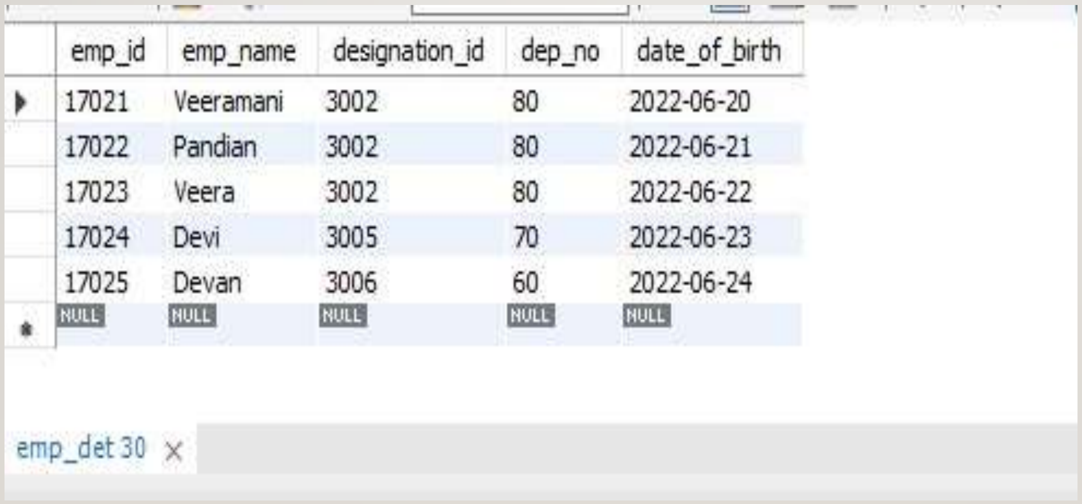
- The GROUP BY statement groups rows that have the same values into summary rows, like "find the number of customers in each country".
- The GROUP BY statement is often used with aggregate functions (Count(), MAX(), MIN(), SUM(), AVG()) to group the result-set by one or more columns.
- **QUERY** : select emp_name,count(emp_id)from emp_det group by emp_name;
- **OUTPUT**



```
emp_name    count(emp_id)
Pandian     1
Veera       1
Devi        1
Devan       1
Keerthi     1
Venkatesh   1
Raja        1
Priya       1
```

LIMIT

- The LIMIT is used to filter the specified range of values.
- **QUERY** : select*from emp_det order by emp_id limit 20,5;
- **OUTPUT**

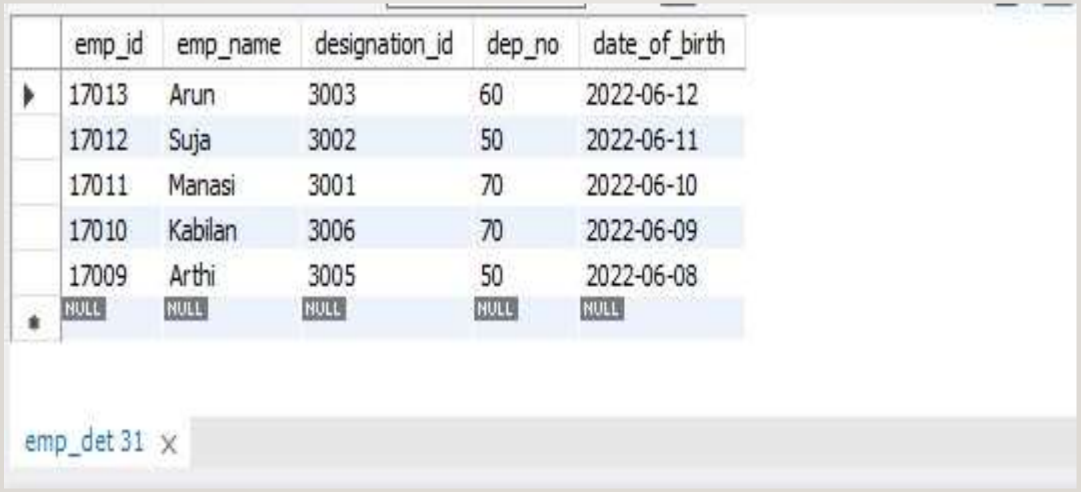


emp_id	emp_name	designation_id	dep_no	date_of_birth
17021	Veeramani	3002	80	2022-06-20
17022	Pandian	3002	80	2022-06-21
17023	Veera	3002	80	2022-06-22
17024	Devi	3005	70	2022-06-23
17025	Devan	3006	60	2022-06-24
NULL	NULL	NULL	NULL	NULL

emp_det 30 ×

DESC LIMIT

- **QUERY** : select*from emp_det order by emp_id desc limit 20,5;
- **OUTPUT**



emp_id	emp_name	designation_id	dep_no	date_of_birth
17013	Arun	3003	60	2022-06-12
17012	Suja	3002	50	2022-06-11
17011	Manasi	3001	70	2022-06-10
17010	Kabilan	3006	70	2022-06-09
17009	Arthi	3005	50	2022-06-08
NULL	NULL	NULL	NULL	NULL

emp_det 31 ×

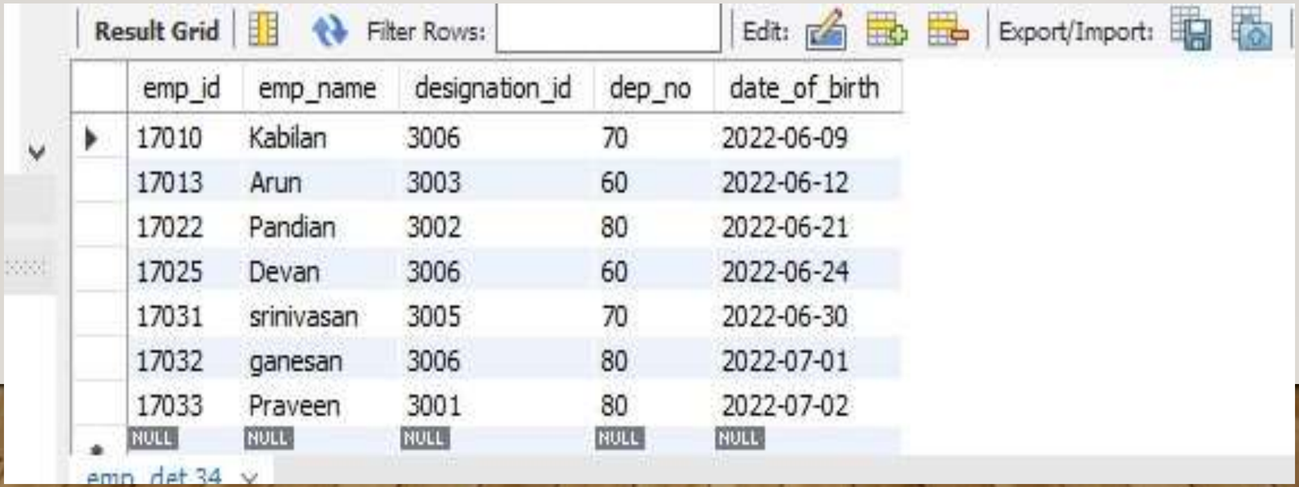
LIKE

- The LIKE operator is used in a WHERE clause to search for a specific pattern in a column.

- The percent sign % represents zero, one, or multiple character.
- The underscore sign_represents one, single character.

- **QUERY** : select*from emp_det where emp_name like'%n';

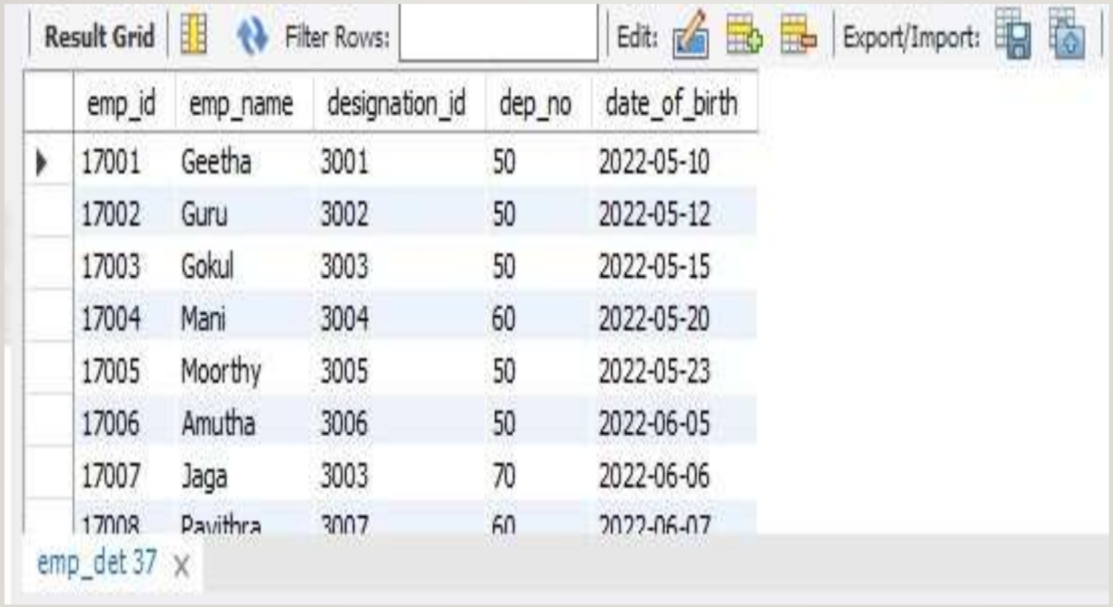
- **OUTPUT**



emp_id	emp_name	designation_id	dep_no	date_of_birth
17010	Kabilan	3006	70	2022-06-09
17013	Arun	3003	60	2022-06-12
17022	Pandian	3002	80	2022-06-21
17025	Devan	3006	60	2022-06-24
17031	srinivasan	3005	70	2022-06-30
17032	ganesan	3006	80	2022-07-01
17033	Praveen	3001	80	2022-07-02
NULL	NULL	NULL	NULL	NULL

NOT LIKE

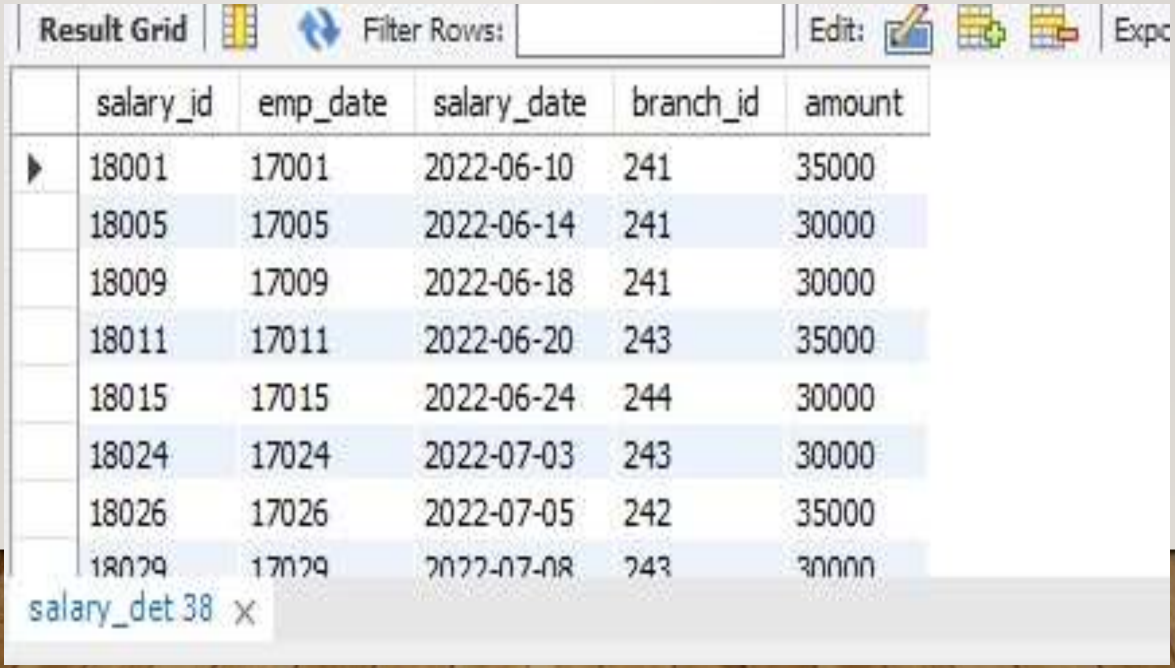
- **QUERY** : select*from emp_det where emp_name not like'%n';
- **OUTPUT**



emp_id	emp_name	designation_id	dep_no	date_of_birth
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

BETWEEN AND

- The BETWEEN operator select values within a given range. The values can be numbers, text, c
- **QUERY :** select* from salary_det where amount between 30000 and 40000;
- **OUTPUT**



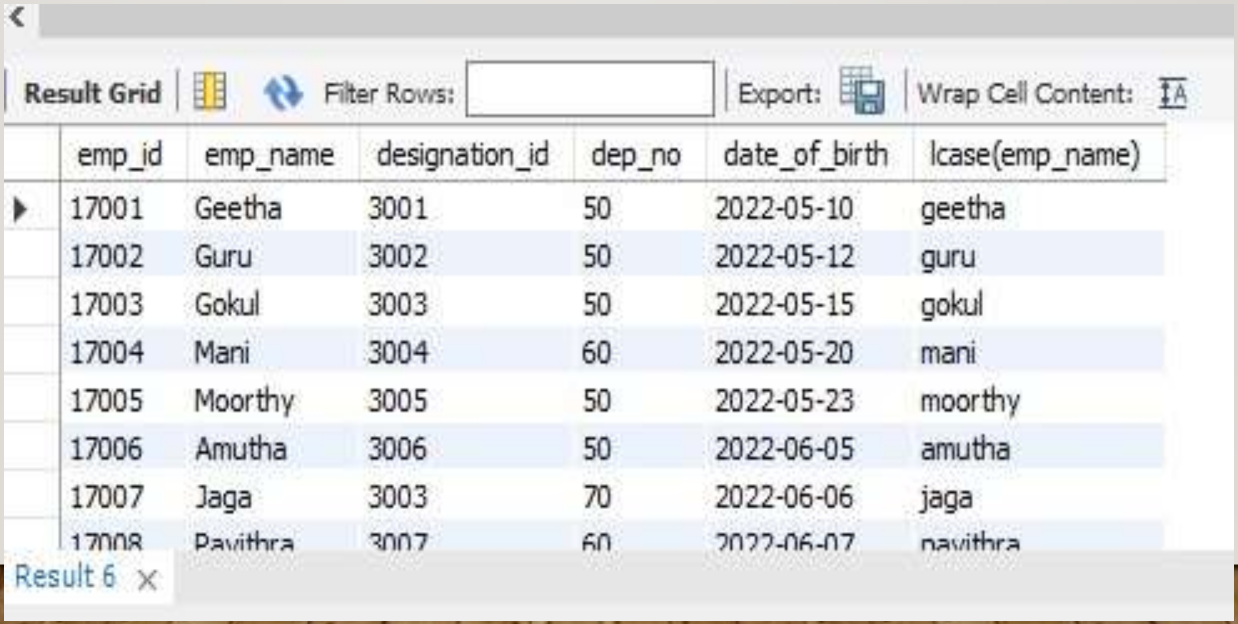
salary_id	emp_date	salary_date	branch_id	amount
18001	17001	2022-06-10	241	35000
18005	17005	2022-06-14	241	30000
18009	17009	2022-06-18	241	30000
18011	17011	2022-06-20	243	35000
18015	17015	2022-06-24	244	30000
18024	17024	2022-07-03	243	30000
18026	17026	2022-07-05	242	35000
18029	17029	2022-07-08	243	30000

MYSQL STRING FUNCTION

- LCase
- UCase
- Left
- Right
- Concat
- Trim
- Char_Length

LOWER CASE

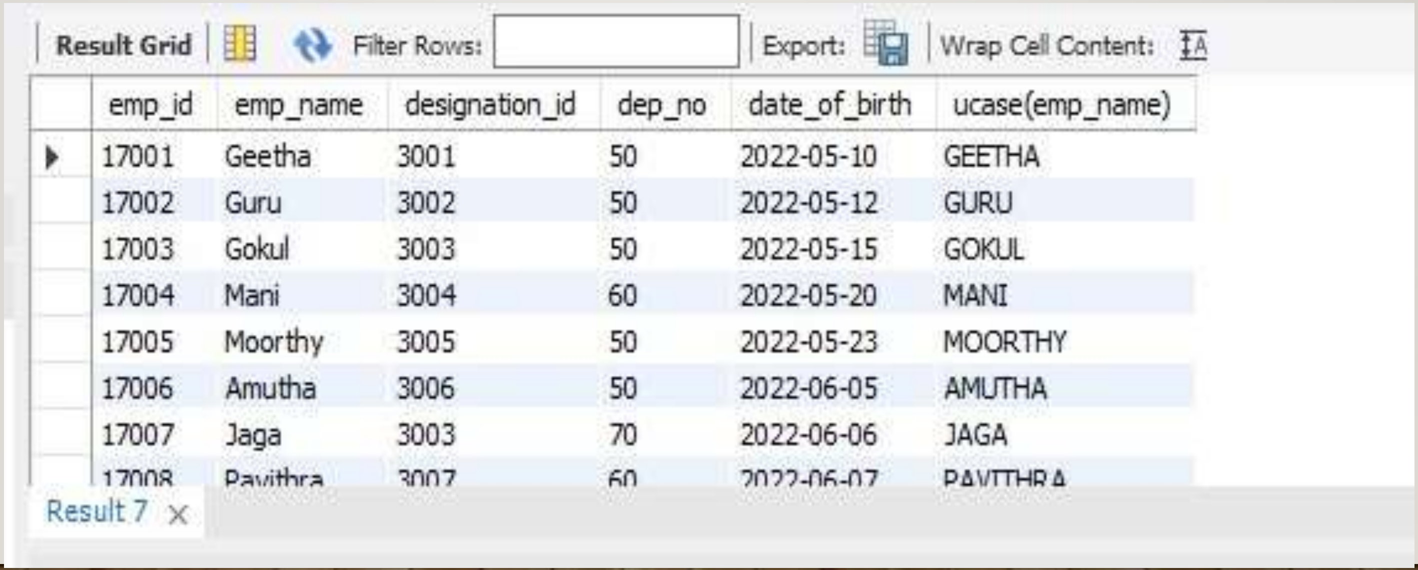
- **QUERY** : select*,lcase(emp_name)from emp_det;
- **Output**



emp_id	emp_name	designation_id	dep_no	date_of_birth	lcase(emp_name)
17001	Geetha	3001	50	2022-05-10	geetha
17002	Guru	3002	50	2022-05-12	guru
17003	Gokul	3003	50	2022-05-15	gokul
17004	Mani	3004	60	2022-05-20	mani
17005	Moorthy	3005	50	2022-05-23	moorthy
17006	Amutha	3006	50	2022-06-05	amutha
17007	Jaga	3003	70	2022-06-06	jaga
17008	Pavithra	3007	60	2022-06-07	pavithra

UPPER CASE

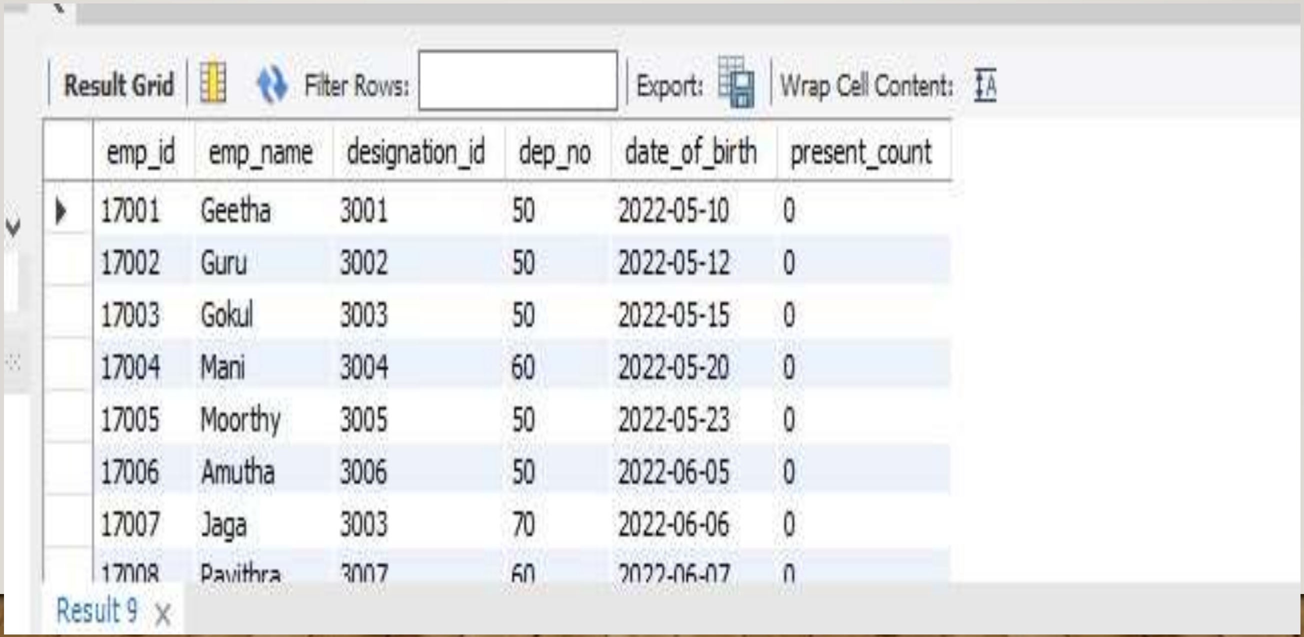
- **QUERY** : select*,ucase(emp_name)from emp_det;
- **Output**



emp_id	emp_name	designation_id	dep_no	date_of_birth	ucase(emp_name)
17001	Geetha	3001	50	2022-05-10	GEETHA
17002	Guru	3002	50	2022-05-12	GURU
17003	Gokul	3003	50	2022-05-15	GOKUL
17004	Mani	3004	60	2022-05-20	MANI
17005	Moorthy	3005	50	2022-05-23	MOORTHY
17006	Amutha	3006	50	2022-06-05	AMUTHA
17007	Jaga	3003	70	2022-06-06	JAGA
17008	Pavithra	3007	60	2022-06-07	PAVITHRA

TRIM

- **QUERY** : select *,if (trim(emp_id) ='p','1','0') as present_count from emp_det;
- **Output**



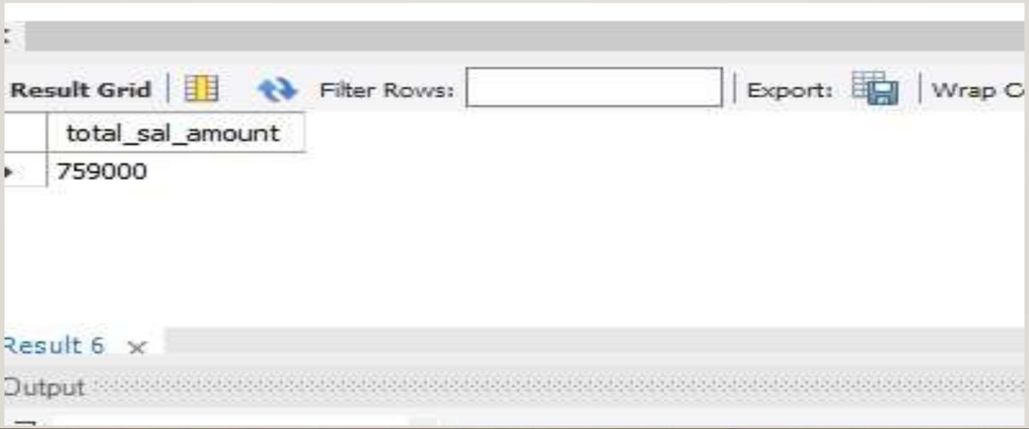
emp_id	emp_name	designation_id	dep_no	date_of_birth	present_count
17001	Geetha	3001	50	2022-05-10	0
17002	Guru	3002	50	2022-05-12	0
17003	Gokul	3003	50	2022-05-15	0
17004	Mani	3004	60	2022-05-20	0
17005	Moorthy	3005	50	2022-05-23	0
17006	Amutha	3006	50	2022-06-05	0
17007	Jaga	3003	70	2022-06-06	0
17008	Pavithra	3007	60	2022-06-07	0

MYSQL CALCULATE FUNCTION

- Sum
- Average
- Min
- Max
- Count

SUM

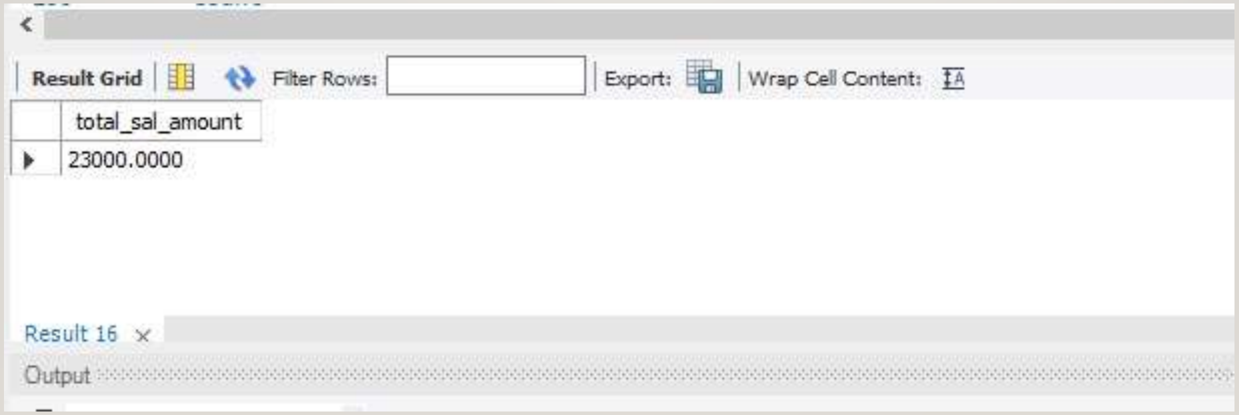
- The SUM() function returns the total sum of a numeric colimn.
- **QUERY : select sum(amount)as total_sal_amount from salary_det;**
- **Output :**



```
total_sal_amount
759000
```

AVERAGE

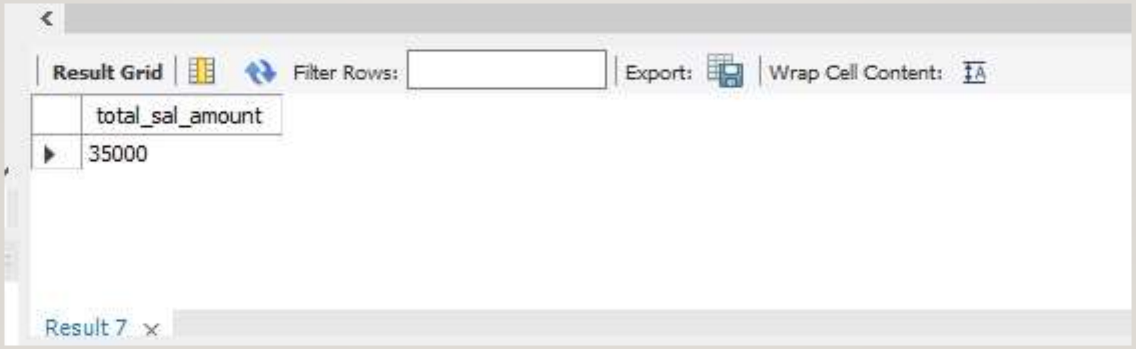
- The AVERAGE function returns the average value off a numeric column.
- **QUERY** : select avg(amount)as total_sal_amount from salary_det;
- **Output** :



```
total_sal_amount
23000.0000
```

MAX

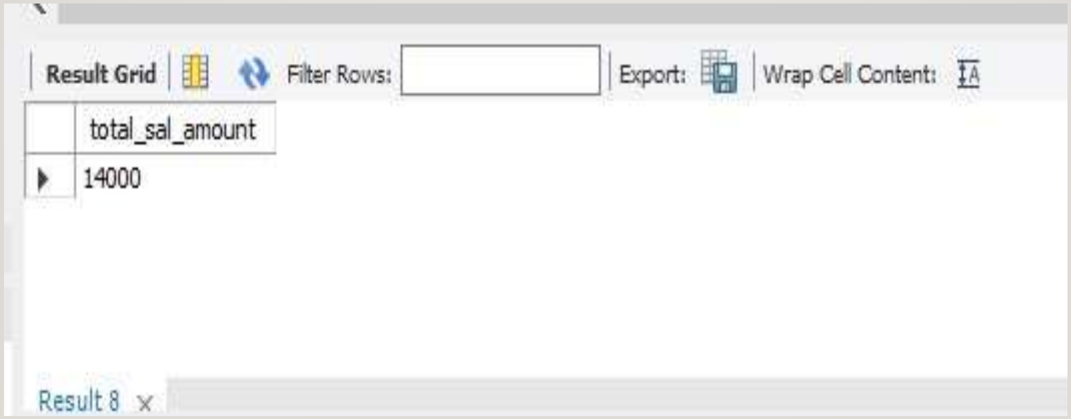
- The MAX function returns the largest value of the selected column.
- **QUERY** : select max(amount)as total_sal_amount from salary_det;
- **Output** :



```
total_sal_amount
35000
```

MIN

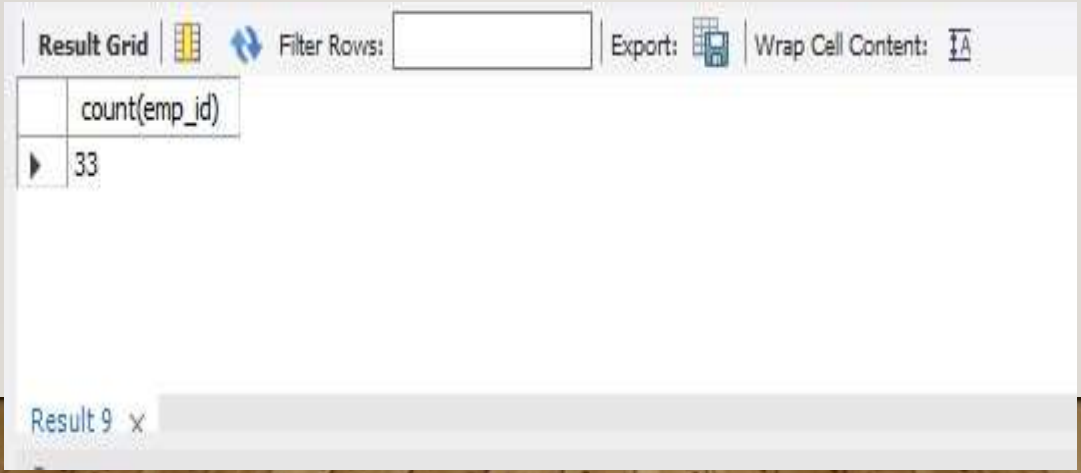
- The MIN function return the smallest value of the selected column.
- **QUERY** : select min(amount)as total_sal_amount from salary_det;
- **Output :**



```
total_sal_amount
14000
```

COUNT

- The COUNT function returns the number of rows that matches a specified criterion
- **QUERY** : select count(emp_id) from emp_det;
- **Output** :



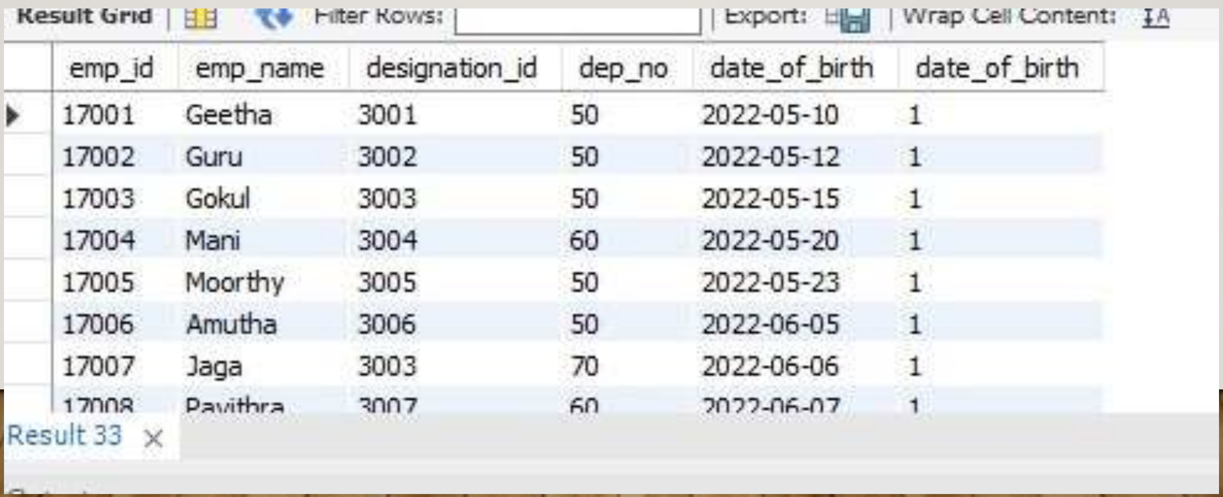
	count(emp_id)
▶	33

YEAR, MONTH, DATE

➢ YEAR

- **QUERY :** select*,timestampdiff(year,date_of_birth,curdate())as date_of_birth from emp_det;

- **Output :**

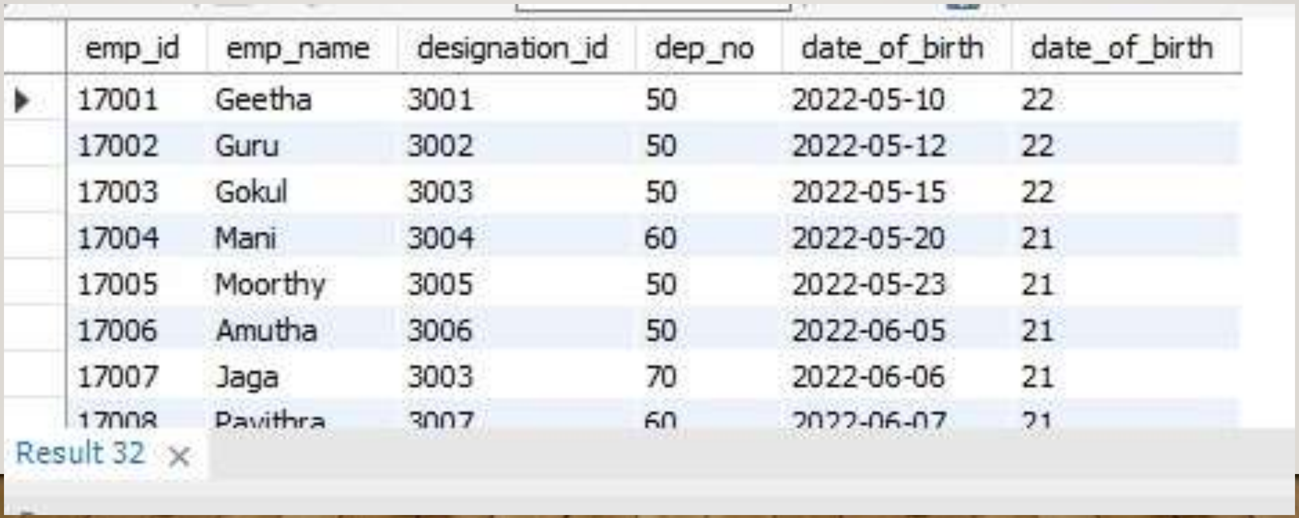


emp_id	emp_name	designation_id	dep_no	date_of_birth	date_of_birth
17001	Geetha	3001	50	2022-05-10	1
17002	Guru	3002	50	2022-05-12	1
17003	Gokul	3003	50	2022-05-15	1
17004	Mani	3004	60	2022-05-20	1
17005	Moorthy	3005	50	2022-05-23	1
17006	Amutha	3006	50	2022-06-05	1
17007	Jaga	3003	70	2022-06-06	1
17008	Pavithra	3007	60	2022-06-07	1

MONTH

- **QUERY :** select*,timestampdiff(month,date_of_birth,curdate())as date_of_birth from emp_det;

- **Output :**

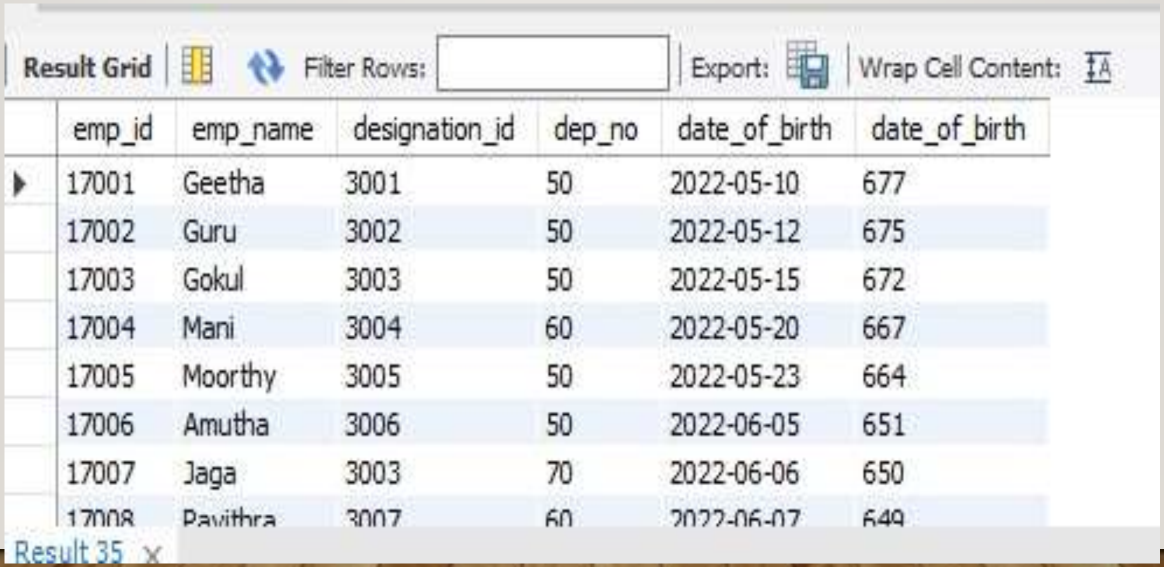


emp_id	emp_name	designation_id	dep_no	date_of_birth	date_of_birth
17001	Geetha	3001	50	2022-05-10	22
17002	Guru	3002	50	2022-05-12	22
17003	Gokul	3003	50	2022-05-15	22
17004	Mani	3004	60	2022-05-20	21
17005	Moorthy	3005	50	2022-05-23	21
17006	Amutha	3006	50	2022-06-05	21
17007	Jaga	3003	70	2022-06-06	21
17008	Pavithra	3007	60	2022-06-07	21

Result 32

DAY

- **QUERY** : select*,timestampdiff(day,date_of_birth,curdate())as date_of_birth from emp_det;
- **Output :**



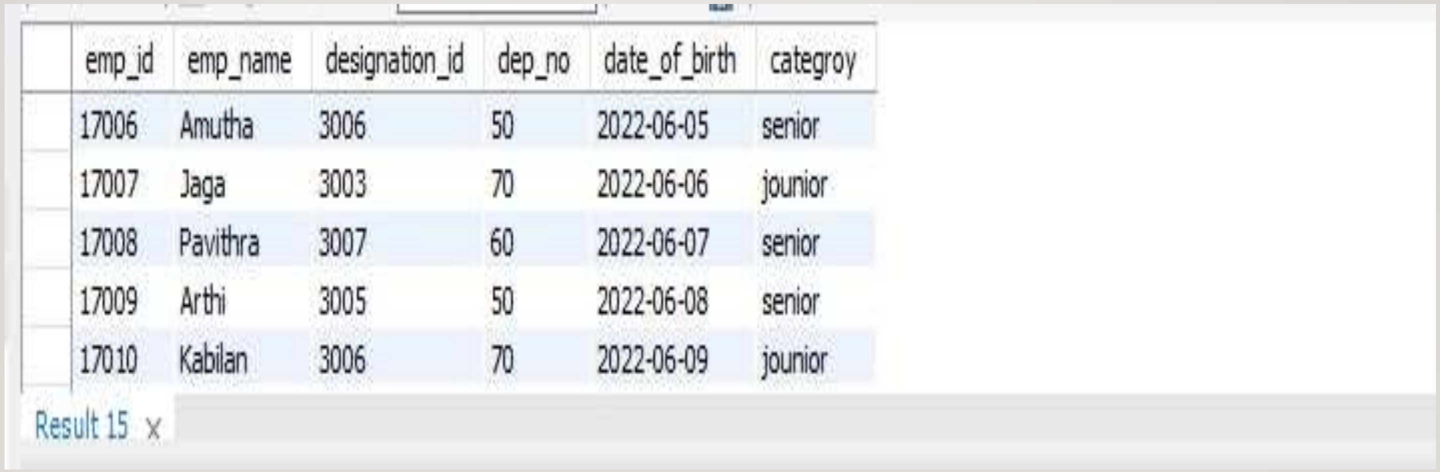
emp_id	emp_name	designation_id	dep_no	date_of_birth	date_of_birth
17001	Geetha	3001	50	2022-05-10	677
17002	Guru	3002	50	2022-05-12	675
17003	Gokul	3003	50	2022-05-15	672
17004	Mani	3004	60	2022-05-20	667
17005	Moorthy	3005	50	2022-05-23	664
17006	Amutha	3006	50	2022-06-05	651
17007	Jaga	3003	70	2022-06-06	650
17008	Pavithra	3007	60	2022-06-07	649

MY SQL LOGICAL FUNCTION

- If
- Count If
- If With And Conditions
- If With Or Conditions

IF CONDITIONS

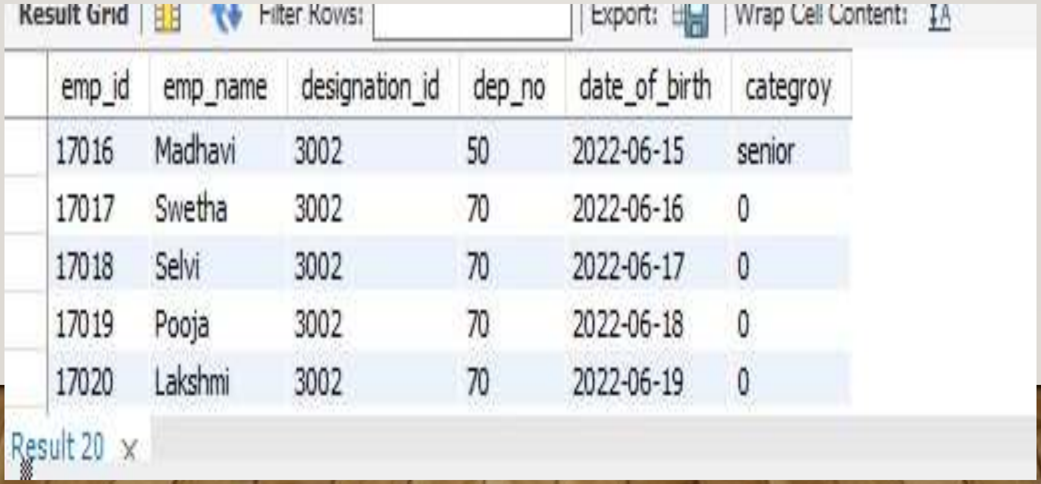
- **QUERY :** select*,if(dep_no<=60,'senior','jounior')as categroy from emp_det;
- **Output :**



emp_id	emp_name	designation_id	dep_no	date_of_birth	categroy
17006	Amutha	3006	50	2022-06-05	senior
17007	Jaga	3003	70	2022-06-06	jounior
17008	Pavithra	3007	60	2022-06-07	senior
17009	Arthi	3005	50	2022-06-08	senior
17010	Kabilan	3006	70	2022-06-09	jounior

IF WITH AND CONDITIONS

- **QUERY** : select*,if(dep_no<=60,'senior','jounior' and emp_id<=17010)as categroy from emp_det;
- **Output** :



emp_id	emp_name	designation_id	dep_no	date_of_birth	categroy
17016	Madhavi	3002	50	2022-06-15	senior
17017	Swetha	3002	70	2022-06-16	0
17018	Selvi	3002	70	2022-06-17	0
17019	Pooja	3002	70	2022-06-18	0
17020	Lakshmi	3002	70	2022-06-19	0

MYSQL JOINS FUNCTIONS

- A JOIN clause is used to combine rows from two or more tables, based on a related column between them.
- Types of Joins are :

INNER JOIN

LEFT JOIN

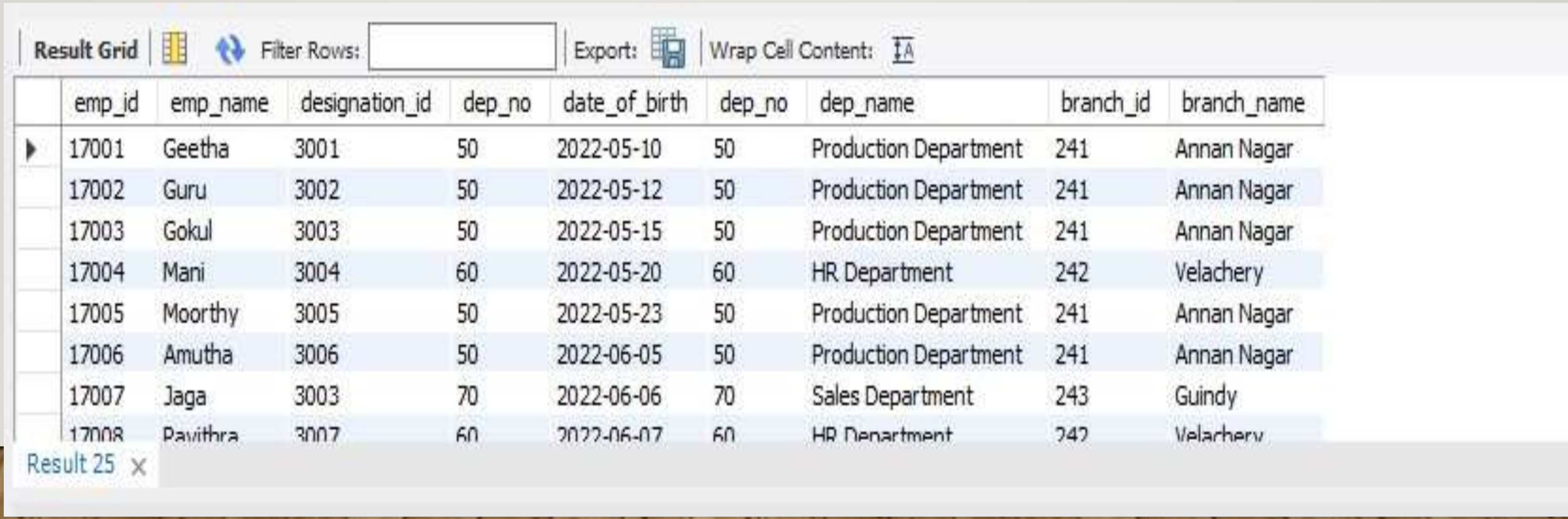
RIGHT JOIN

CROSS JOIN

INNER JOIN

- **QUERY** : select *from emp_det inner join department_det7 on emp_det.dep_no=department_det7.dep_no;

- **Output** :



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

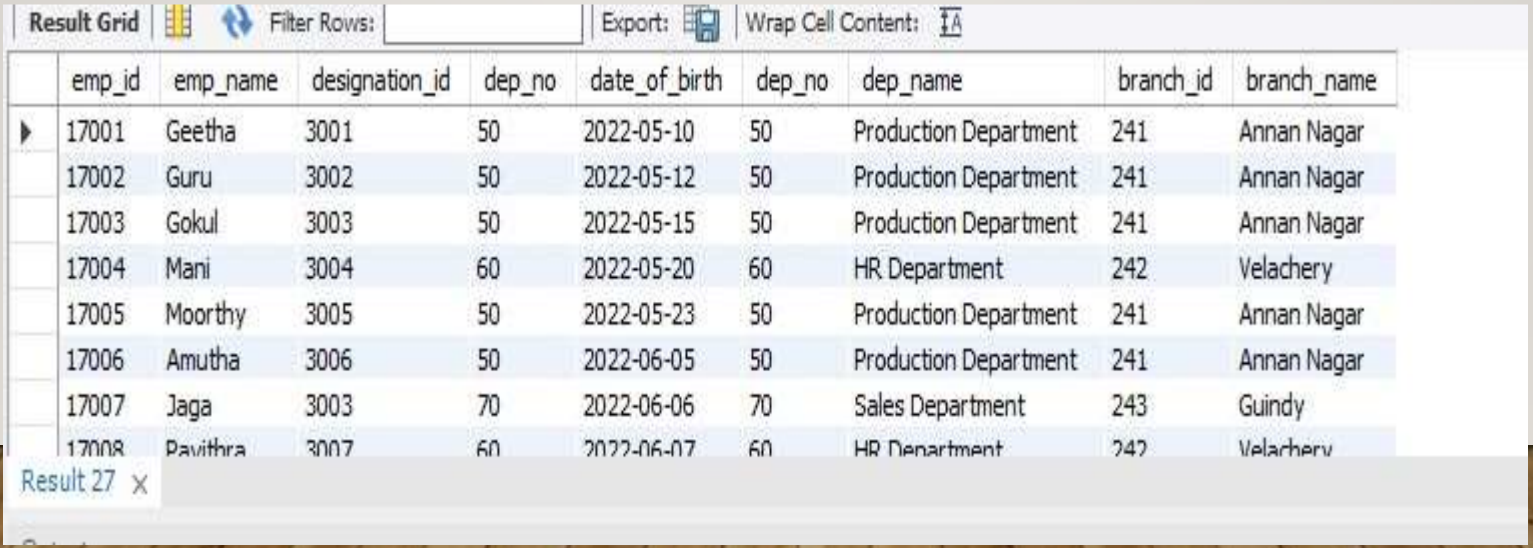
emp_id	emp_name	designation_id	dep_no	date_of_birth	dep_no	dep_name	branch_id	branch_name
17001	Geetha	3001	50	2022-05-10	50	Production Department	241	Annan Nagar
17002	Guru	3002	50	2022-05-12	50	Production Department	241	Annan Nagar
17003	Gokul	3003	50	2022-05-15	50	Production Department	241	Annan Nagar
17004	Mani	3004	60	2022-05-20	60	HR Department	242	Velachery
17005	Moorthy	3005	50	2022-05-23	50	Production Department	241	Annan Nagar
17006	Amutha	3006	50	2022-06-05	50	Production Department	241	Annan Nagar
17007	Jaga	3003	70	2022-06-06	70	Sales Department	243	Guindy
17008	Pavithra	3007	60	2022-06-07	60	HR Department	242	Velachery

Result 25 ×

LEFT JOIN

- **QUERY** : select *from emp_det left join department_det7 on emp_det.dep_no=department_det7.dep_no;

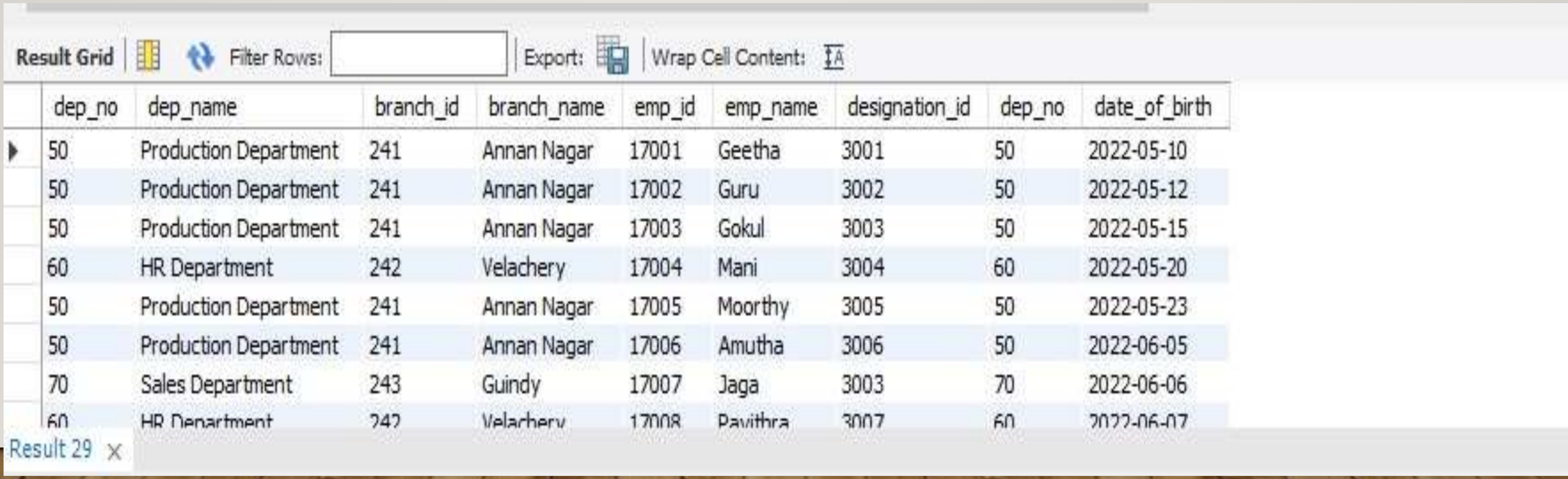
- **Output** :



emp_id	emp_name	designation_id	dep_no	date_of_birth	dep_no	dep_name	branch_id	branch_name
17001	Geetha	3001	50	2022-05-10	50	Production Department	241	Annan Nagar
17002	Guru	3002	50	2022-05-12	50	Production Department	241	Annan Nagar
17003	Gokul	3003	50	2022-05-15	50	Production Department	241	Annan Nagar
17004	Mani	3004	60	2022-05-20	60	HR Department	242	Velachery
17005	Moorthy	3005	50	2022-05-23	50	Production Department	241	Annan Nagar
17006	Amutha	3006	50	2022-06-05	50	Production Department	241	Annan Nagar
17007	Jaga	3003	70	2022-06-06	70	Sales Department	243	Guindy
17008	Pavithra	3007	60	2022-06-07	60	HR Department	242	Velachery

RIGHT JOIN

- **QUERY** : select *from department_det7 right join emp_det on department_det7.dep_no =emp_det.dep_no;
- **Output** :

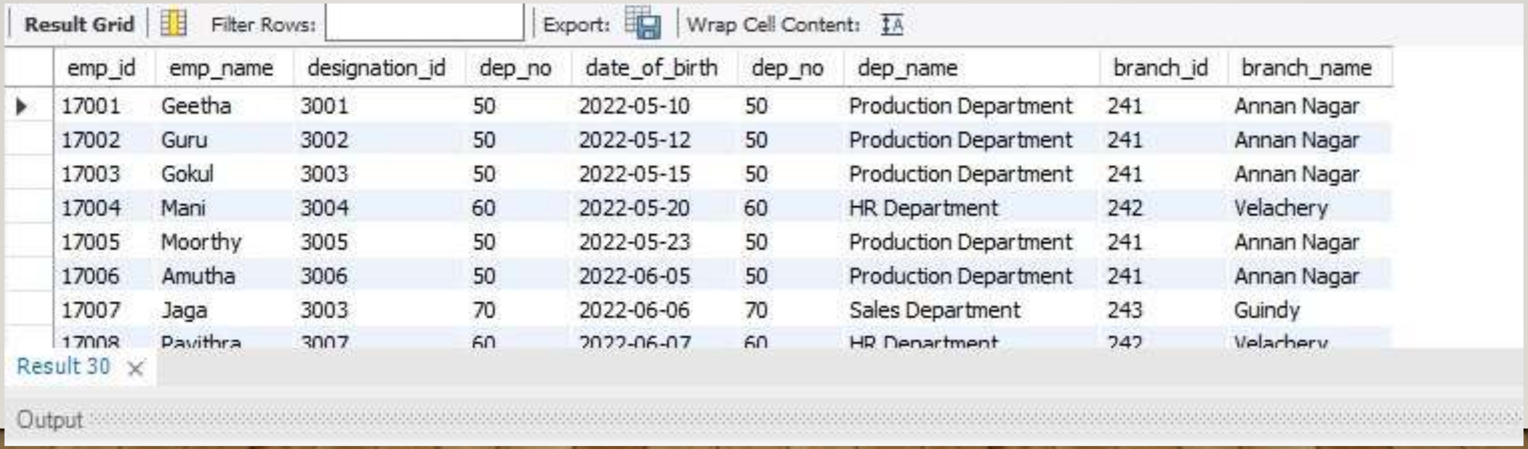


dep_no	dep_name	branch_id	branch_name	emp_id	emp_name	designation_id	dep_no	date_of_birth
50	Production Department	241	Annan Nagar	17001	Geetha	3001	50	2022-05-10
50	Production Department	241	Annan Nagar	17002	Guru	3002	50	2022-05-12
50	Production Department	241	Annan Nagar	17003	Gokul	3003	50	2022-05-15
60	HR Department	242	Velachery	17004	Mani	3004	60	2022-05-20
50	Production Department	241	Annan Nagar	17005	Moorthy	3005	50	2022-05-23
50	Production Department	241	Annan Nagar	17006	Amutha	3006	50	2022-06-05
70	Sales Department	243	Guindy	17007	Jaga	3003	70	2022-06-06
60	HR Department	242	Velachery	17008	Pavithra	3007	60	2022-06-07

UNION

- **QUERY** : (select *from emp_det left join department_det7 on emp_det.dep_no=department_det7.dep_no)union(select *from department_det7 right join emp_det on department_det7.dep_no =emp_det.dep_no);

- **Output** :



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

	emp_id	emp_name	designation_id	dep_no	date_of_birth	dep_no	dep_name	branch_id	branch_name
▶	17001	Geetha	3001	50	2022-05-10	50	Production Department	241	Annan Nagar
	17002	Guru	3002	50	2022-05-12	50	Production Department	241	Annan Nagar
	17003	Gokul	3003	50	2022-05-15	50	Production Department	241	Annan Nagar
	17004	Mani	3004	60	2022-05-20	60	HR Department	242	Velachery
	17005	Moorthy	3005	50	2022-05-23	50	Production Department	241	Annan Nagar
	17006	Amutha	3006	50	2022-06-05	50	Production Department	241	Annan Nagar
	17007	Jaga	3003	70	2022-06-06	70	Sales Department	243	Guindy
	17008	Pavithra	3007	60	2022-06-07	60	HR Department	242	Velachery

Result 30 ×

Output

TRIGGERS IN SQL

- **Triggers creation** : 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 low 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 :

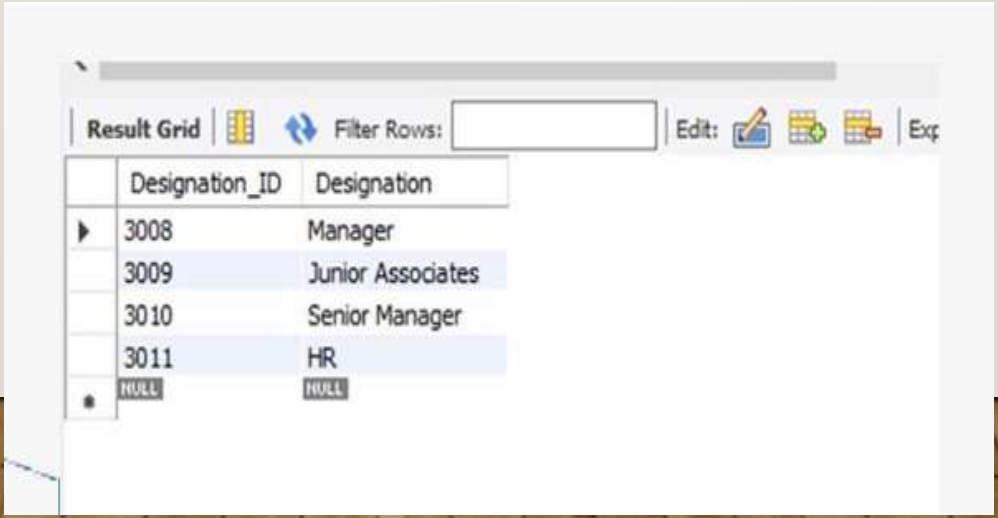
- Before Insert
- After Insert
- Before Update
- After Update
- Before delete
- After Delete

AFTER INSERT

- **QUERY**:

```
                delimiter //
               create trigger designation_update after insert on
designation_det1 for  each row
Begin
insert into  designation_backup(designation_id,designation) values
(new.Designation_ID,new.Designation);
end //
delimiter ;
```

- **Output** :



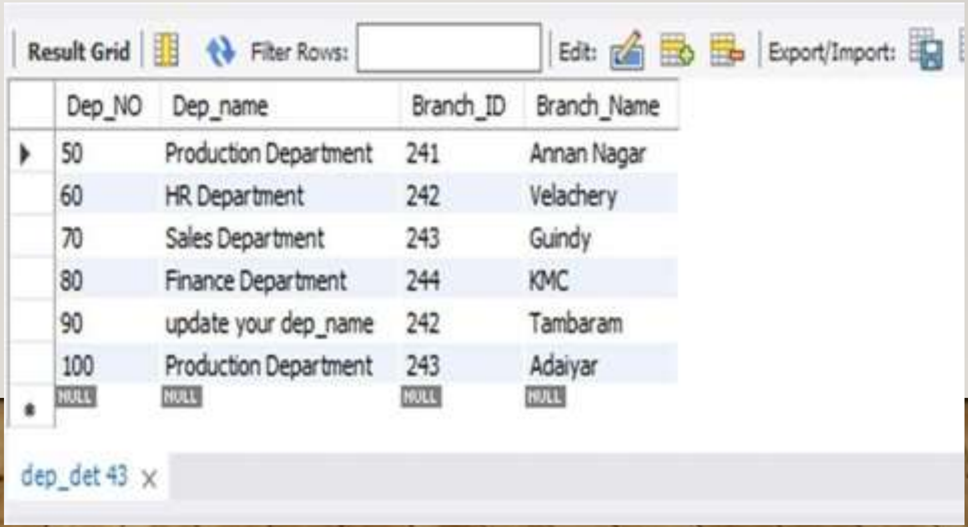
Designation_ID	Designation
3008	Manager
3009	Junior Associates
3010	Senior Manager
3011	HR
NULL	NULL

BEFORE INSERT

- **QUERY** :

```
delimiter //
create trigger dep_update before insert on dep_det for each  row
begin
if new.deplues (90,null ,242,'Tambaram'),(100,'Production
Department',243,'Adaiyar') name is null then
set new.dep_name ="update your  dep_name";
    end if ;
    end //
    Delimiter ;
```

- **Output** :



Dep_NO	Dep_name	Branch_ID	Branch_Name
50	Production Department	241	Annan Nagar
60	HR Department	242	Velachery
70	Sales Department	243	Guindy
80	Finance Department	244	KMC
90	update your dep_name	242	Tambaram
100	Production Department	243	Adaiyar
NULL	NULL	NULL	NULL

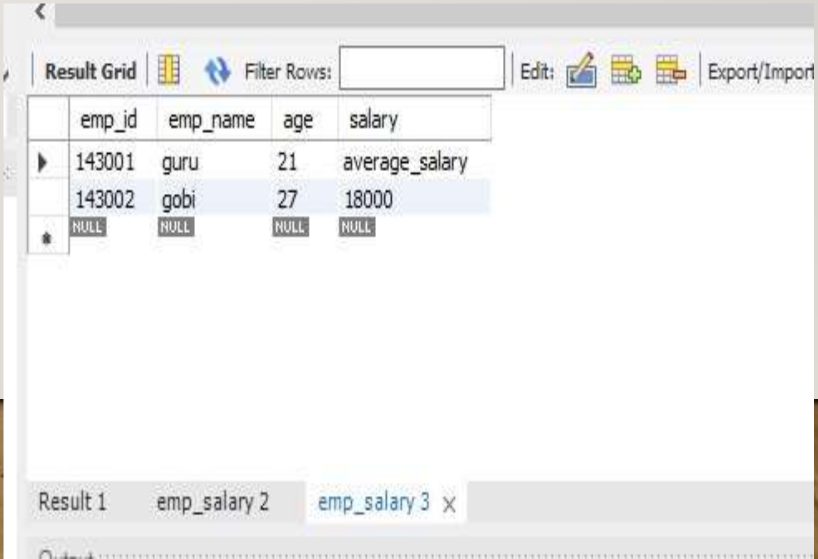
dep_det 43

TRIGGER BEFORE UPDATE

➢ **QUERY** :

```
 delimiter //
create trigger salary_check before update on emp_salary for each row
begin if new.salary>=40000 then
set new.salary="high_salary";
elseif new.salary>=35000 then
set new.salary="good_salary";
elseif new.salary>=15000 then
set new.salary="average_salary";
elseif new.salary>=0 then
set new.salary="low_salary";

 end if;
 end //
 delimiter ;
```



emp_id	emp_name	age	salary
143001	guru	21	average_salary
143002	gobi	27	18000
NULL	NULL	NULL	NULL

Thank you!