show databases;

select database();

use vita;

show tables;

create database sqldb;

use sqldb;

select database();

show tables;

show variables like 'port';

\q

mysql -hlocalhost -uroot -ptest@123 -P3306 -Dsqldb

select database();

\q

mysql --help

use sqldb;

Create table t1 (c1 int, c2 varchar(100), c3 date);

Show tables;

Desc t1;

Select \* from t1;

Select now();

Select current\_date();

Select curdate();

Select current\_time();

Select curtime();

Insert into t1 (c1,c2,c3) values(1,'a','2023-10-21');

Insert into t1 values(2,'b',current\_date());

Insert into t1(c1,c2) values(3,'c');

Select \* from t1 where c1=1;

Select \* from t1 where c1!=1;

Select \* from t1 where c1<>1;

Select \* from t1 where c1!=1;

Select \* from t1 where c3<>current\_date();

Select \* from t1 where c3 is null;

Select \* from t1 where c3 is not null;

Select \* from t1 where c1 in (2,3);

Select \* from t1 where c1 not in (2,3);

Select \* from t1 where c1 between 1 and 3;

Select \* from t1 where c1 not between 1 and 3;

Update t1 set c2='John',c3='2022-01-01' where c1=2;

Show variables like '%commit%'

Start transaction;

Update t1 set c2='ABC',c3='2022-01-01' where c1=2;

Rollback;

Start transaction;

Delete from t1 where c3 is null;

Rollback;

Alter table t1 add c4 int;

Alter table t1 drop column c4 ;

Alter table t1 add c4 int not null;

Alter table t1 drop column c4 ;

Alter table t1 add c4 int default 100 not null;

Alter table t1 modify column c4 varchar(100) default 'abc' not null;

Insert into t1 (c1,c2,c3) values(4,'d','2021-12-12');

Alter table t1 rename to t2;

Alter table t2 rename to t1;

Alter table t1 rename column c4 to a4;

Create table t1\_uk(c1 int unique, c2 varchar(100));

Insert into t1\_uk values(1,'a');

fails

Insert into t1\_uk values(1,'a');

works

Insert into t1\_uk values(null,'a');

Create table t1\_uk\_comp

(c1 int, c2 int, c3 varchar(100),

unique(c1,c2));

Insert into t1\_uk\_comp values(1,1,'a');

Insert into t1\_uk\_comp values(1,2,'b');

Insert into t1\_uk\_comp values(2,2,'c');

Insert into t1\_uk\_comp values(2,2,'d');

Create table t1\_uk\_multi

(c1 int unique, c2 int unique , c3 varchar(100));

Create table t1\_pk(c1 int primary key, c2 varchar(100));

Insert into t1\_pk values(1,'a');

fails

Insert into t1\_pk values(1,'a');

fails

Insert into t1\_pk values(null,'a');

Create table t1\_pk\_comp

(c1 int, c2 int, c3 varchar(100),

Primary key(c1,c2));

Insert into t1\_pk\_comp values(1,1,'a');

Insert into t1\_pk\_comp values(1,2,'b');

Insert into t1\_pk\_comp values(2,2,'c');

fails

Insert into t1\_pk\_comp values(2,2,'d');

Fails

Create table t1\_pk\_multi

(c1 int primary key, c2 int primary key, c3 varchar(100));

Create table t\_cc (eid int,ename varchar(100), salary int check(salary>1000));

Fails

Insert into t\_cc values(1,'a',100);

Works

Insert into t\_cc values(1,'a',1100);

Insert into t\_cc values(1,'a',null);

Create table t\_cc2

(eid int, ename varchar(100), gender varchar(10) check(gender in ('Male','Female')));

Insert into t\_cc2 value(1,'a','test');

Insert into t\_cc2 value(1,'a','male');

Create table t\_nn (id int, name varchar(100) not null);

fails

Insert into t\_nn values(1,null);

Create table t\_parent(deptid int primary key , deptname varchar(100));

Create table t\_child

(eid int, ename varchar(10),

Deptid int,

Foreign key fk1 (deptid) references t\_parent(deptid));

fails

Insert into t\_child values(1,'a',1);

works

Insert into t\_child values(1,'a',null);

Insert into t\_parent values(1,'HR');

Insert into t\_child values(1,'a',1);

Create table t\_def(id int , salary int default 100);

Insert into t\_def values(1,null);

Insert into t\_def(id) values(1);

select \* from t1\_uk;

Select count(\*) from t1\_uk;

Select count(c1) from t1\_uk;

Select count(c2) from t1\_uk;

Select count(distinct c2) from t1\_uk;

Select count(1) from t1\_uk;

Select count(1122121) from t1\_uk;

Select count('adsds') from t1\_uk;

Select sum(c1) from t1;

Select avg(c1) from t1;

Insert into t1 values(null,'d',null,100);

Select avg(c1) from t1;

Drop table t1;

Create table t1 (c1 int, c2 varchar(10));

Create table t2 (c1 int, c3 varchar(10));

Insert into t1 values(1,'a'),(2,'b'),(3,'c');

Insert into t2 values(3,'x'),(4,'y'),(5,'z');

– cross join

– Old Syntax

Select \* from t1,t2;

– New Syntax Ansi Syntax

Select \* from t1 cross join t2;

Ambiguous error

Select c1,c2,c3 from t1 cross join t2;

Select t1.c1,c2,c3 from t1 cross join t2;

Select t1.\*,c3 from t1 cross join t2;

– Inner join

– Old Syntax

Select \* from t1,t2 where t1.c1=t2.c1;

– New Syntax Ansi Syntax

Select \* from t1 inner join t2

On t1.c1=t2.c1;

Select \* from t1 join t2

On t1.c1=t2.c1;

Ambiguous error

Select c1,c2,c3 from t1 inner join t2

On t1.c1=t2.c1;

Select t1.c1,c2,c3 from t1 inner join t2

On t1.c1=t2.c1;

Select t1.\*,c3 from t1 inner join t2

On t1.c1=t2.c1;

– New Syntax Ansi Syntax

Select \* from t1 left outer join t2

On t1.c1=t2.c1;

Select \* from t1 left join t2

On t1.c1=t2.c1;

– New Syntax Ansi Syntax

Select \* from t1 right outer join t2

On t1.c1=t2.c1;

Select \* from t1 right join t2

On t1.c1=t2.c1;

– not supported

Select \* from t1 full join t2

On t1.c1=t2.c1;

Create table a (id int);

Create table b (id int);

Insert into a values(1),(2),(3);

Insert into b values(3),(4),(5);

Select \* from a

Union

Select \* from b;

Select \* from b

Union

Select \* from a;

Select \* from a

Union all

Select \* from b;

Select \* from b

Union all

Select \* from a;

Select \* from a

intersect

Select \* from b;

Select \* from a

except

Select \* from b;

– work around for full join

Select \* from t1 left outer join t2

On t1.c1=t2.c1

union

Select \* from t1 right outer join t2

On t1.c1=t2.c1;

Select \* from a where id in (select id from b);

Select \* from a where id not in (select id from b);

create table dept ( deptid int primary key , deptname varchar(10));

create table emp ( eid int , ename varchar(20) , salary int , deptid int references dept(deptid));

insert into dept values (1 , 'HR');

insert into dept values (2, 'IT');

insert into dept values (3, 'Finance');

insert into dept values(4,'OPR');

insert into emp values (1,'a',1000,1);

insert into emp values (2,'b' , 1023 , 2);

insert into emp values (3,'c' , 23 , 3);

insert into emp values (4,'d' , 123 , 3);

insert into emp values (5,'e' , 102 , 1);

insert into emp values (6,'f' , 2023 , 3);

insert into emp values (7,'g' , 323 , 1);

insert into emp values (8,'h' , 523 , 2);

insert into emp values (9,'i' , 136 , 1);

insert into emp values (10,'j', 627 , 1);

insert into emp values (11,'k' , 978 , 3);

insert into emp values (12,'l' , 222 , 1);

insert into emp values (13,'m' , 746 , 1);

insert into emp values (14,'n' , 3223 , 1);

insert into emp values (15,'o' , 1999 , 3);

insert into emp values (16,'p' , 821 , 3);

insert into emp values (17,'q' , 324 , 1);

insert into emp values (18,'r' , 546 , 3);

insert into emp values (19,'s' , 717 , 2);

insert into emp values (20,'t' , 817 , 2);

insert into emp values (21,'u' , 888 , 3);

insert into emp values (22,'v' , 9029 , 1);

insert into emp values (23,'w' , 20001 , 3);

insert into emp values (24,'x' , 28222 , 1);

insert into emp values (25,'y' , 19212 , 3);

insert into emp values (26,'z' , 12111 , 1);

insert into emp values (27,'a1' , 3211 , 1);

insert into emp values (28,'a2' , 9238 , 1);

insert into emp values (29,'a3' , 653 , 3);

insert into emp values (30,'a4' , 44 , 1);

insert into emp values (31,'a5' , 3 , 2);

insert into emp values (32,'a6' , 16 , 1);

insert into emp values (33,'a7' , 14 , 2);

insert into emp values (34,'a8' , 845 , 1);

insert into emp values (35,'a9' , 135 , 3);

insert into emp values (36,'b1' , 1212 , 1);

insert into emp values (37,'b2' , 1242 , 2);

insert into emp values (38,'b3' , 4212 , 2);

insert into emp values (39,'b4' , 4444 , 3);

insert into emp values (40,'b5' , 555 , 1);

insert into emp values (41,'b6' , 1553 , 3);

insert into emp values (42,'b7' , 6432 , 1);

insert into emp values (43,'b8' , 4532 , 2);

insert into emp values (44,'b9' , 3355 , 1);

insert into emp values (45,'c1' , 2324 , 2);

Select sum(salary) from emp;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid;

Select deptname,sum(salary) total\_salary

From emp join dept

On emp.deptid=dept.deptid

Group by deptname;

Select deptname,sum(salary) total\_salary

From emp e join dept d

On e.deptid=d.deptid

Group by deptname;

Select deptname,sum(salary) total\_salary

From emp e join dept d

On e.deptid=d.deptid

Group by deptname

Having sum(salary)>50000;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid

Order by deptname,salary desc;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid

Order by salary desc;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid

Order by salary desc limit 1;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid

Order by salary desc limit 5;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid

Order by salary desc limit 1,1;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid

Order by salary desc limit 2,1;

Select ename,deptname,salary

From emp join dept

On emp.deptid=dept.deptid

Order by salary desc limit 1 offset 2;

Create table emp\_mgr (eid int, ename varchar(10), mgrid int);

insert into emp\_mgr values(1,'a',4);

insert into emp\_mgr values(2,'b',4);

insert into emp\_mgr values(3,'c',4);

insert into emp\_mgr values(4,'d',4);

insert into emp\_mgr values(5,'e',6);

insert into emp\_mgr values(6,'f',6);

insert into emp\_mgr values(7,'g',6);

Select e.mgrid,m.ename mgrname,e.eid,e.ename from emp\_mgr e ,emp\_mgr m

Where

e.mgrid=m.eid and

e.mgrid<>e.eid;

Assignment

1. Revise slides atleast three times. Each revision should not take more than 30 mins
2. One at the start
3. Another one at the end
4. In the morning before the session starts

2. Redo all the queries we did in the class - 2 hours

3. Try to do the 10 query assignment which uses emp and dept. Refer to the attachment- 1 hour

4. Read Codd Rules- 30 mins

5. Read upto 3NF with examples - 30 mins