Tips.one table may have only one value of another table

.one table may have multiple values of another table once

Difference of sql server

Server-hardware and software needed to run something ex hardware computer,cpu,memory,sql based commands

Engine –a software that run on the server.in database underlying software on DBMS(implicit)

Dbms-interface software

|  |  |  |  |
| --- | --- | --- | --- |
|  | server | engine | Dbms |
| sql |  |  |  |
| mysql |  |  |  |

Distinict in sql and unique in pandas

Uppercase and lowercase have no factor in database

Mysql <> and != with where clause are the same thing

Filter data-from large group return only what we need

Select\* means all column of row unless specify what do you need

Think of table as record taken once for an object

# In and not in operator

You can use multiple expressions in database like condition I.e three times or ,and ,not or others

In operator the same as or only different in syntax i.e where human or animal or plant is the same as

Where in(human,animal,plant don’t forget to use quate in both cases)not in for neither for multiple

# Between…And perator

Possible 1.

Select \* from custumers where points >=1000 ans points<=3000

The same as select \* from custumers where points between 1000 and 3000

# Like and not like operator

Mainly for patterns

Example. Select \* from custumers where lastname like ‘%d’ meaning all custumers whose lastname end with d and any number of characters before b

Select \* from custumers where lastname like ‘d%’ meaning begin with d and any number after b

Select \* from custumers where lastname like ‘%d%’ at the begin or middle or end

Use \_ to refer single character

Select \* from custumers where lastname like ‘\_\_\_d’three under score meand number of chrachters is 4 including three left characters

# REGEXP

Select \* from custumers where lastname REGEXP (^field) meaning lastname start with field

Select \* from custumers where lastname REGEXP (field&)end with field

Select \* from custumers where lastname REGEXP (field) whereever field

You can use | to represent logical or oprtator there is also [string]then you want to append you can at the begning or end of string

# IS NULL and IS NOT NULL

Select \* from custumers where lastname IS NULL

Select \* from custumers where lastname IS NOT NULL

# ORDER BY

Default is primary key

Select \* from custumers ODER BY lastname,firstname meaning-keep the order of lastname then order

In that index by last name.

n.b you can use index even if not advisable in this case you can say

Select firstname,lastname from custumers ODER BY 1,2(to refer firstname and lastname respectively)

# AS

Select\*,unitprice\*quantity as total procice from custumers –this adds new column at the time of query

# LIMIT –maximum number of

Select \* from custumers limit 4 – returns only four number of rows that are ordered by default

Select \* from custumers limit 6,3 means start at 7 and the next three I.e 7,8,9 offset (start)then limit 3

!pay attention to orders as they are excuted sequntially

until now we were working on single table of database next we will see multiple table query

join

select \* from custumers join orders on custumer.custumer\_id equals to orders.custumer\_id

this returns all columns of both tables by comparing thire id.

n.b in table not to insert primary key twice

n.b select excuted last even If come first

for from and join no nees to use as keyword as alias

select s.studentid ifirstname from student s join instructor I on i.studentid =s.studentid you can say like this

# self join

the same as join on multiple tables only differs in using different alias for clarification and different attribute of the same table.

Joining morethan two tables is possible thing of only excute in sequential even upto 100 so simple.

# Compound join condition

Nothing is difficult except it is composite primary key

Implicit join syntax(don’t use join explicitly)

Select \* from custumers c ,orders o where c.custumer\_id=o.custumer\_id//returns based on this equality condition.

Explicit join syntax

Just leaves where and uses on

Select \* from custumers c join orders on c.custumer\_id=o.custumer\_id

until now we were working on single database next we will see multiple database query

it is only prefixing on the the database that is not currently in use

outer join

join by default inner join

problem returns only when condition is satisfied

outer join right or left

right join –returns the right weather or not the condition is satisfied but left based on the condition

left join –returns the right join table weather or not the condition is satisfied but left based on the condition

you can use also inner join and outer join at the same time.

# Self outer join

The same as self inner join

# Using keyword –for both inner and outer join

Used to write query with out using condition

Select \* from custumers c join orders o on c.custumer\_id=o.custumer\_id

Is the same as

Select \* from custumers c join orders using(custumer\_id) but only works for those have columns with the same name.

Natural join

Is the same as joining two tables by explicitly see two tables with the same column.’

Select \* from custumers c join orders o on c.custumer\_id=o.custumer\_id

Is the same as

Select \* from custumers c natural join orders .you can use also for outer join

Cross join

Every record from one table is joned to another column even if no make sense to do so.

Implicit syntax

Select \* from custumers c ,orders o is the same as

Select \* from custumers c cross join orders o

Until now we were focused on columns now let us see rows

Here take care the number of columns should be the same weather they are the same if not the same masked by the first column specified

Select \*from custumers

Union select \* from servants

#### String literal

Select firstname,lastname,”bronze”as type –this will select add type column and add row bronze for all rows.

Upto now it was query operation next insert ,update and delete

Difference of char(40)and varchar(40) is the first leaves 40 space what ever it is.the second is based on the inserted characters but not exceed 40.

Insert into student(firstname,lastname) values (“abebe”,”his father”),(“kebede”,”his fathet”)//use this to ignore defaults

Insert into student values (“abebe”,”his father”),(“kebede”,”his fathet”)

//these two sentences are the same as above

Insert into student values (“abebe”,”his father”)

Insert into student values(“kebede”,”his father”)

How to insert data into multiple columns

Use of Last\_inserted\_id() to access last inserted primary key and to pass as a data to child components.

Copy all data from one table to another

Create table archive as Select \* from orders//copy from orders to archive

Copy only values not attributes

Difference of truncate and drop in database truncate removes rows but drop is all include rows and columns.

Insert subqueries

Example

Insert into students select \* from instructors//this will insert into students to studnts column.here be take care of column sameness unless it will throw an error.

Update data

Syntax=Update student set student\_id=3 where student\_name=”Abebe”

Delete table

Syntax. Delete from student where studentid=3;