**item_master**
- item_id VARCHAR(6)
- item_description VARCHAR(25)
- issue_status CHAR(1)
- item_make VARCHAR(25)
- item_category VARCHAR(20)
- item_valuation INT(6)
- Indexes

**employee_card_details**
- employee_id VARCHAR(6)
- loan_id VARCHAR(6)
- card_issue_date DATE
- Indexes

**employee_issue_details**
- issue_id VARCHAR(6)
- employee_id VARCHAR(6)
- item_id VARCHAR(6)
- issue_date DATE
- return_date DATE
- Indexes

**employee_master**
- employee_id VARCHAR(6)
- employee_name VARCHAR(20)
- designation VARCHAR(25)
- department VARCHAR(25)
- gender CHAR(1)
- date_of_birth DATE
- date_of_joining DATE
- Indexes

**loan_card_master**
- loan_id VARCHAR(6)
- loan_type VARCHAR(15)
- duration_in_years INT(2)
- Indexes

CREATE DATABASE new_loanq;

USE new_loanq;

CREATE TABLE loan_card_master

(

       loan_id                           int(6)           PRIMARY KEY,

       loan_type                     varchar(20),

```
        duration_in_years       int(2)

);


CREATE TABLE employee_master

(

        employee_id             varchar(10)             PRIMARY KEY,

        employee_name                   varchar(30),

        designation                     varchar(15),

        gender                          varchar(6),

        department                      varchar(20),

        date_of_birth           date,

        date_of_joining         date

);


CREATE TABLE item_master

(

        item_id                         varchar(10)             PRIMARY KEY,

        item_description        varchar(50),

        issue_status            varchar(10),

        item_make                       varchar(20),

        item_category           varchar(20),

        item_valuation          double(7,2)

);


CREATE TABLE employee_card_details
```

```
(
        employee_id              varchar(10)    REFERENCES    employee_master,

        loan_id                  varchar(10)        REFERENCES    loan_card_master,

        card_issue_date          date
);


CREATE TABLE employee_issue_details

(
        issue_id                 varchar(10)        PRIMARY KEY,

        employee_id              varchar(10)    REFERENCES    employee_master,

        item_id                  varchar(10)        REFERENCES    item_master,

        issue_date               date,

        return_date              date
);


insert into loan_card_master
values(00001,'stationary',5);
insert into loan_card_master
values(00002,'recurring',1);
insert into loan_card_master
values(00003,'fixed',4);
insert into loan_card_master
values(00004,'recurring',5);
insert into loan_card_master
values(00005,'stationary',3);
```

```sql
insert into loan_card_master

values(00006,'fixed',2);

insert into loan_card_master

values(00007,'recurring',1);

insert into loan_card_master

values(00008,'stationary',3);




select * from employee_master;


insert into employee_master

values('E001','ram','pat','male','hr','1988-04-01','2001-02-14');


insert into employee_master

values('E002','sashi','cat','male','account','1967-02-10','2010-02-04');


insert into employee_master

values('E003','prerna','trainee','female','hr','1990-10-09','2010-10-14');


insert into employee_master

values('E004','pratik','assoc','male','prod','1988-05-12','2005-02-12');


insert into employee_master

values('E005','ram','trainee','male','prod','1978-04-03','2001-02-14');
```

```sql
insert into employee_master
values('E006','ram','pat','male','account','1968-02-05','2007-01-04');


insert into employee_master
values('E007','vivek','assoc','male','hr','1958-09-05','2006-03-12');



insert into employee_master
values('E008','garima','cat','female','account','1990-12-11','2007-04-01');


insert into employee_master
values('E009','ramesh','pat','male','prod','1992-04-04','1998-05-06');


insert into employee_master
values('E010','jatin','assoc','male','account','1994-07-12','2012-01-04');


insert into employee_master
values('E011','sonam','pat','female','prod','1996-03-01','2013-07-03');


insert into employee_master
values('E012','surya','pat','female','prod','1996-03-01','2013-07-03');



insert into item_master
values ('i001','iugiuhou','yes','hand','furniture',2000);
```

```sql
insert into item_master
values ('i002','iugiuhou','no','contract','product',2050);

insert into item_master
values ('i003','iugiuhou','yes','hand','furniture',3000);

insert into item_master
values ('i004','iugiuhou','no','contract','product',7000);

insert into item_master
values ('i005','iugiuhou','no','hand','furniture',8000);

insert into item_master
values ('i006','iugiuhou','yes','machine','product',10000);

insert into item_master
values ('i007','iugiuhou','yes','contract','furniture',7000);

insert into item_master
values ('i008','iugiuhou','no','machine','product',5000);

insert into item_master
values ('i009','iugiuhou','no','hand','product',4000);
```

```sql
insert into item_master

values ('i010','iugiuhou','yes','machine','furniture',1000);


insert into item_master

values ('i013','iugiuhou','yes','machine','product',2000);




insert into employee_card_details

values('e001','00001','2013-10-09');


insert into employee_card_details

values('e005','00005','2011-04-10');


insert into employee_card_details

values('e008','00003','2009-06-04');


insert into employee_card_details

values('e007','00009','2003-02-01');



insert into employee_issue_details

values('iss001','e002','i007','2013-10-02','2013-11-11');

insert into employee_issue_details
```

```sql
values('iss009','e002','i006','2012-10-02','2013-09-04');


insert into employee_issue_details

values('iss010','e002','i007','2011-04-02','2013-11-01');

insert into employee_issue_details

values('iss011','e002','i003','2010-07-02','2013-11-03');



insert into employee_issue_details

values('iss002','e001','i006','2014-03-02','2014-11-11');


insert into employee_issue_details

values('iss003','e009','i001','2012-01-02','2013-03-05');


insert into employee_issue_details

values('iss004','e004','i003','2010-03-02','2011-06-01');


insert into employee_issue_details

values('iss012','e004','i007','2009-03-04','2009-11-01');

insert into employee_issue_details

values('iss013','e004','i007','2008-08-02','2008-09-09');

insert into employee_issue_details

values('iss014','e004','i006','2011-03-07','2011-06-01');


insert into employee_issue_details
```

```sql
values('iss005','e007','i010','2009-04-02','2009-07-07');


insert into employee_issue_details

values('iss006','e009','i007','2010-05-02','2012-12-08');



insert into employee_issue_details

values('iss016','e009','i013','2010-05-02','2012-12-08');


insert into employee_issue_details

values('iss007','e004','i010','2013-10-02','2013-11-11');


select * from item_master;


insert into employee_issue_details

values('iss021','e012','i001','2013-10-02','2013-11-11');

insert into employee_issue_details

values('iss022','e012','i001','2010-03-02','2011-06-01');


insert into employee_issue_details

values('iss023','e012','i005','2009-03-04','2009-11-01');

insert into employee_issue_details

values('iss024','e012','i005','2008-08-02','2008-09-09');

insert into employee_issue_details

values('iss025','e012','i005','2011-03-07','2011-06-01');
```

```sql
select * from employee_issue_details;

select * from employee_card_details;

select * from item_master;

select * from employee_master;

select * from loan_card_master;



/*----------------QUERIES---------------------*/



/*
```

01. Display distinct Employee id, Employee name who kept the item issued for more than a year.

```sql
*/



select distinct em.employee_id, employee_name

from employee_master em, employee_issue_details eid

where em.employee_id=eid.employee_id

and (datediff(return_date,issue_date)/365) >1;
```

```
/*
```

02. Count number of customers who have gone for loan type Stationary.

```
*/
```

```
select count(employee_id)
from loan_card_master lcm, employee_card_details ecd
where lcm.loan_id=ecd.loan_id
and loan_type='Stationary';
/*
```

03. Display Category and number of item in that category.

```
*/
```

```
select item_category, count(item_id)
from item_master
group by item_category;
```

/*

04. Empid ,Emp Name who joined the company after 2005.

*/

```sql
select employee_id, employee_name, date_of_joining

from employee_master

where year(date_of_joining)>2005;
```

/*

05. Count gender and group by gender.

*/

```sql
select gender,count(employee_id)

from employee_master

group by gender;
```

/*

06. Count number of employees whose issue status is yes.

*/

```sql
select count(distinct em.employee_id), em.employee_id

from employee_master em, item_master im, employee_issue_details eid

where em.employee_id=eid.employee_id and im.item_id=eid.item_id

and issue_status='yes'

group by em.employee_id;
```

/*

08.Find the max of total valuation of employees whose purchase is in two different categories.

*/

```sql
select em.employee_id, employee_name, sum(item_valuation)

 from employee_master em, item_master im, employee_issue_details eid

 where em.employee_id=eid.employee_id and eid.item_id=im.item_id

 group by em.employee_id
```

having sum(item_valuation) in(select max(c) from(select sum(item_valuation) c

from item_master im, employee_issue_details eid, employee_master em

where im.item_id=eid.item_id and eid.employee_id=em.employee_id

group by em.employee_id)a) and count(distinct item_category)>=2

order by em.employee_id;


/*


09.Display count of employees who have recieved loan.

*/


select count(employee_id), employee_id

from employee_card_details ecd

where loan_id in(select loan_id from loan_card_master)

group by employee_id;


SELECT count(DISTINCT employee_id),employee_id

FROM employee_card_details

group by employee_id;

/*

10.Display emp id,emp name and no of furniture purchased by employee who purchased more than one furniture.

*/

```
select em.employee_id, employee_name, count(im.item_id)

from employee_master em, employee_issue_details eid, item_master im

where em.employee_id=eid.employee_id and eid.item_id=im.item_id and item_category='furniture'

group by em.employee_id

having count(im.item_id)>1;
```

/*

11. Details of issue id,emp id,name who had issued in product display in sorted order of issue_id.

*/

```
select issue_id, em.employee_id, employee_name

from employee_issue_details eid, item_master im, employee_master em

where im.item_id=eid.item_id and em.employee_id=eid.employee_id and item_category='product'

order by issue_id;
```

select * from employee_issue_details;

/*

12. Display customer who has not availed for loan

*/

select employee_id, employee_name

from employee_master

where employee_id not in( select employee_id from employee_card_details  where loan_id in(select loan_id from loan_card_master));

 select * from employee_card_details;

/*

14. Display emp records for whom never issued an item as a loan order based on emp id

*/

```
select employee_id, employee_name

from employee_master

where employee_id not in( select employee_id

from employee_card_details where loan_id in(select loan_id from loan_card_master))

and employee_id in(select employee_id from employee_issue_details);




/*




15. Display empid,name who has the highest valuation. if multiple records then display in order of emp id

*/


SELECT eid.employee_id, e.employee_name,sum(im.item_valuation)

FROM item_master im, employee_issue_details eid, employee_master e


WHERE im.item_id=eid.item_id AND e.employee_id=eid.employee_id

GROUP BY        e.employee_id

 HAVINGsum(im.item_valuation)=(SELECT max(c)

FROM   (SELECTsum(item_valuation) c

 FROM item_master im, employee_issue_details eid

        WHERE         im.item_id=eid.item_id

                                                                        GROUP
BY      eid.employee_id

                )a
```

)

ORDER BY        eid.employee_id;

/*

16. Display No. of emp in HR dept

*/

select count(employee_id)

from employee_master

where department='HR';

select * from employee_master;

/*

17. Display issue status  and number of items of furniture based on issued and not issued

*/

select issue_status, count(item_id)

from item_master

where item_category='furniture'

group by issue_status;

select * from item_master where item_CATEGORY='FURNITURE';

/*

18. Display empid and total valuation of each employee where employee must have at least one product issued

*/

select * from employee_issue_details;

select * from item_master;

SELECT          eid.employee_id, e.employee_name,sum(im.item_valuation)

FROM            item_master im, employee_issue_details eid, employee_master e

WHERE           im.item_id=eid.item_id AND

                        e.employee_id=eid.employee_id

```
GROUP BY        e.employee_id

having  employee_id in (select employee_id from employee_issue_details

                        where item_id in (select item_id from item_master

                        where item_category='product'));




select * from employee_issue_details;


/*




19. Disp empid,name and count of categories of each emp having at least 2 categories

*/


SELECT em.employee_id, employee_name, count(item_category)

from employee_master em, employee_issue_details eid, item_master im

where im.item_id=eid.item_id and em.employee_id=eid.employee_id

group by em.employee_id

having count(distinct item_category)>=2;
```

/*

20. Display name of categories and no of items in each category and sort in order of no of items

*/

select item_category, count(item_id) c

from item_master im

group by item_category

order by c;

select * from item_master;

/*

20. Display empid,name with their total valuations.

*/

SELECT eid.employee_id, e.employee_name,sum(im.item_valuation)

FROM item_master im, employee_issue_details eid, employee_master e

WHERE im.item_id=eid.item_id AND

 e.employee_id=eid.employee_id

GROUP BY e.employee_id


HAVING          sum(im.item_valuation) IN (SELECT max(c) FROM (SELECTsum(item_valuation) c

 FROM item_master im, employee_issue_details eid

 WHERE im.item_id=eid.item_id


GROUP BY eid.employee_id

)a

)

ORDER BY eid.employee_id;



Key: (Part of) Primary Key
Filled Diamond: NOT NULL
Not filled Diamond: NULL
Red colored: (Part of) Foreign key
Blue lined Diamond: Simple attribute (no key)

Can be combined for example:
 is a Red colored Key so it's a Primary Key which is also a Foreign Key
 is a Yellow (non Red) Key so it's only a Primary Key
 is a blue lined filled diamond so it's a NOT NULL simple attribute
 is a red colored filled diamond so it's a NOT NULL Foreign Key
 is a blue lined not filled diamond so it's a simple attribute which can be NULL
 is a red colored not filled diamond so it's a Foreign Key which can be NULL