**SQL- Structured Query Language [sql123]**

* SQL stands for Structured Query Language.
* Whatever the of application from different platforms or whatever the Java code or whatever the application we are defined or we are using with the help of SQL you can

interact with databases.

* So SQL is the main language which will interact with all the databases .
* There are different SQL base databases, Like we have oracle, MySql , SQL server ,db2 ,Microsoft Access .So all these are the servers are available with respect to Sequel databases.
* This is the standard language for all the data base to interact with.
* ================================================

|  |  |  |
| --- | --- | --- |
|  |  |  |
| To get the data /retrieve the data | SELECT Query |  |

**CRUD—**

**Create means – Create the Table**

**Insert means – You are creating the data**

**Update – update the data**

**Delete means – Delete the data**

Select means – get the data from the table

Star [\*] means – give me all the data from this particular table [whatever the total number of Rows are there.]

**Remember -**

1. ADD- you can add more data
2. Maintain the Sequence when insert your data / according the table
3. Same data type you have maintain
4. Comment – Select the line and then ctrl + forward slash
5. AND – means both of them.
6. Count function --count function is always will be used to get the total number of counts from the table , How many total number of rows are available

 JDOODLE

create table Employee

(

EmpID int,

EmpName Varchar (255),

Age int,

Phone int,

Addrress Varchar(255),

Email address Varchar(255)

);

// Create the data

insert into Employee values(1, "Tom", 25, 907548, "12th ave Brooklyn nyc", "tom@gmail.com");

insert into Employee values(1, "Toni", 20, 9075481, "13th ave Brooklyn nyc", "toni@gmail.com");

insert into Employee values(1, "Tono", 27, 9075482, "14th ave Brooklyn nyc", "tono@gmail.com");

**Different Queries**

1. **select \* from Employee;**

Result –

1|Tom|25|907548|12th ave Brooklyn nyc|tom@gmail.com

1|Toni|20|9075481|13th ave Brooklyn nyc|toni@gmail.com

1|Tono|27|9075482|14th ave Brooklyn nyc|tono@gmail.com

1. How many Rows are there –

**select count(\*) from Employee**;

Result 3

1. Filter it out – [Use- where or there keyword ] Let see total data is 3

**select \* from employee where EmpName = "Tom"; -**

**it will you only “Tom ” related data**

Result –

1|Tom|25|907548|12th ave Brooklyn [nyc|tom@gmail.com](mailto:nyc|tom@gmail.com)

1. Like Ruma is not there . So it will print nothing--

**select \* from employee where EmpName = "Ruma";**

1. **Two Filter**

**select \* from employee where EmpName = "Tono" and age =27;**

**1|Tono|27|9075482|14th ave Brooklyn** [**nyc|tono@gmail.com**](mailto:nyc|tono@gmail.com)

1. **select \* from employee** where **Age> 27;**

**select \* from employee where Age> 27 ;**

1. **Both the name**

**select \* from employee where Age> 27 and EmpName ="Tom";**

**Result :** **5|Tom|30|9075948|116th ave Brooklyn** [**nyc|tom@gmail.com**](mailto:nyc|tom@gmail.com)

1. **Select distinct keyboard ---**distinct keyword means only the distinct values. distinct means it will just avoid the duplicate values , it will give you only and only the unique values-

Distinct means give me the unique data and avoid the duplicate data

**-- same value and everything in two or three or more . but it will give only one distict value not duplicate values. Because Somehow I'm certain to duplicate value in the table ./so avoid the duplicate data .**

**select \* from Employee; // to see all the data**

**select distinct \* from Employee; // to see only distinct data**

**Result –**

1|Tom|25|907548|12th ave Brooklyn nyc|tom@gmail.com

2|Toni|29|9075481|13th ave Brooklyn nyc|toni@gmail.com

3|Tono|27|9075482|14th ave Brooklyn nyc|tono@gmail.com

4|Tono|22|12075482|15th ave Brooklyn nyc|tono@gmail.com

5|Tom|30|9075948|116th ave Brooklyn [nyc|tom@gmail.com](mailto:nyc|tom@gmail.com)

1. How many Rows are there –

**select count(\*) from Employee**

**select count(\*) from Employee; // it means details info in the row**

**select distinct count(\*) from Employee; // it shows only the number with duplicate value**

**So for without duplicate value I have to write like this- from this Tables -**

1. **Based on EmployeeID**

**select count(distinct EmpName) from Employee; // Result --3**

1. **Based on Employee Name**

**select count(distinct EmpID) from Employee; // Result –5**

**insert into Employee values(1, "Tom", 25, 907548, "12th ave Brooklyn nyc", "tom@gmail.com");**

**insert into Employee values(2, "Toni", 29, 9075481, "13th ave Brooklyn nyc", "toni@gmail.com");**

**insert into Employee values(3, "Tono", 27, 9075482, "14th ave Brooklyn nyc", "tono@gmail.com");**

**insert into Employee values(4, "Tono", 22, 12075482, "15th ave Brooklyn nyc", "tono@gmail.com");**

**insert into Employee values(5, "Tom", 30, 9075948, "116th ave Brooklyn nyc", "tom@gmail.com");**

**insert into Employee values(5, "Tom", 30, 9075948, "116th ave Brooklyn nyc", "tom@gmail.com");**

**create table Employee**

(

EmpID int,

EmpName Varchar (255),

Age int,

Phone int,

Addrress Varchar(255),

Email address Varchar(255)

);

insert into Employee values(1, "Tom", 25, 907548, "12th ave Brooklyn nyc", "tom@gmail.com");

insert into Employee values(2, "Toni", 29, 9075481, "13th ave Brooklyn nyc", "toni@gmail.com");

insert into Employee values(3, "Tono", 27, 9075482, "14th ave Brooklyn nyc", "tono@gmail.com");

insert into Employee values(4, "Tono", 22, 12075482, "15th ave Brooklyn nyc", "tono@gmail.com");

insert into Employee values(5, "Tom", 30, 9075948, "116th ave Brooklyn nyc", "tom@gmail.com");

insert into Employee values(5, "Tom", 30, 9075948, "116th ave Brooklyn nyc", "tom@gmail.com");

-- same value and everything in two or three or more . but it will give only one distict value not duplicate values

-- select \* from Employee;

-- select count(\*) from Employee;

-- select \* from employee where EmpName = "Tom";

-- select \* from employee where EmpName = "Ruma";

--

-- Two filter

-- select \* from employee where EmpName = "Tono" and age =27;

-- select \* from employee where Age> 27 and EmpName ="Tom";

-- select distinct \* from Employee;

-- select distinct count(\*) from Employee;

select count(distinct EmpName) from Employee;

select count(distinct EmpID) from Employee;

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**Get the data on the basis of ascending order and the descending order**

Type or use - **order by [according to like EmpID/ age/ ----]**

1. **Asscending order—** it means the Lowest to the highest value.

**select \* from Employee order by EmpID ASC;**

**Descending order**  it means descending order means the highest to the lowest value.

**select \* from Employee order by EmpID DESC; [hightest to lowest ]**

1. Give me all the information about the employee order by Age column and the descending order the highest the oldest-

**select \* from Employee order by Age DESC;**

**select \* from Employee order by EmpName, Age; [here EmpName – it will take first]**

**If I don’t type ASC / DESC then it will give by default Ascending order .**

**Use and/or/not operator in SQL**

**select \* from Employee where Age>25 and EmpID>2 ;**

**select \* from Employee where Age<22 or EmpID<5;**

**select \* from Employee where Age<22 or EmpID<5 and Phone=12075482;**

**create table Customer**

**(**

**ID int,**

**Name varchar(255),**

**PhoneNumber int,**

**EmailID varchar(255),**

**Country varchar(255)**

**);**

**insert into Customer values(10,"Tina",32434,"tina@gamil.com","England");**

**insert into Customer values(11,"Bina",105233,"bina@gamil.com","UK");**

**insert into Customer values(12,"Dina",1278934,"dina@gamil.com","Bangladesh");**

**insert into Customer values(13,"Lina",12657634,"lina@gamil.com","USA");**

**insert into Customer values(14,"Nina",1279034,"tina@gamil.com","Austrilia");**

**-- select \* from Customer ;**

**-- select \* from customer where Country ="Bangladesh" or Country="UK" and Phone = 1279034;**

**select \* from customer where Country="Bangladesh" or Country="USA";**

**Use Not Operator**

**select \* from customer where Not Country = "Bangladesh" and NOT "USA";**

**create table Customer**

**(**

**ID int,**

**Name varchar(255),**

**PhoneNumber int,**

**EmailID varchar(255),**

**Country varchar(255),**

**City Varchar(255)**

**);**

**insert into Customer values(10,"Tina",32434,"tina@gamil.com","England", "Ev");**

**insert into Customer values(11,"Bina",105233,"bina@gamil.com","UK","Ele");**

**insert into Customer values(12,"Dina",1278934,"dina@gamil.com","Bangladesh","bela");**

**insert into Customer values(13,"Lina",12657634,"lina@gamil.com","USA","NYC");**

**insert into Customer values(14,"Nina",1279034,"tina@gamil.com","Austrilia","Dene");**

**insert into Customer values(15,"pina",127634,"pina@gamil.com","Austrilia","puna");**

**-- select \* from Customer ;**

**-- select \* from customer where Country ="Bangladesh" or Country="UK" and Phone = 1279034;**

**-- select \* from customer where Country="Bangladesh" or Country="USA";**

**-- select \* from customer where Not Country = "Bangladesh" and NOT "USA";**

**-- select \* from customer where Country = "England" AND (City="Ev" OR City ="NYC");**

**-- select \* from customer where Country = "Austrilia" AND (City="Dene" OR City ="puna");**

**select \* from customer where Country = "USA" AND NOT Country ="Austrilia";**