

SET 1

```
use mysql;
```

```
CREATE TABLE city (  
    location_pincode INT,  
    cityname VARCHAR(50),  
    state VARCHAR(50)  
);
```

```
CREATE TABLE branch (  
    ifsc_code VARCHAR(10) ,  
    branch_name VARCHAR(50),  
    location_pincode INT  
);
```

```
CREATE TABLE customer (  
    cust_id INT,  
    name VARCHAR(50),  
    income_permonth DECIMAL(10, 2),  
    gender VARCHAR(10),  
    location_pincode INT  
);
```

```
CREATE TABLE accounts (  
    account_number INT ,  
    cust_id INT,  
    account_type VARCHAR(50),  
    balance_inlakhs DECIMAL(10, 2),  
    ifsc_code VARCHAR(10)  
);
```

```
-- Insert values into tables
```

```
-- City table
```

```
INSERT INTO city (location_pincode, cityname, state)  
VALUES  
    (500001, 'Hyderabad', 'Telangana'),  
    (530001, 'Vizag', 'Andhra Pradesh'),  
    (500075, 'Gandipet', 'Telangana');
```

```
-- Branch table
```

```
INSERT INTO branch (ifsc_code, branch_name, location_pincode)  
VALUES
```

```
('IFSC001', 'Hyderabad Branch 1', 500001),  
( 'IFSC002', 'Hyderabad Branch 2', 500001),  
( 'IFSC003', 'Vizag Branch 1', 530001),  
( 'IFSC004', 'Vizag Branch 2', 530001),  
( 'IFSC005', 'Gandipet Branch', 500075);
```

-- Customer table

```
INSERT INTO customer (cust_id, name, income_permonth, gender,  
location_pincode)
```

VALUES

```
(1, 'John', 50000, 'Male', 500001),  
(2, 'Sarah', 75000, 'Female', 500001),  
(3, 'Mike', 60000, 'Male', 500001),  
(4, 'Emily', 90000, 'Female', 530001),  
(5, 'David', 80000, 'Male', 530001),  
(6, 'Emma', 55000, 'Female', 500075),  
(7, 'Robert', 70000, 'Male', 500075),  
(8, 'Sophia', 60000, 'Female', 500075);
```

-- Accounts table

```
INSERT INTO accounts (account_number, cust_id, account_type,  
balance_inlakhs, ifsc_code)
```

VALUES

```
(1001, 1, 'Savings', 1.5, 'IFSC001'),  
(1002, 2, 'Current', 2.7, 'IFSC001'),  
(1003, 2, 'Savings', 1.2, 'IFSC001'),  
(1004, 3, 'Savings', 0.8, 'IFSC001'),  
(1005, 4, 'Savings', 1.6, 'IFSC003'),  
(1006, 4, 'Loan', -1.2, 'IFSC003'),  
(1007, 5, 'Savings', 0.9, 'IFSC003'),  
(1008, 5, 'Current', 1.1, 'IFSC003'),  
(1009, 6, 'Savings', 0.5, 'IFSC005'),  
(1010, 6, 'Savings', 0.7, 'IFSC005'),  
(1011, 7, 'Current', 1.2, 'IFSC005'),  
(1012, 7, 'Loan', -0.6, 'IFSC005'),  
(1013, 8, 'Savings', 1.4, 'IFSC005');
```

1) Find number of accounts in hyderabad city with balance amount > 1 Lakh

```
select count(*)
from accounts a
join branch b on a.ifsc_code=b.ifsc_code
join city c on b.location_pincode=c.location_pincode
where c.cityname='Hyderabad' and a.balance_inlakhs>1;
```

2) find number of branches in vizag city with female accounts > 2

```
select count(distinct ifsc_code)
from branch b
join customer c on b.location_pincode=c.location_pincode
join city ci on ci.location_pincode=b.location_pincode
where cityname='vizag' and c.gender='female'
group by ifsc_code
having count(distinct cust_id)>2;
```

3)Find customer names from any specified branch like gandipet who are having more than one account.

```
Select c.name
from customer c
join branch b on c.location_pincode=b.location_pincode
join accounts a on a.ifsc_code=b.ifsc_code
where b.branch_name='Gandipet Branch'
group by c.name
having count(*)>1;
```

4) find city name which is having minimum average balance amount among all cities

```
select c.cityname
from city c
join branch b on c.location_pincode=b.location_pincode
join accounts a on b.ifsc_code=a.ifsc_code
group by c.cityname
having avg(a.balance_inlakhs)=(select min(avg_balance) from (select
avg(balance_inlakhs) as avg_balance from accounts group by ifsc_code)avg);
```

SET 2

```
use mysql;
drop table dept;
drop table emp;
```

```
drop table projects;  
CREATE TABLE dept (  
    did INT ,  
    dname VARCHAR(50)  
);
```

```
CREATE TABLE emp (  
    emp_id INT ,  
    ename VARCHAR(50),  
    salary DECIMAL(10, 2),  
    did INT,  
    eid_of_manager INT  
);
```

```
CREATE TABLE projects (  
    pid INT ,  
    eid INT  
);
```

-- Insert values into tables

-- Dept table

```
INSERT INTO dept (did, dname)  
VALUES  
    (1, 'AIML'),  
    (2, 'CSE'),  
    (3, 'EEE');
```

-- Emp table

```
INSERT INTO emp (emp_id, ename, salary, did, eid_of_manager)  
VALUES  
    (1, 'John', 5000, 1, NULL),  
    (2, 'Sarah', 6000, 1, 1),  
    (3, 'Mike', 4000, 1, 1),  
    (4, 'Emily', 8000, 2, NULL),  
    (5, 'David', 7000, 2, 4),  
    (6, 'Emma', 5500, 2, 4),  
    (7, 'Robert', 6500, 3, NULL),  
    (8, 'Sophia', 7500, 3, 7);
```

-- Projects table

```
INSERT INTO projects (pid, eid)  
VALUES  
    (1, 2),
```

(2, 3),
(3, 5);

1: find number of managers from AIML dept who are doing projects

```
select count(distinct e.eid_of_manager)
from emp e
join projects p on e.emp_id=p.eid
join dept d on d.did=e.did
where d.dname='AIML';
```

2.find the emp names from CSE dept whose sal > maximum avg sal of all depts.

```
select e.ename
from emp e

join dept d on e.did=d.did
where d.dname='CSE' and e.salary>(select max(avg_sal) from (select
avg(salary) as avg_sal from emp group by did)avg);
```

Q3: find the dept names from which none of the employees are doing atleast one projects

```
select d.dname
from dept d
left join emp e on e.did=d.did
left join projects p on e.emp_id=p.eid
group by d.dname
having count(p.pid)=0;
```

Q4: Find employee names who are managers to themselves

```
select e.ename
from emp e
where e.emp_id=e.eid_of_manager;
```

Q5: Find employee names who are not managers to any employees.

```
select e.ename from emp e where e.eid_of_manager is NULL;
```

SET 3

```
use mysql;
```

```
-- Create tables
```

```
drop table city;
```

```
drop table artists;
```

```
drop table skills;
```

```
drop table artists_skills;
```

```
drop table movies;
```

```
CREATE TABLE city (  
    pincode INT,  
    cityname VARCHAR(50),  
    state VARCHAR(50)  
);
```

```
CREATE TABLE artists (  
    artist_id INT ,  
    name VARCHAR(50),  
    location_pincode INT  
);
```

```
CREATE TABLE skills (  
    skill_id INT ,  
    skill_name VARCHAR(50)  
);
```

```
CREATE TABLE artists_skills (  
    artist_id INT,  
    skill_id INT,  
    exp_in_years INT  
);
```

```
CREATE TABLE movies (  
    movie_name VARCHAR(50),  
    artist_id INT,  
    language VARCHAR(50),  
    genre VARCHAR(50)  
);
```

```
-- Insert values into tables
```

```
-- City table
```

```
INSERT INTO city (pincode, cityname, state)
```

VALUES

(500001, 'Hyderabad', 'Telangana'),
(530001, 'Vizag', 'Andhra Pradesh'),
(500075, 'Gandipet', 'Telangana');

-- Artists table

INSERT INTO artists (artist_id, name, location_pincode)

VALUES

(1, 'John', 500001),
(2, 'Sarah', 500001),
(3, 'Mike', 530001),
(4, 'Emily', 530001),
(5, 'David', 500075),
(6, 'Emma', 500075);

-- Skills table

INSERT INTO skills (skill_id, skill_name)

VALUES

(1, 'Director'),
(2, 'Producer'),
(3, 'Singer'),
(4, 'Music Director');

-- Artists_Skills table

INSERT INTO artists_skills (artist_id, skill_id, exp_in_years)

VALUES

(1, 1, 3),
(2, 2, 5),
(3, 3, 7),
(4, 3, 4),
(5, 4, 8),
(6, 4, 5);

-- Movies table

INSERT INTO movies (movie_name, artist_id, language, genre)

VALUES

('KGF1', 1, 'Kannada', 'Action'),
('KGF1', 2, 'Kannada', 'Action'),
('RRR', 3, 'Telugu', 'Action'),
('RRR', 4, 'Telugu', 'Action'),
('Pushpa', 4, 'Telugu', 'Action'),
('Pushpa', 5, 'Telugu', 'Action');

1.find the artists who are both directors and producers for action

```
select a.name
from artists a
join artists_skills a1 on a.artist_id=a1.artist_id
join skills s on a1.skill_id=s.skill_id
join movies m on m.artist_id=a1.artist_id
where s.skill_name='Director' or s.skill_name='Producer' and m.genre='Action';
```

2. find music directors from hyderabad city who have at least 5 years of experience as singers in telugu movies

```
select a.name
from artists a
join artists_skills a1 on a.artist_id=a1.artist_id
join skills s on a1.skill_id=s.skill_id and s.skill_name='Music Director'
join artists_skills a2 on a2.artist_id=a.artist_id
join skills s1 on a2.skill_id=s1.skill_id and s1.skill_name='Singer'
```

```
JOIN movies m ON a.artist_id = m.artist_id AND m.language = 'Telugu'
```

```
join city c on a.location_pincode=c.pincode and c.cityname='Hyderabad'
where a2.exp_in_years>=5;
```

3.Find all artists names who commonly worked for kgf1, RRR and pushpa Movies

```
select a.name
from artists a
join movies m on a.artist_id=m.artist_id
where m.movie_name='Pushpa' or 'RRR'or 'kgf1';
```

SET 4

```
use mysql;
drop table city;
drop table player;
drop table matches;
drop table transactions;
CREATE TABLE city (
    pincode INT ,
    name VARCHAR(255)
);
```



```
CREATE TABLE player (  
    player_id int ,  
    name VARCHAR(255),  
    game_account_balance DECIMAL(10, 2),  
    location_pincode INT  
);
```

```
CREATE TABLE matches (  
    match_id INT ,  
    type_of_game VARCHAR(255),  
    location_pincode INT  
);
```

```
CREATE TABLE transactions (  
    trans_id INT PRIMARY KEY,  
    player_id INT,  
    bet_amount DECIMAL(10, 2),  
    win_or_loss BOOLEAN  
);
```

-- Inserting sample data

```
INSERT INTO city (pincode, name)  
VALUES  
    (10001, 'City A'),  
    (10002, 'City B'),  
    (10003, 'City C');
```

```
INSERT INTO player (player_id, name, game_account_balance,  
location_pincode)  
VALUES  
    (1, 'Player 1', 500.00, 10001),  
    (2, 'Player 2', 1000.00, 10002),  
    (3, 'Player 3', 750.00, 10001),  
    (4, 'Player 4', 1200.00, 10003);
```

```
INSERT INTO matches (match_id, type_of_game, location_pincode)  
VALUES  
    (101, 'Game A', 10001),  
    (102, 'Game B', 10002),  
    (103, 'Game A', 10003);
```

```
INSERT INTO transactions (trans_id, player_id, bet_amount, win_or_loss)
```

VALUES

```
(1001, 1, 50.00, FALSE),  
(1002, 2, 100.00, TRUE),  
(1003, 3, 25.00, FALSE),  
(1004, 4, 150.00, TRUE),  
(1005, 1, 75.00, FALSE),  
(1006, 3, 50.00, TRUE),  
(1007, 4, 100.00, FALSE),  
(1008, 2, 200.00, TRUE);
```

```
select m.type_of_game from matches m join player p on  
p.location_pincode=m.location_pincode  
join transactions t on p.player_id=t.player_id  
group by m.type_of_game  
order by count(t.trans_id)ASC  
LIMIT 1;
```

Q1: find the player name who lost maximum amount in bets

```
select p.name  
from player p  
join transactions t on p.player_id=t.player_id  
where win_or_loss=FALSE  
group by p.name  
order by sum(t.bet_amount)DESC  
LIMIT 1;
```

Q2: find city names with maximum average bet amount

```
select c.name  
  
from city c  
  
join player p on p.location_pincode=c.pincode  
  
join transactions t on t.player_id=p.player_id  
group by c.name  
order by avg(t.bet_amount)DESC  
LIMIT 1;
```

Q3: find the type of game which is having minimum number of bets

```
select m.type_of_game
from matches m
left join player p on p.location_pincode=m.location_pincode
left join transactions t on p.player_id=t.player_id
group by m.type_of_game
order by count(t.trans_id)ASC
LIMIT 1;
```

Q4: find city names from which no citizens bets done so far

```
select c.name
from city c
left join player p on p.location_pincode=c.pincode
left join transactions t on t.player_id=p.player_id
where t.trans_id is NULL
group by c.name;
```

LAB INTERNAL - 2

```
create table emp (
    ename varchar(20),
    eid int ,
    did int,
    sal float,city varchar(20));
```

```
insert into emp
values('a',1,1,25000,'hyd'),('b',2,1,30000,'kmm'),('c',3,1,35000,'mp'),('d',4,2,56000,
'wrngl'),('e',
5,2,45000,'hyd'),('f',6,2,50000,'rangareddy'),('g',7,3,79000,'hyd'),('h',8,3,35000,'mi
yapur'),('i',9
,3,67000,'malakpet');
select * from emp;
```

```
create table dept(
    did int,
    dname varchar(20));
insert into dept values(1,'aiml'),(2,'cse'),(3,'aids');
select*from dept;
```

#count no of employees where the sal is greater than avg sal of his own dept

```
select count(*) as no_of_employees
from emp e1
join dept d
on e1.did = d.did
where e1.sal > (select avg(e2.sal)
                from emp e2
                where e2.did = e1.did);
```

#print name ,sal,city,dname where sal is greater than avg sal of his own dept but not from hyd

```
select ename,sal,city,dname
from emp e1
inner join dept d
on e1.did = d.did
where e1.sal > (select avg(e2.sal)
                from emp e2
                where e2.did = e1.did) and e1.city <> 'hyd';
```

#within every dept print 3rd highest salary--dname,sal

```
select d.dname,e1.sal
from emp e1
join dept d
on e1.did = d.did
where ( select count(distinct e2.sal)
        from emp e2
        where e2.sal > e1.sal
        and e2.did = e1.did) = 2;
```

```
use mysql;
set sql_safe_updates = 0;
create table sample (
                id int auto_increment,
                col1 varchar(20),
                col2 varchar(30),
                primary key(id)
                );
insert into sample(col1,col2) values('X','Y'),
                                   ('A','B'),
```

```
('X','Y'),  
('K','L');
```

```
drop table sample;  
select * from sample;
```

delete all unique records

```
delete t1  
from sample t1  
inner join (select col1,col2  
            from sample  
            group by col1,col2  
            having count(*) = 1) t2 on t1.col1 = t2.col1 and t1.col2 =  
t2.col2;  
select * from sample;
```

#delete all duplicate records

```
delete t1  
from sample t1  
inner join (select col1,col2  
            from sample  
            group by col1,col2  
            having count(*) > 1) t2 on t1.col1 = t2.col1 and t1.col2 =  
t2.col2;  
select * from sample;
```
