create database viewp;

use viewp;

create table branch(Branch\_name varchar(20) primary key,

Branch\_city varchar(20),

assests int);

describe branch;

create table account(Acc\_no int primary key, balance int,Branch\_name varchar(20), foreign key(Branch\_name) references branch(Branch\_name));

describe account;

create table customer(cust\_name varchar(20) primary key,

cust\_street varchar(20),

cust\_city varchar(20));

describe customer;

create table depositor(cust\_name varchar(20),Acc\_no int , foreign key(cust\_name) references customer(cust\_name),

foreign key(Acc\_no) references account(Acc\_no));

describe depositor;

create table loan( Loan\_no int primary key ,

Branch\_name varchar(20),

amount int ,

foreign key(Branch\_name) references branch(Branch\_name));

describe loan;

create table borrower(cust\_name varchar(20),Loan\_no int,

foreign key(Loan\_no) references loan(Loan\_no),

foreign key(cust\_name) references customer(cust\_name));

describe borrower;

insert into branch values('akurdi','pune',100000);

insert into branch values('hadpsar','pune',120000);

insert into branch values('Bandra','mumbai ',130000);

insert into branch values('deolali','nashik ',130000);

insert into branch values('fatehpur','solapur ',230000);

insert into branch values('jamdarwadi','solapur ',150000);

insert into branch values('wardha','nagpur',156000);

insert into branch values('ravet','pune',144000);

insert into branch values('anderi','mumbai',144000);

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (101, 13000, 'anderi');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (102, 12000, 'anderi');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (103, 16000, 'hadpsar');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (104, 60000, 'bandra');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (105, 20000, 'anderi');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (106, 40000, 'ravet');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (107, 23000, 'ravet');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (108, 30000, 'fatehpur');

INSERT INTO account (Acc\_no, balance, Branch\_name) VALUES (109, 5000, 'wardha');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('akaay', 'Hadpsar', 'pune');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('apurva', 'Agam vasti', 'solapur');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('ashu', 'bhiwapur', 'nagpur');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('pranav', 'Akkalkot', 'solapur');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('riya', 'hill road', 'mumbai');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('sam', 'laxmi', 'pune');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('sanjay', 'Ramtek', 'nagpur');

INSERT INTO customer (cust\_name, cust\_street, cust\_city) VALUES ('Siya', 'Linking road', 'mumbai');

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (201, 'anderi', 100000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (202, 'hadpsar', 200000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (203, 'Bandra', 130000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (204, 'wardha', 30000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (205, 'deolali', 30000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (206, 'hadpsar', 320000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (207, 'jamdarwadi', 40000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (208, 'ravet', 70000);

INSERT INTO loan (Loan\_no, Branch\_name, amount) VALUES (209, 'Bandra', 300000);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('riya', 201);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('akaay', 202);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('siya', 203);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('sanjay', 204);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('pranav', 205);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('pranav', 206);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('ashu', 207);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('sam', 208);

INSERT INTO borrower (cust\_name, Loan\_no) VALUES ('apurva', 209);

INSERT INTO depositor (cust\_name, Acc\_no) VALUES ('pranav', 101);

INSERT INTO depositor (cust\_name, Acc\_no) VALUES ('riya', 102);

INSERT INTO depositor (cust\_name, Acc\_no) VALUES ('akaay', 103);

INSERT INTO depositor (cust\_name, Acc\_no) VALUES ('siya', 104);

INSERT INTO depositor (cust\_name, Acc\_no) VALUES ('sam', 105);

INSERT INTO depositor (cust\_name, Acc\_no) VALUES ('sam', 106);

INSERT INTO depositor (cust\_name, Acc\_no) VALUES ('akaay', 107);

* **Create a View1 to display List all customers in alphabetical order who have loan from Pune\_Station branch**.

create view hadpasar as select cust\_name from borrower where Loan\_no in (select Loan\_no from loan where Branch\_name = 'hadpsar');

select \* from hadpasar order by cust\_name asc ;

+-----------+

| cust\_name |

+-----------+

| akaay |

| pranav |

+-----------+

* **Create View2 on branch table by selecting any two columns and perform insert update delete operations**

create view bid as select Branch\_name , Branch\_city from branch ;

insert into bid values ('nigdi','mumbai');

mysql> select \* from bid;

+-------------+-------------+

| Branch\_name | Branch\_city |

+-------------+-------------+

| akurdi | pune |

| anderi | mumbai |

| Bandra | mumbai |

| deolali | nashik |

| fatehpur | solapur |

| hadpsar | pune |

| jamdarwadi | solapur |

| nigdi | mumbai |

| ravet | pune |

| wardha | nagpur |

+-------------+-------------+

update bid

set Branch\_city = 'pune'

where Branch\_name='nigdi';

select \* from bid;

+-------------+-------------+

| Branch\_name | Branch\_city |

+-------------+-------------+

| akurdi | pune |

| anderi | mumbai |

| Bandra | mumbai |

| deolali | nashik |

| fatehpur | solapur |

| hadpsar | pune |

| jamdarwadi | solapur |

| nigdi | pune |

| ravet | pune |

| wardha | nagpur |

+-------------+-------------+

delete from bid where Branch\_name = 'nigdi';

select \* from bid;

+-------------+-------------+

| Branch\_name | Branch\_city |

+-------------+-------------+

| akurdi | pune |

| anderi | mumbai |

| Bandra | mumbai |

| deolali | nashik |

| fatehpur | solapur |

| hadpsar | pune |

| jamdarwadi | solapur |

| ravet | pune |

| wardha | nagpur |

+-------------+-------------+

* **Create View3 on borrower and depositor table by selecting any one column from each table perform insert update delete operations**

CREATE VIEW bdview AS

SELECT borrower.cust\_name AS name, 'borrower' AS type

FROM borrower

UNION ALL

SELECT depositor.cust\_name AS name, 'depositor' AS type

FROM depositor;

insert into customer values ('priya','xyz','abc');

insert into loan values(210,'ravet',435355);

insert into borrower values('priya',210);

select distinct\* from bdview;

* **. Create Union of left and right joint for all customers who have an account or loan or both at bank**

select customer.cust\_name from depositor

left join customer on customer.cust\_name=depositor.cust\_name

union

select customer.cust\_name from borrower

right join customer on customer.cust\_name=borrower.cust\_name;

* **Create Simple and Unique index. And Display index Information**

create index id\_acc on account (Acc\_no);

show index from account;

+---------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+

| Table | Non\_unique | Key\_name | Seq\_in\_index | Column\_name | Collation | Cardinality | Sub\_part | Packed | Null | Index\_type | Comment | Index\_comment |

+---------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+

| account | 0 | PRIMARY | 1 | Acc\_no | A | 9 | NULL | NULL | | BTREE | | |

| account | 1 | Branch\_name | 1 | Branch\_name | A | 6 | NULL | NULL | YES | BTREE | | |

| account | 1 | id\_acc | 1 | Acc\_no | A | 9 | NULL | NULL | | BTREE | | |

+---------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+

create unique index id\_uni\_acc on account (Acc\_no);

show index from account;

+---------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+

| Table | Non\_unique | Key\_name | Seq\_in\_index | Column\_name | Collation | Cardinality | Sub\_part | Packed | Null | Index\_type | Comment | Index\_comment |

+---------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+

| account | 0 | PRIMARY | 1 | Acc\_no | A | 9 | NULL | NULL | | BTREE | | |

| account | 0 | id\_uni\_acc | 1 | Acc\_no | A | 9 | NULL | NULL | | BTREE | | |

| account | 1 | Branch\_name | 1 | Branch\_name | A | 6 | NULL | NULL | YES | BTREE | | |

| account | 1 | id\_acc | 1 | Acc\_no | A | 9 | NULL | NULL | | BTREE | | |

+---------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+

create table Companies(comp\_id varchar(20) primary key,

name varchar(20),

cost int,

year int(5));

insert into Companies values('C001','ONGC',2000,2010);

insert into Companies values('C002','HPCL',2500,2012);

insert into Companies values('C005','IOCL',1000,2014);

insert into Companies values('C006','BHEL',3000,2015);

create table Orders(comp\_id varchar(20) , domain varchar(20),quantity int,foreign key(comp\_id) references Companies(comp\_id));

insert into Orders values('C001','oil',109);

insert into Orders values('C002','gas',121);

insert into Orders values('C005','telecom',115);

* **Find names, costs, domains and quantities for companies using inner join.**

select Companies.name ,Companies.cost,Orders.domain,Orders.quantity

from Companies

inner join Orders on Companies.comp\_id = Orders.comp\_id;

+------+------+---------+----------+

| name | cost | domain | quantity |

+------+------+---------+----------+

| ONGC | 2000 | oil | 109 |

| HPCL | 2500 | gas | 121 |

| IOCL | 1000 | telecom | 115 |

+------+------+---------+----------+

* **Find names, costs, domains and quantities for companies using left outer join**

select Companies.name ,Companies.cost,Orders.domain,Orders.quantity

from Companies

left join Orders on Companies.comp\_id=Orders.comp\_id;

+------+------+---------+----------+

| name | cost | domain | quantity |

+------+------+---------+----------+

| ONGC | 2000 | oil | 109 |

| HPCL | 2500 | gas | 121 |

| IOCL | 1000 | telecom | 115 |

| BHEL | 3000 | NULL | NULL |

+------+------+---------+----------+

* **Find names, costs, domains and quantities for companies using right outer join**

select Companies.name ,Companies.cost,Orders.domain,Orders.quantity

from Companies

right join Orders on Companies.comp\_id = Orders.comp\_id;

+------+------+---------+----------+

| name | cost | domain | quantity |

+------+------+---------+----------+

| ONGC | 2000 | oil | 109 |

| HPCL | 2500 | gas | 121 |

| IOCL | 1000 | telecom | 115 |

+------+------+---------+----------+

* **Find names, costs, domains and quantities for companies using Union operator**

select name,cost

from Companies

union

select domain ,quantity

from Orders;

+---------+------+

| name | cost |

+---------+------+

| ONGC | 2000 |

| HPCL | 2500 |

| IOCL | 1000 |

| BHEL | 3000 |

| oil | 109 |

| gas | 121 |

| telecom | 115 |

+---------+------+

* **Create View View1 by selecting both tables to show company name and quantities**

create view view1 as

select Companies.name, Orders.quantity from Companies

left join Orders on Companies.comp\_id=Orders.comp\_id;

* **Display content of View1**

select \* from view1;

+------+----------+

| name | quantity |

+------+----------+

| ONGC | 109 |

| HPCL | 121 |

| IOCL | 115 |

| BHEL | NULL |

+------+----------+