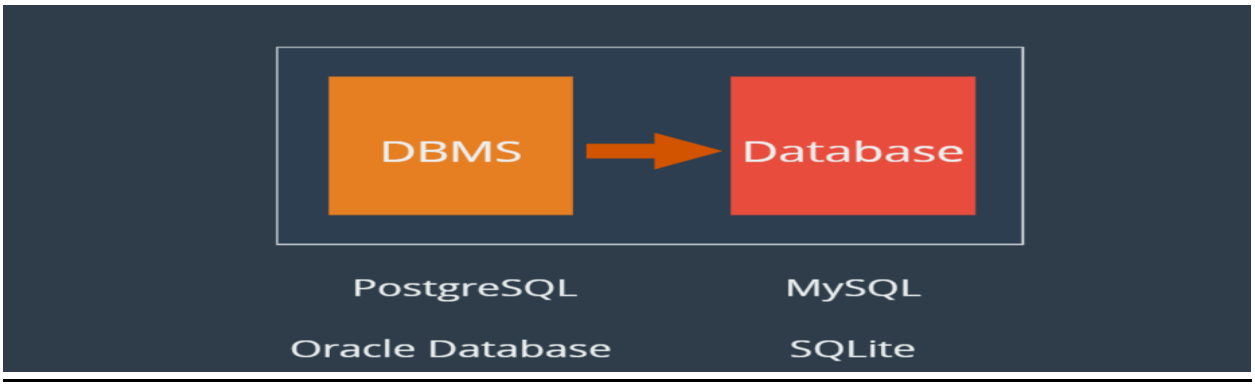
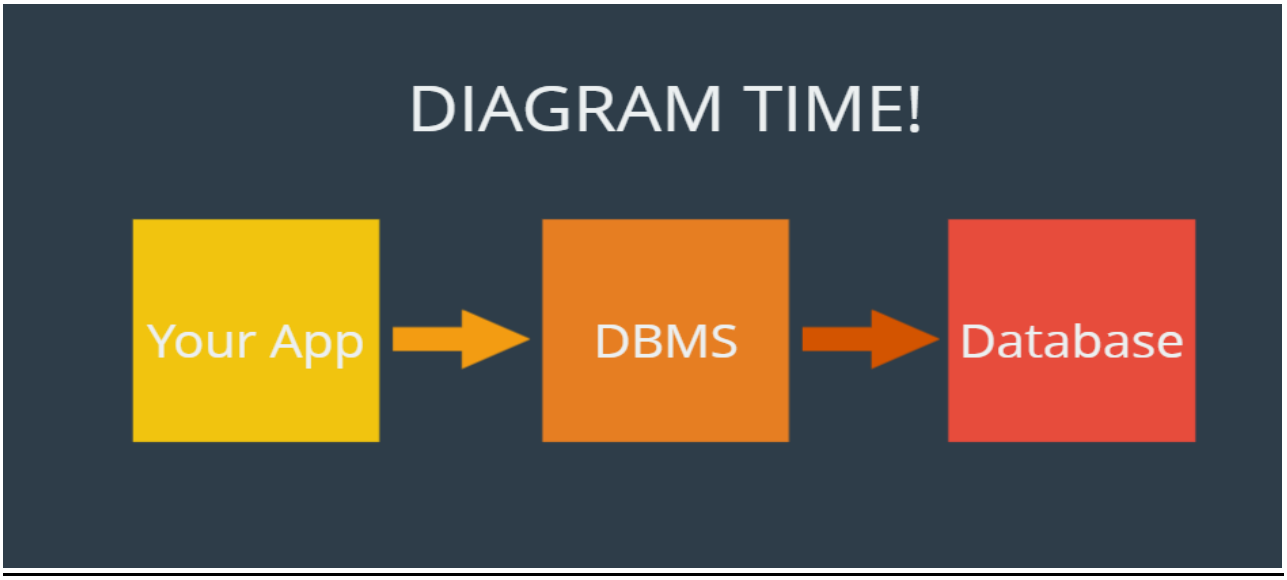
SOME BASIC TERMINOLOGIES USED IN DATABASE MANAGEMENT SYSTEM:

DATABASE:



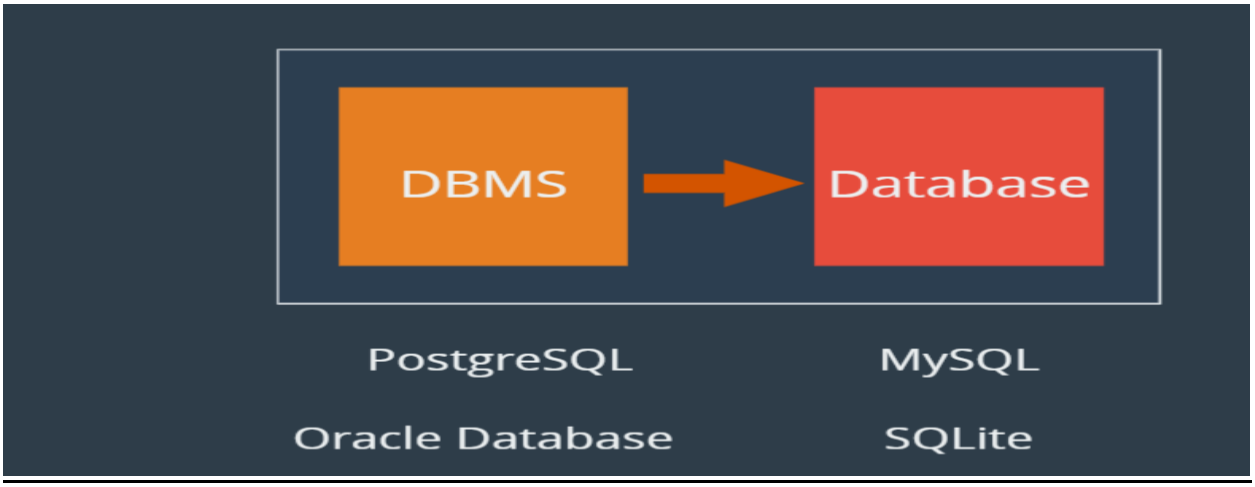


Basic Difference Between MySQL and SQL:

SQL is structured query language that offers the syntax that can be written in order to interact with the databases.

Mysql is a database mangemnet system through which we implement the syntax of SQL in oder to interact with the databases.

Different type of DBMS(Data base management system):



A rule of thumb for naming convention:

Always use the databse name as :

a. **app_database,**
b. **practice_database**

SOME BASIC AND ADVANCE QUERIES OF SQL ALONG WITH THE NUMERICALS:

1.Creating the database in the MySQL Workbench:

Syntax:

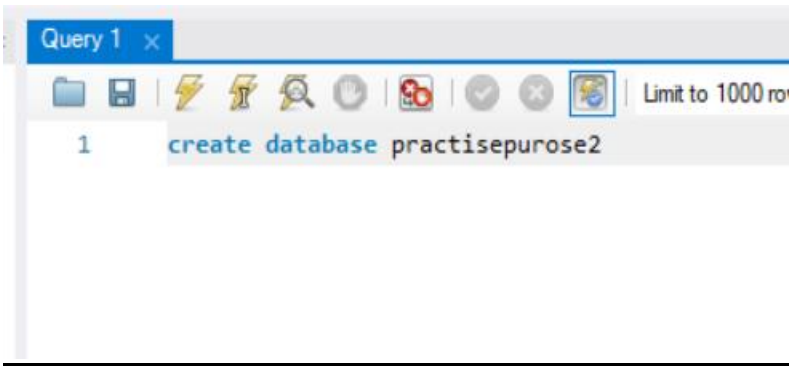
Create database <databsename>;

Question:

We have to create the database name: practisepurpose2.

Solution:

Create database practice_purpose2



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2. Dropping the created database from the My SqlWorkbench:

Syntax:

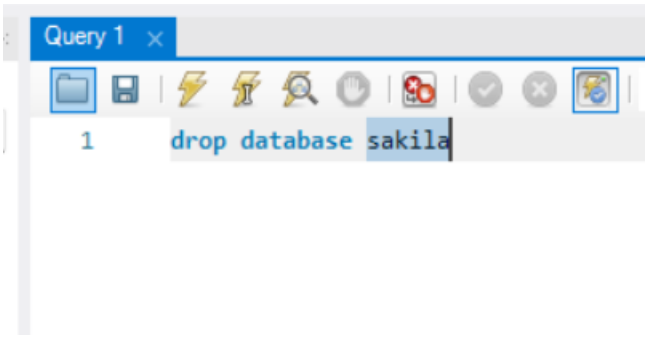
drop database <databasename>;

Question:

We have to drop the database name: sakila

Solution:

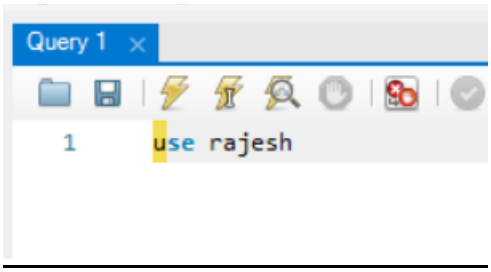
drop database sakila



Now if we have multiple databases present in the mysql server, then in order to use particular database we have to follow the below syntax:

Syntax:

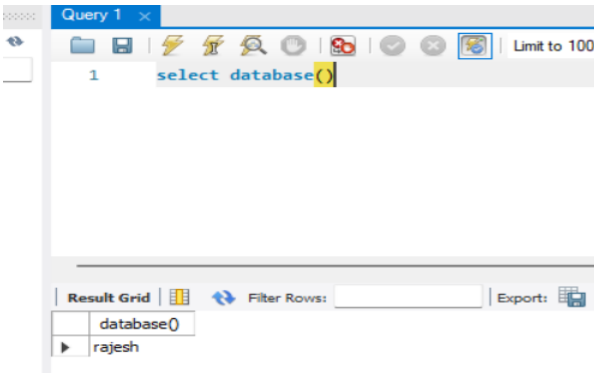
Use database;



Now in order to know the present data in which MySql is pointing, we will be using the below syntax:

Syntax:

Select database()



3.Displaying all the Rows and Columns Of The Table Present in the data set.

Syntax:

Select * from <Table Name>.<DatabaseName>;

Question:

Your Database:

Tablename	Records
Customers	91
Categories	8
Employees	10
OrderDetails	518
Orders	196
Products	77
Shippers	3
Suppliers	29

Table no -1.1(a)

We have Database which contains the following list of tables.

Problem Statement1.a:

Display all the content of the table Customers

Solution:

```
Select * from Customers
```

Output:

SQL Statement:

```
Select * from Customers
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

Number of Records: 91

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden
6	Blauer See Delikatessen	Hanna Moos	Forsterstr. 57	Mannheim	68306	Germany
7	Blondel père et fils	Frédérique Citeaux	24, place Kléber	Strasbourg	67000	France

---

Problem Statement 1.b :

Display all the content of the table Products

Solution

Select * from Products

SQL Statement:

```
Select * from Products
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

Number of Records: 77

ProductID	ProductName	SupplierID	CategoryID	Unit	Price
1	Chais	1	1	10 boxes x 20 bags	18
2	Chang	1	1	24 - 12 oz bottles	19
3	Aniseed Syrup	1	2	12 - 550 ml bottles	10
4	Chef Anton's Cajun Seasoning	2	2	48 - 6 oz jars	22
5	Chef Anton's Gumbo Mix	2	2	36 boxes	21.35
6	Grandma's Boysenberry Spread	3	2	12 - 8 oz jars	25
7	Uncle Bob's Organic Dried Pears	3	7	12 - 1 lb pkgs.	30
8	Northwoods Cranberry Sauce	3	2	12 - 12 oz jars	40

Now if we want any specific column name details to be displayed, then we have to use the following syntax:

Syntax:

Select <column name> from <database name.table name>;

Example:

In the above table we have to print the details of the ProductName only, the syntax for the above will be :

Select ProductName from Products;

Now if we want to display more than one column but not only one column then we have to use the following syntax:

Select col_name 1,col_name2 from <databasename>.<tablename>;

Example:

We have to select ProductName and CategoryId from the table Products;

We will be using the following syntax:

Select ProductName, CategoryId from Products;

WHERE CLAUSE:

Now if we want to display the data containing certain specif specific information, then we have to use the where clause.

Problem Statement:

Now we want to display all the details of the data whose categoryID is 1:

Syntax:

Select * from <databasename>.<tablename> where <condition>;

If we want to apply condition on int data type then don't use quotes , if we want to apply condition on varchar datatype then use quotes.

Select * from Products where catrgoryID = 1;

Problem Statement:

Now we want to display all the details of the data whose Product Name is chang:

Here, datatype is varchar so we have to enclosed the condition under quotes.

Syntax:

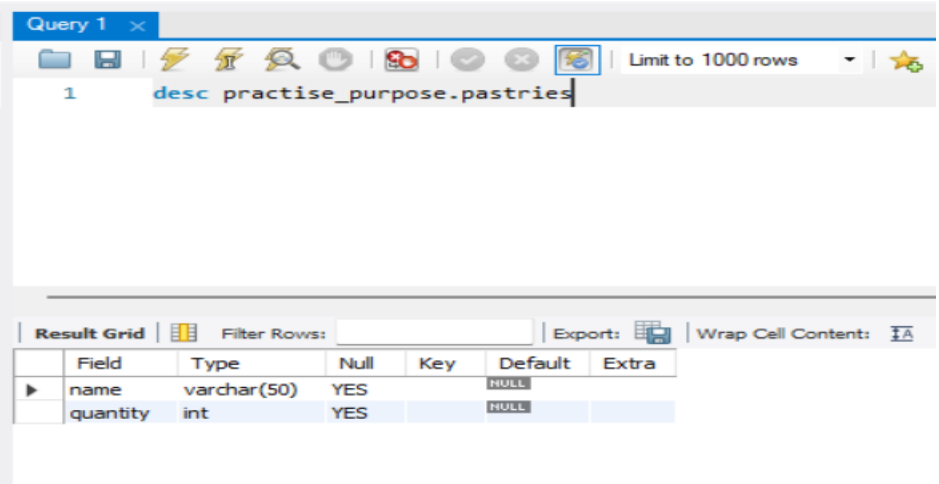
Select * from Products where ProductName = “Chang”;

Note: There is another short way of describing all the content of the tables in a very descriptive way,

The syntax for the same is as follows:

Syntax:

Desc databasename.tablename;



4.Displaying the data in some specific order

Problem Statement 1 :

We have table Products and we have to display all the records but one record (Price) has to be displayed in the descending Order.

Solution:

Select * From Products

Order by Price Desc

SQL Statement:

```
Select * From Products
Order by Price Desc
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

Number of Records: 77

ProductID	ProductName	SupplierID	CategoryID	Unit	Price
38	Côte de Blaye	18	1	12 - 75 cl bottles	263.5
29	Thüringer Rostbratwurst	12	6	50 bags x 30 sausgs.	123.79
9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97
20	Sir Rodney's Marmalade	8	3	30 gift boxes	81
18	Carnarvon Tigers	7	8	16 kg pkg.	62.5
59	Raclette Courdavault	28	4	5 kg pkg.	55
51	Manjimup Dried Apples	24	7	50 - 300 g pkgs.	53
62	Tarte au sucre	29	3	48 pies	49.3
43	Ipoh Coffee	20	1	16 - 500 g tins	46
28	Rössle Sauerkraut	12	7	25 - 825 g cans	45.6

Problem Statement 2 :

We have table Products and we have to display all the records but one record (Price) has to be displayed in the Ascending Order.

Solution:

```
Select * from Products
Order by Price Asc
```

```
Select * From Products
Order by Price Asc
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

Number of Records: 77

ProductID	ProductName	SupplierID	CategoryID	Unit	Price
33	Geitost	15	4	500 g	2.5
24	Guaraná Fantástica	10	1	12 - 355 ml cans	4.5
13	Konbu	6	8	2 kg box	6
52	Filo Mix	24	5	16 - 2 kg boxes	7
54	Tourtière	25	6	16 pies	7.45
75	Rhönbräu Klosterbier	12	1	24 - 0.5 l bottles	7.75
23	Tunnbröd	9	5	12 - 250 g pkgs.	9
19	Teatime Chocolate Biscuits	8	3	10 boxes x 12 pieces	9.2
45	Røgede sild	21	8	1k pkg.	9.5
47	Zaanse koeken	22	3	10 - 4 oz boxes	9.5
41	Jack's New England Clam Chowder	19	8	12 - 12 oz cans	9.65
3	Aniseed Syrup	1	2	12 - 550 ml bottles	10

WARNINGS SIGN AND WAYS TO DISPLAY THE WARNING IN MYSQL:

Warning comes when we insert the data into the tables but not following the required data types or the format that has been passed.

e.g. Create Table play_ineuron.pastries(Name VARCHAR(10),Quantity Int(10));

Insert into ineuron.pastries values("MOZILLIA","PRANJAL");

Now in the above case, we have made a variable Quantity of int type but in the values we have passed the value inside the quantity as the string type.

My SQL will insert/push the name in the table under the required format but it will show the warnings.

In order to display the warning, we have to use the following command:

SYTNAX:

Show warnings.

SETTING THE DEFAULT VALUES:

SYNTAX:

```
Create table <table name>(
Col_name1  datatype(size) Default <default value>,
Col_name2 datatype(size) Default <default value>,
,,,,,);
```

EXAMPLE:

```
Create table employees(
Id int(10) not null auto_increment,
Last_name  varchar(20) not null,
Mirst_name  varchar(20) not null,
Middle_name varchar(20)  DEFAULT “employed”,
PRIMARY KEY(Id));
```

PRIMARY KEY CONCEPTS:

Primary key uniquely identifies record in the table that has been created.

Let us take the example of Instagram.

In Instagram, we have our unique username while password of one user name may /may not be same with that of the different username.

If unique username was not there, it would be very difficult to fetch the recod having same username and password.

In order to avoid this situation, username is being made as a PRIMARY KEY.

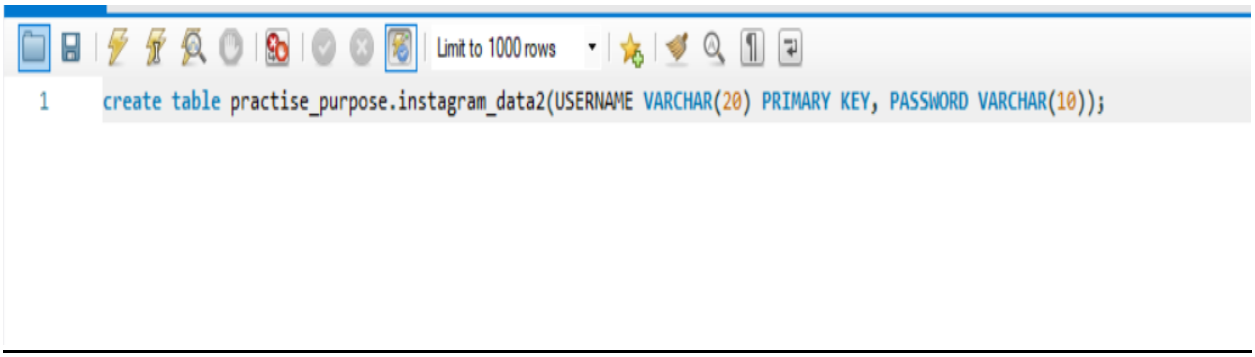
Now even if the password is same, username will be different and Instagram will recognize the unique accounts and retrieve the data with the help of username column which is made primary key(unique).

SYNTAX:

Create table database.tablename (col_name 1 data type PRIMARY KEY, col_name 2 datatype ,…….);

Here we want to set col_name 1 as primary key.

Always make the column which you want to set as primary key as first column.



CONCEPT OF AUTO INCREMENT IN PRIMARY KEYS:

Imp notes:

1.Auto increment can be done only on int data types and on the column which has been made as a primary key.

CASE 1 : Trying to make the int column name id as auto increment but username has been defined as a primary key:

```
1 •  CREATE TABLE practise_purpose.instagramdata3(USERNAME VARCHAR(20) not null, id int(10) auto_increment , primary key(username));
2
```

Error:

```
30  10:22:03  CREATE TABLE practise_purpose.instagramdata3(USERNAME VARCHAR(20) not null, id int(10) auto_increm...  Error Code: 1075. Incorrect table definition; there can be only one auto column and it must be defined as a key
```

CASE 2.Trying to make the auto increment on VARCHAR DATA TYPE(Here USERNAME) ,keeping the auto increment column and primary key column same.

```
1   table practie_purpose.instagram_data3(USERNAME VARCHAR(20) NOT NULL auto_increment , ID int(10) , PASSSWORD varchar(20), primary key(USERNAME));
```

ERROR:

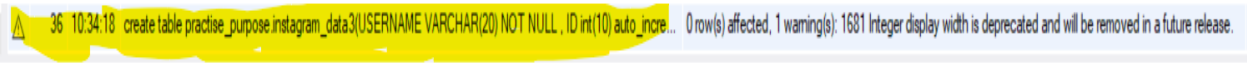
```
34  10:32:50  create table practie_purpose.instagram_data3(USERNAME VARCHAR(20) NOT NULL auto_increment , ID int...  Error Code: 1063. Incorrect column specifier for column 'USERNAME'
```

CASE 3 : Trying to make the autoincrement on int type(Here id) and making the primary key as id also.

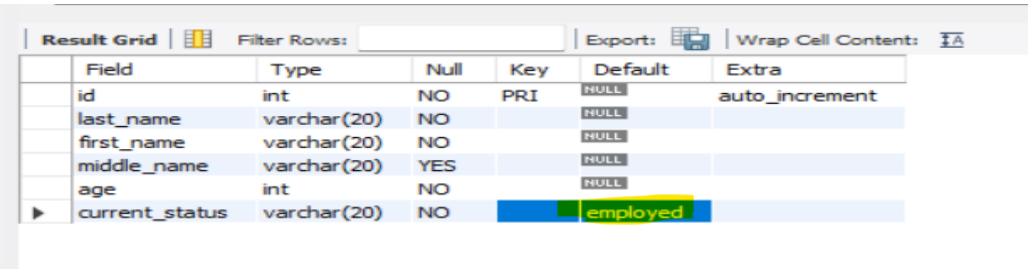
```
1   table practise_purpose.instagram_data3(USERNAME VARCHAR(20) NOT NULL , ID int(10) auto_increment , PASSSWORD varchar(20), primary key(id));
```

OUTPUT :

Since all the conditions of the primary key and autoincrement has been satisfied, hence the above statement has been executed successfully.



Now there will be a situation, when we have created as shown below:



Earlier current_status was having no default value but now we want to change the default value to employed.

The correct syntax for this is :

ALTER TABLE <databasename.tablename >ALTER COLUMN <column name > SET DEFAULT <default value>

ALTER TABLE practise_purpose.Employes_table ALTER COLUMN current_status SET DEFAULT "employed".

After executing the above syntaxes, in the default column of the current_status,

Employed will be displayed.

CRUD OPERATIONS:

CRUD Stands for:

C ---------- CREATE

R---------- READ

U---------- UPDATE

D---------- DELETE

Another way of inserting the data into the table:

```
INSERT INTO practise_purpose.cats(name, breed, age)
VALUES ('Ringo', 'Tabby', 4),
       ('Cindy', 'Maine Coon', 10),
       ('Dumbledore', 'Maine Coon', 11),
       ('Egg', 'Persian', 4),
       ('Misty', 'Tabby', 13),
       ('George Michael', 'Ragdoll', 9),
```

Here (name, breed, age) are the columns of the table. We can change in accordance with the need of our table.

CONCEPT OF ALIAS:

SQL aliases are used to give a table, or a column in a table, a temporary name.

Aliases are often used to make column names more readable.

An alias only exists for the duration of that query.

An alias is created with the AS keyword.

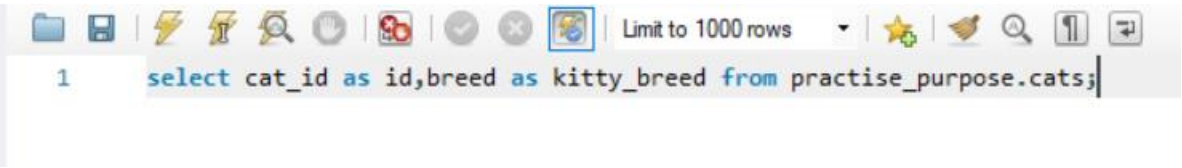
It is mainly used when we have to combine 2 or more tables and we want to fetch certain records from that combined table.

Problem Statement:

Now we want to display the cat_id as id and breed name as kitty breed providing that all the data remains same.

cat_id	name	breed	age
1	Ringo	Tabby	4
2	Cindy	Maine Coon	10
3	Dumbledore	Maine Coon	11
4	Egg	Persian	4
5	Misty	Tabby	13
6	George Michael	Ragdoll	9
7	Jackson	Sphynx	7
NULL	NULL	NULL	NULL

Solution:



Output:

Result Grid | Filter Ro

id	kitty_breed
1	Tabby
2	Maine Coon
3	Maine Coon
4	Persian
5	Tabby
6	Ragdoll
7	Sphynx

Note: Column name change reflect only for the query which we have written. Original column name will be remain same as before.

Now after executing the above query, we have performed the operation of desc tablein order to know wether cat_id as been change to id and breed as kitty breed in the original table or not.

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

Field	Type	Null	Key	Default	Extra
cat_id	int	NO	PRI	NULL	auto_increment
name	varchar(100)	YES		NULL	
breed	varchar(100)	YES		NULL	
age	int	YES		NULL	

As we can see that cat_id and breed column is same as before. Aliasing of cat_id as id and breed as kitty breed is temporary for that query only and it does not reflect in the datatype name of the original table.

UPDATE COMMANDS:

In update syntax, 3 keywords play a major role:

1. Update

2. Set

3. Where

IMPORTANT NOTE:

Be careful when updating records in a table! Notice the `WHERE` clause in the `UPDATE` statement. The `WHERE` clause specifies which record(s) that should be updated. If you omit the `WHERE` clause, all records in the table will be updated!

Syntax for Update:

Update <Database_Name>.<Table Name>

Set <column name 1> = values,<column name 2> = values , ……..

Where condition;

Problem Statement:

cat_id	name	breed	age
1	Ringo	Tabby	4
2	Cindy	Maine Coon	10
3	Dumbledore	Maine Coon	11
4	Egg	Persian	4
5	Misty	Tabby	13
6	George Michael	Ragdoll	9
7	Jackson	Sphynx	7
NULL	NULL	NULL	NULL

We have the following table and we want to set the Name as Pingu and Breed as Dog for the cat id =1

Solution:

```
1  Update practise_purpose.cats
2  Set name ="Pingu", breed ="dog"
3  where cat_id = 1;
4
```

Output:

Result Grid | Filter Rows:

cat_id	name	breed	age
1	Pingu	dog	4
2	Cindy	Maine Coon	10
3	Dumbledore	Maine Coon	11
4	Egg	Persian	4
5	Misty	Tabby	13
6	George Michael	Ragdoll	9
7	Jackson	Sphynx	7
NULL	NULL	NULL	NULL

name and breed data has been updated in accordance with the updation operation we have performed in the above steps.

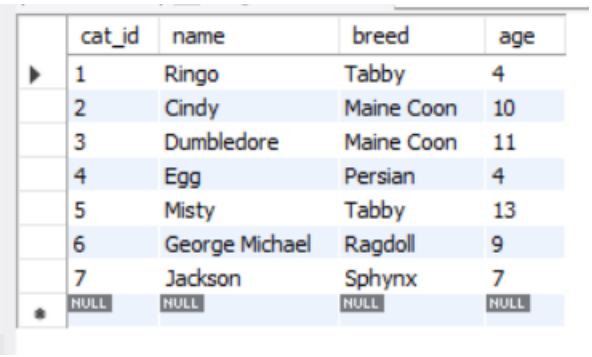
DELETE OPERATIONS:

The DELETE statement is used to delete existing records in a table.

Delete Syntax:

DELETE FROM <databasename>.<tablename> WHERE condition;

Problem Statement:



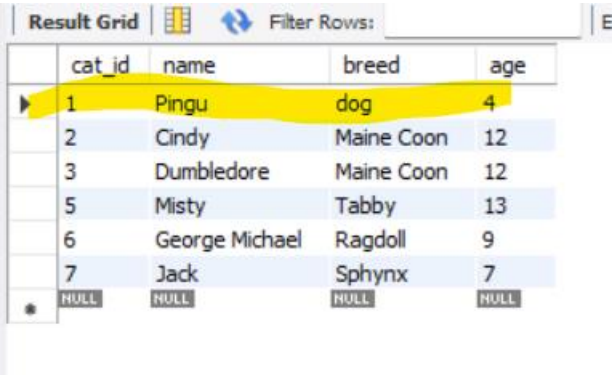
cat_id	name	breed	age
1	Ringo	Tabby	4
2	Cindy	Maine Coon	10
3	Dumbledore	Maine Coon	11
4	Egg	Persian	4
5	Misty	Tabby	13
6	George Michael	Ragdoll	9
7	Jackson	Sphynx	7
NULL	NULL	NULL	NULL

We have the following table and we want to delete the record where name = “Egg” in the above table.

Solution:

```
Select * from practise_purpose.cats where name = "Egg";
Delete from practise_purpose.cats where name = "Egg";
Select * from practise_purpose.cats
```

Output:



Result Grid | Filter Rows:

cat_id	name	breed	age
1	Pingu	dog	4
2	Cindy	Maine Coon	12
3	Dumbledore	Maine Coon	12
5	Misty	Tabby	13
6	George Michael	Ragdoll	9
7	Jack	Sphynx	7
NULL	NULL	NULL	NULL

As we can see that in the cat_id column we don’t have the cat_id 4 column which was present earlier in the above table.

Note : If we are getting the error like this after performing the UPDATE statement:

Error Code: 1175. You are using safe update mode and you tried to update a table without a WHERE that uses a KEY column. To disable safe mode, toggle the option in Preferences -> SQL Editor and reconnect.

Solution is to run the following command in the MYSQL Workbench.

SET SQL_SAFE_UPDATES = 0;

Some Basic differences between the Delete and Drop Clauses.

Delete clause is used to delete records present in the table.

cat_id	name	breed	age
1	Ringo	Tabby	4
2	Cindy	Maine Coon	10
3	Dumbledore	Maine Coon	11
4	Egg	Persian	4
5	Misty	Tabby	13
6	George Michael	Ragdoll	9
7	Jackson	Sphynx	7
NULL	NULL	NULL	NULL

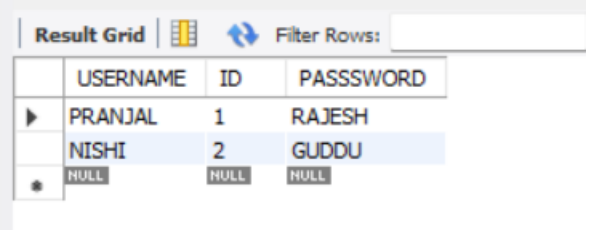
This is a cat table.

Delete from cat where name = “Egg”;

It will delete the entire data associated with the Egg as shown below:

Result Grid | Filter Rows:

cat_id	name	breed	age
1	Pingu	dog	4
2	Cindy	Maine Coon	12
3	Dumbledore	Maine Coon	12
5	Misty	Tabby	13
6	George Michael	Ragdoll	9
7	Jack	Sphynx	7
NULL	NULL	NULL	NULL



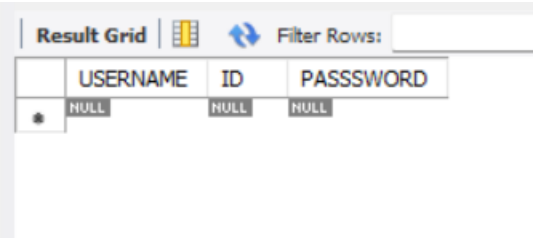
This is the above table (database- practice_ineuron, table name - instagram_data3)

The following syntax:

Delete from practice_ineuron.instagram_data3;

```
Select * from practise_purpose.instagram_data3;
Delete from practise_purpose.instagram_data3
Select * from practise_purpose.instagram_data3;
```

Output:



As we can see all the input parametrs inside the table has been deleted but the table is still created in the mysql.

Now when we use the syntax:

Drop table practice_purpose.instagram_data3:

It will delete the entire table as shown below.

```
Select * from practise_purpose.instagram_data3;
Drop table practise_purpose.instagram_data3;
Select * from practise_purpose.instagram_data3;
```

Output:

Error Code: 1146. Table 'practise_purpose.instagram_data3' doesn't exist

---

After the above, we can conclude the basic difference between Drop And Delete Clause:

Drop Clause is used when we want to delete the entire table.

Delete Clause is used when we want to delte certain records/the whole records present in the table.

By using the delete clause, entire data can of the table can be remove but still table will be created.

That table will contain NULL Values as shown in the above example.

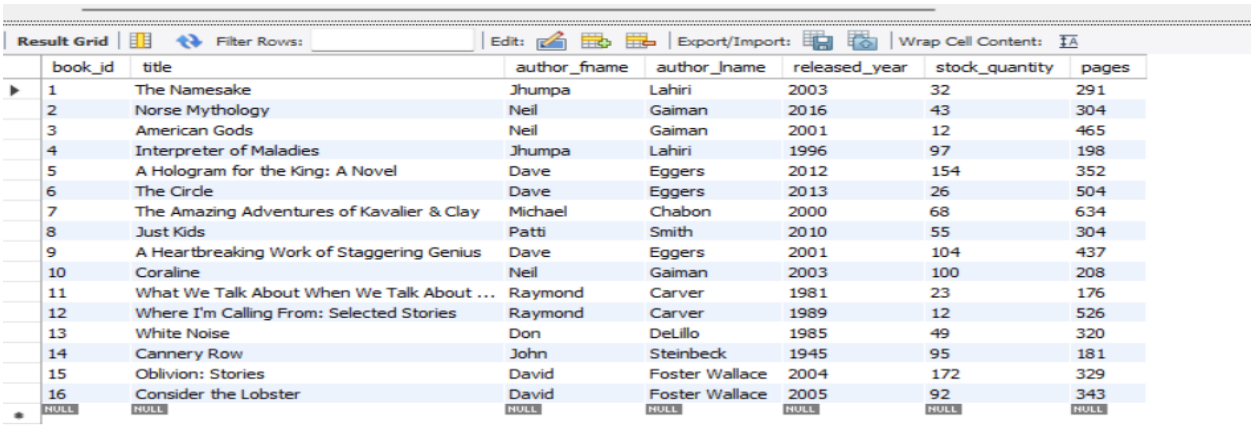
STARTING WITH THE STRING FUNCTIONS IN MYSQL

The major string function which are frequently used in the SQL are:

1.Concat

Problem Statement:

We have the following table with the following data as shown below in the screenshot:



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

book_id	title	author_fname	author_lname	released_year	stock_quantity	pages
1	The Namesake	Jhumpa	Lahiri	2003	32	291
2	Norse Mythology	Neil	Gaiman	2016	43	304
3	American Gods	Neil	Gaiman	2001	12	465
4	Interpreter of Maladies	Jhumpa	Lahiri	1996	97	198
5	A Hologram for the King: A Novel	Dave	Eggers	2012	154	352
6	The Circle	Dave	Eggers	2013	26	504
7	The Amazing Adventures of Kavalier & Clay	Michael	Chabon	2000	68	634
8	Just Kids	Patti	Smith	2010	55	304
9	A Heartbreaking Work of Staggering Genius	Dave	Eggers	2001	104	437
10	Coraline	Neil	Gaiman	2003	100	208
11	What We Talk About When We Talk About ...	Raymond	Carver	1981	23	176
12	Where I'm Calling From: Selected Stories	Raymond	Carver	1989	12	526
13	White Noise	Don	DeLillo	1985	49	320
14	Cannery Row	John	Steinbeck	1945	95	181
15	Oblivion: Stories	David	Foster Wallace	2004	172	329
16	Consider the Lobster	David	Foster Wallace	2005	92	343
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Now there are 2 columns namely :

1.author_fname

2.author_lname

Our main aim is to _ merge the data of these 2 columns and print the entire name in a new column name as fullname

SYNTAX:

Select <col name 1> as <name>,<col name 2 > as <name>,

CONCAT(<col name 1>,<col name 2>) as <name>,

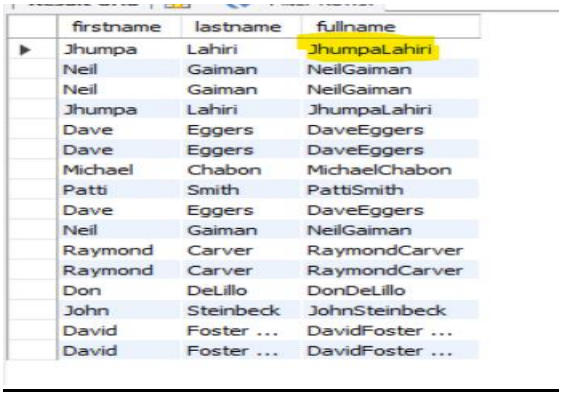
From <database name>.<table name>;

SOLUTION:

```
Select author_fname as firstname, author_lname as lastname,
CONCAT(author_fname,' ',author_lname) as fullname
from book_shop.books;
```

Note: In order to have the space in the full name we have used ‘ ’ in the concat part

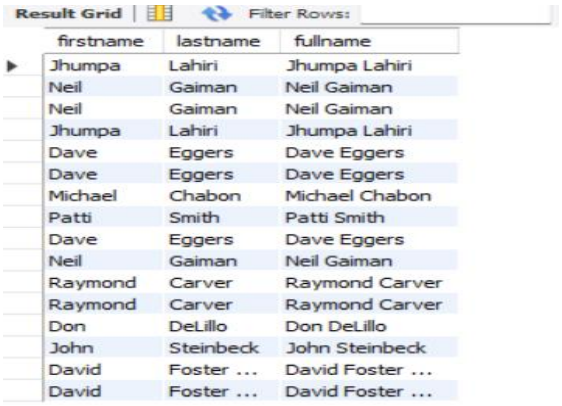
Case 1 : Not using ‘ ’ in the concat part:



	firstname	lastname	fullname
▶	Jhumpa	Lahiri	JhumpaLahiri
	Neil	Gaiman	NeilGaiman
	Neil	Gaiman	NeilGaiman
	Jhumpa	Lahiri	JhumpaLahiri
	Dave	Eggers	DaveEggers
	Dave	Eggers	DaveEggers
	Michael	Chabon	MichaelChabon
	Patti	Smith	PattiSmith
	Dave	Eggers	DaveEggers
	Neil	Gaiman	NeilGaiman
	Raymond	Carver	RaymondCarver
	Raymond	Carver	RaymondCarver
	Don	DeLillo	DonDeLillo
	John	Steinbeck	JohnSteinbeck
	David	Foster ...	DavidFoster ...
	David	Foster ...	DavidFoster ...

As we can see no space is there in the full name.

Case 2: Using the ‘ ‘ in the concat part:



Result Grid | Filter Rows:

	firstname	lastname	fullname
▶	Jhumpa	Lahiri	Jhumpa Lahiri
	Neil	Gaiman	Neil Gaiman
	Neil	Gaiman	Neil Gaiman
	Jhumpa	Lahiri	Jhumpa Lahiri
	Dave	Eggers	Dave Eggers
	Dave	Eggers	Dave Eggers
	Michael	Chabon	Michael Chabon
	Patti	Smith	Patti Smith
	Dave	Eggers	Dave Eggers
	Neil	Gaiman	Neil Gaiman
	Raymond	Carver	Raymond Carver
	Raymond	Carver	Raymond Carver
	Don	DeLillo	Don DeLillo
	John	Steinbeck	John Steinbeck
	David	Foster ...	David Foster ...
	David	Foster ...	David Foster ...

As we can see space appears in the full name part.

Type 2 : Concat_WS():

If we have multiple symbols viz. dash(-) to be inserted in between the every column filed, then we can use CONCAT_WS() for the same.

Syntax:

Select <col_name 1>, <col_name 2> as <name>, <col_name 3> as name,

CONCAT_WS("-",<col_name1>,<col_name 2>,<col_name 3>)

from <database_name>.<table_name>;

```
Select title, author_fname as firstname, author_lname as lastname,
CONCAT_WS("-",title,author_fname,author_lname) from book_shop.books;
```

Output:

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

title	firstname	lastname	CONCAT_WS("-",title,author_fname,author_lname
The Namesake	Jhumpa	Lahiri	The Namesake-Jhumpa-Lahiri
Norse Mythology	Neil	Gaiman	Norse Mythology-Neil-Gaiman
American Gods	Neil	Gaiman	American Gods-Neil-Gaiman
Interpreter of Maladies	Jhumpa	Lahiri	Interpreter of Maladies-Jhumpa-Lahiri
A Hologram for the King: A Novel	Dave	Eggers	A Hologram for the King: A Novel-Dave-Eggers
The Circle	Dave	Eggers	The Circle-Dave-Eggers
The Amazing Adventures of Kavalier & Clay	Michael	Chabon	The Amazing Adventures of Kavalier & Clay-Mic...
Just Kids	Patti	Smith	Just Kids-Patti-Smith
A Heartbreaking Work of Staggering Genius	Dave	Eggers	A Heartbreaking Work of Staggering Genius-Da...
Coraline	Neil	Gaiman	Coraline-Neil-Gaiman
What We Talk About When We Talk About ...	Raymond	Carver	What We Talk About When We Talk About Love...
Where I'm Calling From: Selected Stories	Raymond	Carver	Where I'm Calling From: Selected Stories-Raym...
White Noise	Don	DeLillo	White Noise-Don-DeLillo
Cannery Row	John	Steinbeck	Cannery Row-John-Steinbeck
Oblivion: Stories	David	Foster ...	Oblivion: Stories-David-Foster Wallace
Consider the Lobster	David	Foster ...	Consider the Lobster-David-Foster Wallace

Note: The above CONCAT_WS() is not applicable to only "-"(dash) symbol but it is applicable to any symbol which we want to insert between the every columns which we want to concat.

The below syntax depicts the use of symbol ' '(space bar) used in the CONCAT_WS( ) method:

```
Select title, author_fname as firstname, author_lname as lastname,
CONCAT_WS(' ' ,title,author_fname,author_lname) from book_shop.books;
```

Output:

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

title	firstname	lastname	CONCAT_WS(' ',title,author_fname,author_lname)
The Namesake	Jhumpa	Lahiri	The Namesake Jhumpa Lahiri
Norse Mythology	Neil	Gaiman	Norse Mythology Neil Gaiman
American Gods	Neil	Gaiman	American Gods Neil Gaiman
Interpreter of Maladies	Jhumpa	Lahiri	Interpreter of Maladies Jhumpa Lahiri
A Hologram for the King: A Novel	Dave	Eggers	A Hologram for the King: A Novel Dave Eggers
The Circle	Dave	Eggers	The Circle Dave Eggers
The Amazing Adventures of Kavalier & Clay	Michael	Chabon	The Amazing Adventures of Kavalier & Clay Mic...
Just Kids	Patti	Smith	Just Kids Patti Smith
A Heartbreaking Work of Staggering Genius	Dave	Eggers	A Heartbreaking Work of Staggering Genius Da...
Coraline	Neil	Gaiman	Coraline Neil Gaiman
What We Talk About When We Talk About ...	Raymond	Carver	What We Talk About When We Talk About Love...
Where I'm Calling From: Selected Stories	Raymond	Carver	Where I'm Calling From: Selected Stories Raymo...
White Noise	Don	DeLillo	White Noise Don DeLillo
Cannery Row	John	Steinbeck	Cannery Row John Steinbeck
Oblivion: Stories	David	Foster ...	Oblivion: Stories David Foster Wallace
Consider the Lobster	David	Foster ...	Consider the Lobster David Foster Wallace

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Note – To start from the Lecture no 104(SQL COMPLETE BOOTCAMP)