#### Week 7:

1. Using Scheme diagram, Create tables by properly specifying the primary keys and the foreign keys.

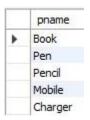
```
create database supplier;
use supplier;
create table supplier(
sid int,
sname varchar(20),
city varchar(20),
primary key(sid)
);
create table parts(
pid int,
pname varchar(20),
color varchar(20),
primary key(pid)
);
create table catalog(
sid int.
pid int,
cost int,
primary key(sid,pid),
foreign key (sid) references supplier(sid),
foreign key (pid) references parts(pid)
);
2. Insert appropriate records in each table.
insert into supplier values(10001,"Acme Widget","Bangalore");
insert into supplier values(10002, "Johns", "Kolkata");
insert into supplier values(10003, "Vimal", "Mumbai");
insert into supplier values(10004,"Reliance","Delhi");
insert into parts values(20001, "Book", "Red");
```

```
insert into parts values(20002,"Pen","Red"); insert into parts values(20003,"Pencil","Green"); insert into parts values(20004,"Mobile","Green"); insert into parts values(20005,"Charger","Black"); insert into catalog values(10001,20001,10); insert into catalog values(10001,20002,10); insert into catalog values(10001,20003,30); insert into catalog values(10001,20004,10); insert into catalog values(10001,20005,10); insert into catalog values(10002,20001,10); insert into catalog values(10002,20001,20); insert into catalog values(10003,20003,30); insert into catalog values(10004,20003,40);
```

	sid	pid	cost								
•	10001	20001	10								
	10001	20002	10								
	10001	20003	30		pid	pname	color				
	10001	20004	10	<b>&gt;</b>	20001	Book	Red				
	10001	20005	10		20002	Pen	Red		sid	sname	city
	10002	20001	10		20003	Pencil	Green	•	10001	Acme Widget	Bangalore
	10002	20002	20		20004	Mobile	Green		10002	Johns	Kolkata
	10003	20003	30		20005	Charger	Black		10003	Vimal	Mumbai
	10004	20003	40		NULL	NULL	NULL		10003	Reliance	Mumba

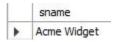
#### /\*3. Find the pnames of parts for which there is some supplier.\*/

select p.pname from parts as p where p.pid in (select distinct c.pid from supplier as s inner join catalog as c);



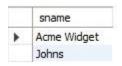
#### /\*4. Find the snames of suppliers who supply every part.\*/

select sname from supplier where sid in (select sid from catalog c group by sid having count(sid)=(select count(pid) from parts));



#### /\*5. Find the snames of suppliers who supply every red part.\*/

select sname from supplier where sid in (select sid from catalog c where pid in(select (pid) from parts where color="Red"));



### /\* 6. Find the pnames of parts supplied by Acme Widget Suppliers and by no one else.\*/

select p.pname from parts as p where p.pid not in (select distinct c.pid from catalog as c inner join (select c.pid from catalog as c where c.sid!= (select supplier.sid from supplier where supplier.sname = "Acme Widget")) as d on d.pid = c.pid);



## /\*7. Find the sids of suppliers who charge more for some part than the average cost of that part (averaged over all the suppliers who supply that part).\*/

select c1.sid from catalog as c1 where c1.cost > (select avg(c.cost) from catalog as c where c1.pid =c.pid group by c.pid);



# /\*8. For each part, find the sname of the supplier who charges the most for that part.\*/

(select c1.pid,s.sname from supplier as s,catalog as c1 where c1.sid = s.sid and c1.cost =

(select max(c.cost) from catalog as c where c1.pid = c.pid group by c.pid))

	pid	sname
•	20001	Acme Widget
	20004	Acme Widget
	20005	Acme Widget
	20001	Johns
	20002	Johns
	20003	Reliance