BANK

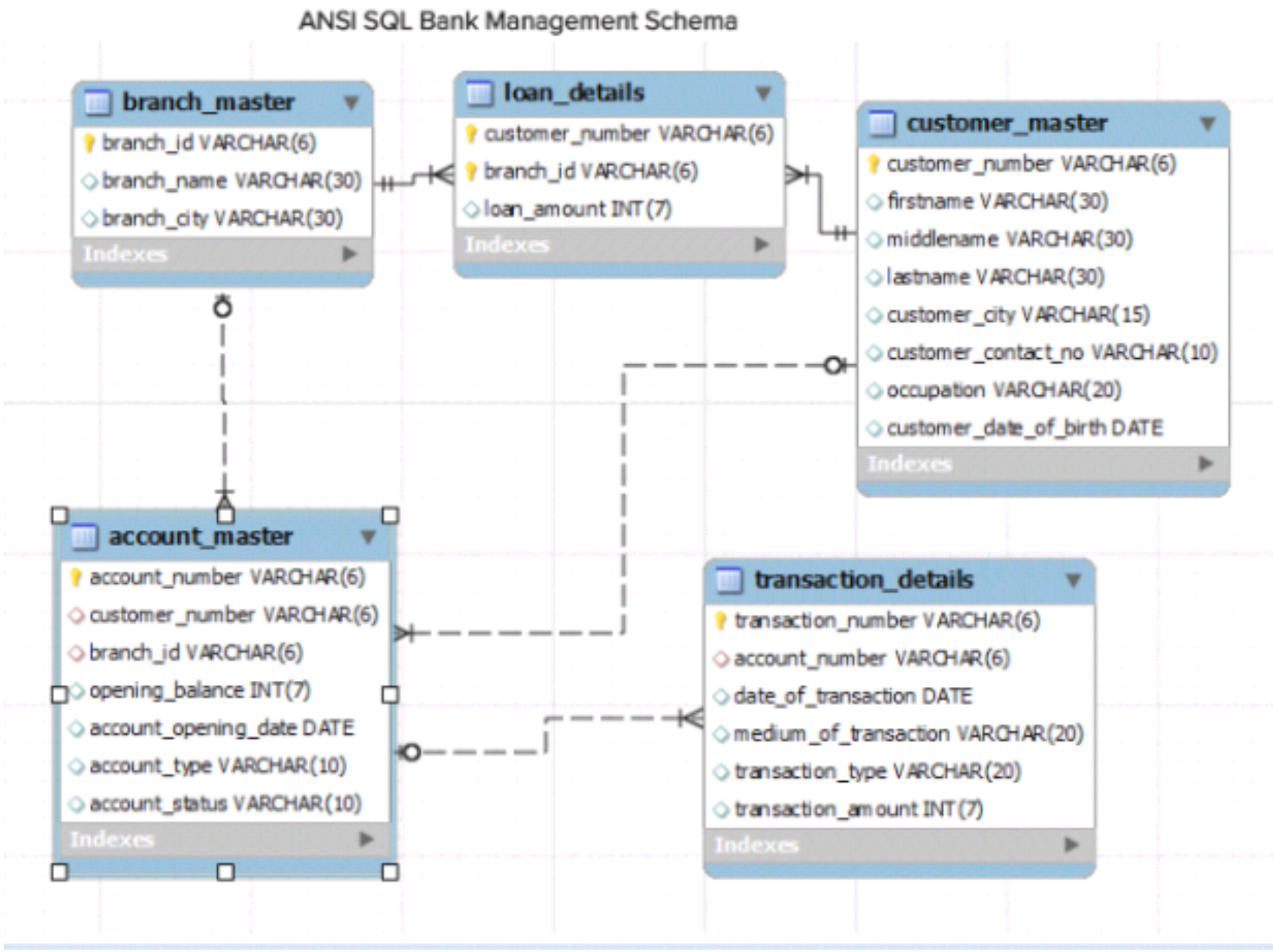
```
create database bank;
use bank;

CREATE TABLE customer_master(
CUSTOMER_NUMBER VARCHAR(6),
FIRSTNAME VARCHAR(30),
middlename VARCHAR(30),
lastname VARCHAR(30),
CUSTOMER_CITY VARCHAR(15),
CUSTOMER_CONTACT_NO VARCHAR(10),
occupation VARCHAR(10),
CUSTOMER_DATE_OF_BIRTH DATE,
CONSTRAINT customer_custid_pk PRIMARY KEY (CUSTOMER_NUMBER));



CREATE TABLE branch_master(
branch_id VARCHAR(6),
branch_name VARCHAR(30),
branch_city VARCHAR(30),
CONSTRAINT branch_bid_pk PRIMARY KEY (branch_id));
```

```
CREATE TABLE account_master
(account_number VARCHAR(255),
customer_number VARCHAR(255),
branch_id VARCHAR(255),
opening_balance INT(20),
account_opening_date DATE,
account_type VARCHAR(10),
account_status VARCHAR(10),
PRIMARY KEY (account_number),
FOREIGN KEY (customer_number) references customer_master(customer_number),
FOREIGN KEY (branch_id) references branch_master(branch_id));

CREATE TABLE transaction_details(
transaction_number VARCHAR(6),
account_number VARCHAR(6),
date_of_transaction DATE,
medium_of_transaction VARCHAR(20),
transaction_type VARCHAR(20),
transaction_amount INT(7),
CONSTRAINT transaction_details_tnumber_pk PRIMARY KEY (transaction_number),
CONSTRAINT transaction_details_acnumber_fk FOREIGN KEY (account_number)
REFERENCES account_master (account_number));

CREATE TABLE loan_details
(customer_number varchar(255),
branch_id varchar(255),
loan_amount bigint(20),
foreign key(customer_number) references customer_master(customer_number));
```

```
insert into customer_master values('C00001', 'RAMESH', 'CHANDRA', 'SHARMA', 'DELHI',
        '9543198345', 'SERVICE' ,'1976-12-06');

insert into customer_master values('C00002', 'AVINASH', 'SUNDER', 'MINHA', 'DELHI',
        '9876532109' ,'SERVICE', '1974-10-16');

insert into customer_master values('C00003', 'RAHUL', 'NULL', 'RASTOGI', 'DELHI',
        '9765178901', 'STUDENT', '1981-09-26');

insert into customer_master values('C00004', 'PARUL', 'NULL', 'GANDHI', 'DELHI',
        '9876532109' ,'HOUSEWIFE','1976-11-03');

insert into customer_master values('C00005', 'NAVEEN' ,'CHANDRA', 'AEDEKAR',
        'MUMBAI', '8976523190', 'SERVICE' ,'1976-09-19');

insert into customer_master values('C00006', 'CHITRESH', 'NULL', 'BARWE', 'MUMBAI',
        '7651298321', 'STUDENT' ,'1992-11-06');

insert into customer_master values('C00007', 'AMIT' ,'KUMAR', 'BORKAR', 'MUMBAI',
        '9875189761', 'STUDENT', '1981-09-06');

insert into customer_master values('C00008', 'NISHA',NULL, 'DAMLE', 'MUMBAI',
        '7954198761', 'SERVICE', '1975-12-03');

insert into customer_master values('C00009', 'ABHISHEK', NULL, 'DUTTA', 'KOLKATA'
        ,'9856198761', 'SERVICE' ,'1973-05-22');

insert into customer_master values('C00010','SHANKAR' ,NULL, 'NAIR', 'CHENNAI', '8765489076',
        'SERVICE', '1976-07-12');


insert into branch_master values('B00001', 'ASAF ALI ROAD','DELHI');

insert into branch_master values('B00002','NEW DELHI MAIN BRANCH','DELHI');

insert into branch_master values('B00003' ,'DELHI CANTT', 'DELHI');

insert into branch_master values('B00004' ,'JASOLA', 'DELHI');

insert into branch_master values('B00005' ,'MAHIM' ,'MUMBAI');

insert into branch_master  values('B00006' ,'VILE PARLE', 'MUMBAI');

insert into branch_master  values('B00007', 'MANDVI' ,'MUMBAI');

insert into branch_master  values('B00008' ,'JADAVPUR', 'KOLKATA');

insert into branch_master values('B00009' ,'KODAMBAKKAM', 'CHENNAI');
```

```
insert into account_master values('A00001' ,'C00001','B00001',1000       ,'2012-12-15',    'SAVING',
        'ACTIVE');

insert into account_master  values('A00002'      ,'C00002','B00001',1000,'2012-06-12'    ,'SAVING',
        'ACTIVE');

insert into account_master  values('A00003'      ,'C00003',        'B00002',        1000     ,'2012-05-17'
        ,'SAVING',        'ACTIVE');

insert into account_master values('A00004'       ,'C00002',        'B00005',        1000     ,'2013-01-27'
        ,'SAVING          ','ACTIVE');

insert into account_master  values('A00005'      ,'C00006',        'B00006',        1000     ,'2012-12-17'
        ,'SAVING','ACTIVE');

insert into account_master  values('A00006'      ,'C00007',        'B00007',        1000     ,'2010-08-12'
        ,'SAVING          ','SUSPENDED');

insert into account_master values('A00007'       ,'C00007',        'B00001',        1000     ,'2012-10-02'
        ,'SAVING          ','ACTIVE');

insert into account_master  values('A00008'      ,'C00001','B00003',       1000     ,'2009-11-09'
        ,'SAVING          ','TERMINATED');

insert into account_master values('A00009'       ,'C00003',        'B00007',        1000     ,'2008-11-30'
        ,'SAVING',        'TERMINATED');

insert into account_master  values('A00010'      ,'C00004',        'B00002',        1000     ,'2013-03-01'
        ,'SAVING',        'ACTIVE');


insert into transaction_details  values('T00001',  'A00001',        '2013-01-01',    'CHEQUE',
        'DEPOSIT',        2000);

insert into transaction_details  values('T00002'   ,'A00001'        ,'2013-02-01'    ,'CASH'  ,'WITHDRAWAL',
        1000);

insert into transaction_details  values('T00003',  'A00002         ', '2013-01-01',  'CASH'   ,'DEPOSIT',
        2000);

insert into transaction_details  values('T00004',  'A00002',        '2013-02-01' , 'CASH'     ,'DEPOSIT',
        3000);

insert into transaction_details  values('T00005',  'A00007',        '2013-01-11',    'CASH'   ,'DEPOSIT',
        7000);

insert into transaction_details  values('T00006',  'A00007',        '2013-01-13',    'CASH'   ,'DEPOSIT',
        9000);

insert into transaction_details  values('T00007',  'A00001',        '2013-03-13',    'CASH'   ,'DEPOSIT'
        ,4000);
```

```
insert into transaction_details  values('T00008',  'A00001',        '2013-03-14',    'CHEQUE'
          ,'DEPOSIT'         ,3000);

insert into transaction_details  values('T00009',  'A00001',        '2013-03-21',    'CASH'   ,'WITHDRAWAL'
          ,9000);

insert into transaction_details  values('T00010',  'A00001',        '2013-03-22',    'CASH'   ,'WITHDRAWAL'
          ,2000);

insert into transaction_details  values('T00011',  'A00002',        '2013-03-25',    'CASH'   ,'WITHDRAWAL'
          ,7000);

insert into transaction_details  values('T00012',  'A00007',        '2013-03-26',    'CASH'   ,'WITHDRAWAL'
          ,2000);


insert into Loan_details  values('C00001',          'B00001',        100000);

insert into Loan_details  values('C00002',          'B00002',        200000);

insert into Loan_details  values('C00009',          'B00008',        400000);

insert into Loan_details  values('C00010',          'B00009',        500000);

insert into Loan_details  values('C00001',          'B00003',        600000);

insert into Loan_details  values('C00002',          'B00001',        600000);
```



CUSTOMER MASTER

CUSTOMER_NUMBER	FIRSTNAME	middlename	lastname	CUSTOMER_CITY	CUSTOMER_CONTACT_NO	occupation	CUSTOMER_DATE_OF_BIRTH
C00001	RAMESH	CHANDRA	SHARMA	DELHI	9543198345	SERVICE	1976-12-06
C00002	AVINASH	SUNDER	MINHA	DELHI	9876532109	SERVICE	1974-10-16
C00003	RAHUL	NULL	RASTOGI	DELHI	9765178901	STUDENT	1981-09-26
C00004	PARUL	NULL	GANDHI	DELHI	9876532109	HOUSEWIFE	1976-11-03
C00005	NAVEEN	CHANDRA	AEDEKAR	MUMBAI	8976523190	SERVICE	1976-09-19
C00006	CHITRESH	NULL	BARWE	MUMBAI	7651298321	STUDENT	1992-11-06
C00007	AMIT	KUMAR	BORKAR	MUMBAI	9875189761	STUDENT	1981-09-06
C00008	NISHA	NULL	DAMLE	MUMBAI	7954198761	SERVICE	1975-12-03
C00009	ABHISHEK	NULL	DUTTA	KOLKATA	9856198761	SERVICE	1973-05-22
C00010	SHANKAR	NULL	NAIR	CHENNAI	8765489076	SERVICE	1976-07-12
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

ACCOUNT MASTER

account_number	customer_number	branch_id	opening_balance	account_opening_date	account_type	account_status
A00001	C00001	B00001	1000	2012-12-15	SAVING	ACTIVE
A00002	C00002	B00001	1000	2012-06-12	SAVING	ACTIVE
A00003	C00003	B00002	1000	2012-05-17	SAVING	ACTIVE
A00004	C00002	B00005	1000	2013-01-27	SAVING	ACTIVE
A00005	C00006	B00006	1000	2012-12-17	SAVING	ACTIVE
A00006	C00007	B00007	1000	2010-08-12	SAVING	SUSPENDED
A00007	C00007	B00001	1000	2012-10-02	SAVING	ACTIVE
A00008	C00001	B00003	1000	2009-11-09	SAVING	TERMINATED
A00009	C00003	B00007	1000	2008-11-30	SAVING	TERMINATED
A00010	C00004	B00002	1000	2013-03-01	SAVING	ACTIVE
NULL	NULL	NULL	NULL	NULL	NULL	NULL

BRANCH MASTER

branch_id	branch_name	branch_city
B00001	ASAF ALI ROAD	DELHI
B00002	NEW DELHI MAIN BRANCH	DELHI
B00003	DELHI CANTT	DELHI
B00004	JASOLA	DELHI
B00005	MAHIM	MUMBAI
B00006	VILE PARLE	MUMBAI
B00007	MANDVI	MUMBAI
B00008	JADAVPUR	KOLKATA
B00009	KODAMBAKKAM	CHENNAI
NULL	NULL	NULL

LOAN DETAILS

customer_number	branch_id	loan_amount
C00001	B00001	100000
C00002	B00002	200000
C00009	B00008	400000
C00010	B00009	500000
C00001	B00003	600000
C00002	B00001	600000

TRANSACTION DETAILS

transaction_number	account_number	date_of_transaction	medium_of_transaction	transaction_type	transaction_amount
T00001	A00001	2013-01-01	CHEQUE	DEPOSIT	2000
T00002	A00001	2013-02-01	CASH	WITHDRAWAL	1000
T00003	A00002	2013-01-01	CASH	DEPOSIT	2000
T00004	A00002	2013-02-01	CASH	DEPOSIT	3000
T00005	A00007	2013-01-11	CASH	DEPOSIT	7000
T00006	A00007	2013-01-13	CASH	DEPOSIT	9000
T00007	A00001	2013-03-13	CASH	DEPOSIT	4000
T00008	A00001	2013-03-14	CHEQUE	DEPOSIT	3000
T00009	A00001	2013-03-21	CASH	WITHDRAWAL	9000
T00010	A00001	2013-03-22	CASH	WITHDRAWAL	2000
T00011	A00002	2013-03-25	CASH	WITHDRAWAL	7000
T00012	A00007	2013-03-26	CASH	WITHDRAWAL	2000
NULL	NULL	NULL	NULL	NULL	NULL

QUERIES

1. Write a query to display account number, customer's number, customer's firstname, lastname, account opening date. Display the records sorted in ascending order based on account number.

```
SELECT a.account_number,c.customer_number,c.firstname,c.lastname,a.account_number
FROM customer_master c JOIN account_master a ON
c.customer_number=a.customer_number
ORDER BY a.account_number;
```

account_number	customer_number	firstname	lastname	account_opening_date
A00001	C00001	RAMESH	SHARMA	2012-12-15
A00002	C00002	AVINASH	MINHA	2012-06-12
A00003	C00003	RAHUL	RASTOGI	2012-05-17
A00004	C00002	AVINASH	MINHA	2013-01-27
A00005	C00006	CHITRESH	BARWE	2012-12-17
A00006	C00007	AMIT	BORKAR	2010-08-12
A00007	C00007	AMIT	BORKAR	2012-10-02
A00008	C00001	RAMESH	SHARMA	2009-11-09
A00009	C00003	RAHUL	RASTOGI	2008-11-30
A00010	C00004	PARUL	GANDHI	2013-03-01

2. Write a query to display the number of customer's from Delhi. Give the count an alias name of Cust_Count.

```
SELECT count(customer_number) Cust_Count FROM customer_master WHERE customer_city='Delhi';
```

cust_count
4

3. Write a query to display the customer number, customer firstname, account number for the customer's whose accounts were created after 15th of any month. Display the records sorted in ascending order based on customer number and then by account number.

```
SELECT c.customer_number,c.firstname,a.account_number FROM account_master a join customer_master c ON c.customer_number=a.customer_number WHERE day(a.account_opening_date)>'15' ORDER BY c.customer_number,a.account_number;
```

customer_number	firstname	account_number
C00002	AVINASH	A00004
C00003	RAHUL	A00003
C00003	RAHUL	A00009
C00006	CHITRESH	A00005

4. Write a query to display customer number, customer's first name, account number where the account status is terminated. Display the records sorted in ascending order based on customer number and then by account number.

```
SELECT c.customer_number,c.firstname,a.account_number

FROMaccount_master a JOIN customer_master c

ON c.customer_number=a.customer_number

WHERE a.account_status='Terminated'

ORDER BY c.customer_number,a.account_number;
```

customer_number	firstname	account_number
C00001	RAMESH	A00008
C00003	RAHUL	A00009

5. Write a query to display the total number of withdrawals and total number of deposits being done by customer whose customer number ends with 001. The query should display transaction type and the number of transactions. Give an alias name as Trans_Count for number of transactions. Display the records sorted in ascending order based on transaction type.

```
SELECT transaction_type,count(transaction_number) Trans_Count

FROM account_master am JOIN transaction_details td

ON am.account_number=td.account_number

WHERE customer_number like '%001'

GROUP BY transaction_type

ORDER BY transaction_type;
```

transaction_type	Trans_count
DEPOSIT	3
WITHDRAWAL	3

6. Write a query to display the number of customers who have registration but no account in the bank. Give the alias name as Count_Customer for number of customers.

```
SELECT count(customer_number) Count_Customer FROM customer_master

WHERE customer_number NOT IN (SELECT customer_number FROM account_master);
```

Count_customer
4

7. Write a query to display account number and total amount deposited by each account holder (Including the opening balance). Give the total amount deposited an alias name of Deposit_Amount. Display the records in sorted order based on account number.

```
SELECT a.account_number,a.opening_balance+sum(t.transaction_amount)

FROM account_master a JOIN transaction_details t ON a.account_number=t.account_number

WHERE t.transaction_type='Deposit' GROUP BY t.account_number;
```

account_number	Deposit_Amount
A00001	10000
A00002	6000
A00007	17000

8. Write a query to display the number of accounts opened in each city .The Query should display Branch City and number of accounts as No_of_Accounts.For the branch city where we don't have any accounts opened display 0. Display the records in sorted order based on branch city.

```
SELECT branch.branch_city, count(account.account_number) No_of_Accounts

FROM branch_master LEFT JOIN account_master

ON account.branch_id=branch.branch_id

GROUP BY branch.branch_city ORDER BY branch_city;
```

branch_city	No_of_accounts
CHENNAI	0
DELHI	6
KOLKATA	0
MUMBAI	4

9. Write a query to display the firstname of the customers who have more than 1 account. Display the records in sorted order based on firstname.

```
SELECT c.firstname FROM

customer_master c JOIN account_master a ON a.customer_number=c.customer_number

GROUP BY a.customer_number HAVING count(a.account_number)>1;
```

firstname
AMIT
AVINASH
RAHUL
RAMESH

10. Write a query to display the customer number, customer firstname, customer lastname who has taken loan from more than 1 branch. Display the records sorted in order based on customer number.

```
SELECT c.customer_number,c.firstname,c.lastname FROM

customer_master c JOIN loan_details l ON c.customer_number=l.customer_number

GROUP BY l.customer_number HAVING count(l.branch_id)>1

ORDER BY c.customer_number;
```

customer_number	firstname	lastname
C00001	RAMESH	SHARMA
C00002	AVINASH	MINHA

11. Write a query to display the customer's number, customer's firstname, customer's city and branch city where the city of the customer and city of the branch is different. Display the records sorted in ascending order based on customer number.

```
SELECT c.customer_number,c.firstname,c.customer_city,b.branch_city FROM

Customer_master c JOIN Account_master a ON c.customer_number=a.customer_number

JOIN Branch_master b ON b.branch_id=a.branch_id

WHERE b.branch_city<>c.customer_city
```

ORDER BY c.customer_number;

customer_number	firstname	customer_city	branch_city
C00002	AVINASH	DELHI	MUMBAI
C00003	RAHUL	DELHI	MUMBAI
C00007	AMIT	MUMBAI	DELHI

12. Write a query to display the number of clients who have asked for loans but they don't have any account in the bank though they are registered customers. Give the count an alias name of Count.

SELECT count(c.customer_number)Count FROM customer_master c JOIN loan_details l

ON c.customer_number=l.customer_number

WHERE c.customer_number NOT IN (SELECT customer_number FROM account_master);

Count
2

13. Write a query to display the account number who has done the highest transaction. For example the account A00023 has done 5 transactions i.e. suppose 3 withdrawal and 2 deposits. Whereas the account A00024 has done 3 transactions i.e. suppose 2 withdrawals and 1 deposit. So account number of A00023 should be displayed. In case of multiple records, display the records sorted in ascending order based on account number.

SELECT account_number FROM transaction_details

GROUP BY account_number

HAVING count(transaction_number)>=ALL

(SELECT count(transaction_number) FROM transaction_details

GROUP BY account_number) ORDER BY account_number;

account_number
A00001

14. Write a query to show the branch name,branch city where we have the maximum customers. For example the branch B00019 has 3 customers, B00020 has 7 and B00021 has 10. So branch id B00021 is having maximum customers. If B00021 is Koramangla branch Bangalore, Koramangla branch should be displayed along with city name Bangalore. In case of multiple records, display the records sorted in ascending order based on branch name.

SELECT b.branch_name,b.branch_city FROM

Branch_master b JOIN account a ON a.branch_id=b.branch_id

GROUP BY a.branch_id HAVING count(a.customer_number)>=ALL

```
(SELECT count(customer_number) FROM
Account_master GROUP BY branch_id)
ORDER BY b.branch_name;
```

branch_name	branch_city
ASAF ALI ROAD	DELHI

15. Write a query to display all those account number, deposit, withdrawal where withdrawal is more than deposit amount. Hint: Deposit should include opening balance as well. For example A00011 account opened with Opening Balance 1000 and A00011 deposited 2000 rupees on 2012-12-01 and 3000 rupees on 2012-12-02. The same account i.e A00011 withdrawn 3000 rupees on 2013-01-01 and 7000 rupees on 2013-01-03. So the total deposited amount is 6000 and total withdrawal amount is 10000. So withdrawal amount is more than deposited amount for account number A00011. Display the records sorted in ascending order based on account number.

```
SELECT td.account_number,
sum(CASE WHEN  transaction_type='Deposit' THEN transaction_amount END)
+(SELECT opening_balance
FROM account_master where account_number=td.account_number) Deposit,
sum(CASE WHEN transaction_type='Withdrawal' THEN transaction_amount END) Withdrawal
FROM transaction_details td
GROUP BY td.account_number
HAVING Withdrawal > Deposit
ORDER BY td.account_number;
(or)
 SELECT ifnull(t1.account_number,t2.account_number) account_number,
 t2.d Deposit,ifnull(t1.w,0) Withdrawal FROM
 (SELECT account_number,transaction_type,sum(transaction_amount) w from transaction_details
 WHERE transaction_type='Withdrawal' GROUP BY account_number) t1
 RIGHT JOIN
 (SELECT a.account_number,a.opening_balance+sum(t.transaction_amount) d
 FROM account_master a JOIN transaction_details t ON a.account_number=t.account_number
 WHERE t.transaction_type='Deposit'GROUP BY t.account_number) t2
 ON t1.account_number=t2.account_number
```

```
WHERE ifnull(t1.w,0)>t2.d

ORDER BY account_number;
```

account_number	Deposit	Withdrawal
A00001	10000	12000
A00002	6000	7000

16. Write a query to show the balance amount for account number that ends with 001. Note: Balance amount includes account opening balance also. Give alias name as Balance_Amount. For example A00015 is having an opening balance of 1000. A00015 has deposited 2000 on 2012-06-12 and deposited 3000 on 2012-07-13. The same account has drawn money of 500 on 2012-08-12 , 500 on 2012-09-15, 1000 on 2012-12-17. So balance amount is 4000 i.e (1000 (opening balance)+2000+3000) – (500+500+1000).

```
SELECT ifnull((SUM(CASE WHEN transaction_type='Deposit'

THEN transaction_amount END)) -

(SUM(CASE WHEN transaction_type='Withdrawal'

THEN transaction_amount END))+(select opening_balance

from account_master where account_number like '%001'),(SUM(CASE WHEN transaction_type='Deposit'

THEN transaction_amount END))+(select opening_balance

from account_master where account_number like '%001')) AS Balance_Amount

FROM transaction_details where account_number like '%001';
```

(or)

```
SELECT ifnull(t1.account_number,t2.account_number) account_number,

t2.d-ifnull(t1.w,0) Balance_Amount FROM

(SELECT account_number,transaction_type,sum(transaction_amount) w from transaction_details

WHERE transaction_type='Withdrawal' GROUP BY account_number) t1

RIGHT JOIN

(SELECT a.account_number,a.opening_balance+sum(t.transaction_amount) d

FROM account a JOIN transaction_details t ON a.account_number=t.account_number

WHERE t.transaction_type='Deposit'GROUP BY t.account_number) t2

ON t1.account_number=t2.account_number

WHERE ifnull(t1.account_number,t2.account_number) LIKE '%001'

ORDER BY account_number;
```

account_number	Balance_Amount
A00001	-2000

17. Display the customer number, customer's first name, account number and number of transactions being made by the customers from each account. Give the alias name for number of transactions as Count_Trans. Display the records sorted in ascending order based on customer number and then by account number.

```
SELECT c.customer_number,c.firstname,t.account_number, count(t.account_number) Count_Trans

FROM transaction_details t JOIN account_master a ON a.account_number=t.account_number

JOIN customer c ON c.customer_number=a.customer_number

GROUP BY t.account_number ORDER BY c.customer_number, a.account_number;
```

customer_number	firstname	account_number	Count_Trans
C00001	RAMESH	A00001	6
C00002	AVINASH	A00002	3
C00007	AMIT	A00007	3

18. Write a query to display the customer's firstname who have multiple accounts (atleast 2 accounts). Display the records sorted in ascending order based on customer's firstname.

```
SELECT c.firstname FROM

Customer_master c JOIN account_master a ON c.customer_number=a.customer_number

GROUP BY a.customer_number HAVING count(a.account_number)>1

ORDER BY c.firstname;
```

firstname
AMIT
AVINASH
RAHUL
RAMESH

19. Write a query to display the customer number, firstname, lastname for those client where total loan amount taken is maximum and at least taken from 2 branches. For example the customer C00012 took a loan of 100000 from bank branch with id B00009 and C00012 Took a loan of 500000 from bank branch with id B00010. So total loan amount for customer C00012 is 600000. C00013 took a loan of 100000 from bank branch B00009 and 200000 from bank branch B00011. So total loan taken is 300000. So loan taken by C00012 is more then C00013.

```
SELECT ld.customer_number, firstname, lastname
```

```
FROM customer_master cm JOIN loan_details ld

ON cm.customer_number=ld.customer_number

GROUP BY customer_number

HAVING count(branch_id)>=2 AND sum(loan_amount)>=

ALL(SELECT sum(loan_amount) FROM loan GROUP BY customer_number);
```

customer_number	firstname	lastname
C00002	AVINASH	MINHA

20. Write a query to display the customer's number, customer's firstname, branch id and loan amount for people who have taken loans. Display the records sorted in ascending order based on customer number and then by branch id and then by loan amount.

```
SELECT c.customer_number,c.firstname,l.branch_id,l.loan_amount FROM

Customer_master c JOIN loan_details l ON c.customer_number=l.customer_number

ORDER BY c.customer_number,l.branch_id,l.loan_amount;
```

customer_number	firstname	branch_id	loan_amount
C00001	RAMESH	B00001	100000
C00001	RAMESH	B00003	600000
C00002	AVINASH	B00001	600000
C00002	AVINASH	B00002	200000
C00009	ABHISHEK	B00008	400000
C00010	SHANKAR	B00009	500000

21. Write a query to display city name and count of branches in that city. Give the count of branches an alias name of Count_Branch. Display the records sorted in ascending order based on city name.

```
SELECT branch_city,count(branch_id) Count_Branch FROM

Branch_master GROUP BY branch_city

ORDER BY branch_city;
```

branch_city	Count_Branch
CHENNAI	1
DELHI	4
KOLKATA	1
MUMBAI	3

22. Write a query to display account id, customer's firstname, customer's lastname for the customer's whose account is Active. Display the records sorted in ascending order based on account id / account number.

SELECT a.account_number,c.firstname,c.lastname FROM

Customer_master c JOIN account_master a ON c.customer_number=a.customer_number and a.account_status='Active'

ORDER BY a.account_number;

account_number	firstname	lastname
A00001	RAMESH	SHARMA
A00002	AVINASH	MINHA
A00003	RAHUL	RASTOGI
A00004	AVINASH	MINHA
A00005	CHITRESH	BARWE
A00007	AMIT	BORKAR
A00010	PARUL	GANDHI

23. Write a query to display customer's number, first name and middle name. For the customers who don't have middle name, display their last name as middle name. Give the alias name as Middle_Name. Display the records sorted in ascending order based on customer number.

SELECT customer_number,firstname,ifnull(middlename,lastname) Middle_name FROM

Customer_master ORDER BY customer_number;

customer_number	firstname	Middle_name
C00001	RAMESH	CHANDRA
C00002	AVINASH	SUNDER
C00003	RAHUL	NULL
C00004	PARUL	NULL
C00005	NAVEEN	CHANDRA
C00006	CHITRESH	NULL
C00007	AMIT	KUMAR
C00008	NISHA	DAMLE
C00009	ABHISHEK	DUTTA
C00010	SHANKAR	NAIR

24. Write a query to display the customer number , firstname, customer's date of birth . Display the records sorted in ascending order of date of birth year and within that sort by firstname in ascending order.

SELECT customer_number,firstname,customer_date_of_birth FROM

Customer_master ORDER BY year(customer_date_of_birth),customer_number;

customer_number	firstname	customer_date_of_birth
C00009	ABHISHEK	1973-05-22
C00002	AVINASH	1974-10-16
C00008	NISHA	1975-12-03
C00001	RAMESH	1976-12-06
C00004	PARUL	1976-11-03
C00005	NAVEEN	1976-09-19
C00010	SHANKAR	1976-07-12
C00003	RAHUL	1981-09-26
C00007	AMIT	1981-09-06
C00006	CHITRESH	1992-11-06

25. Write a query to display the customers firstname, city and account number whose occupation are not into Business, Service or Student. Display the records sorted in ascending order based on customer first name and then by account number.

SELECT c.firstname,c.customer_city,a.account_number FROM

Customer_master c JOIN account_master a ON a.customer_number=c.customer_number

WHERE c.occupation NOT IN ('Service','Student','Business')

ORDER BY c.firstname,a.account_number;

firstname	customer_city	account_number
PARUL	DELHI	A00010

AIRLINES

create database flight;

use flight;

CREATE TABLEair_credit_card_details

(

```
profile_id VARCHAR(10)              NOT NULL,
card_number     BIGINT,
card_type VARCHAR(45),
expiration_month INT,
expiration_year INT
);

CREATE  TABLEair_passenger_profile
(
profile_id VARCHAR(10) NOT NULL ,
password VARCHAR(45) NULL ,
first_name VARCHAR(45) NULL ,
last_name VARCHAR(45) NULL ,
address VARCHAR(45) NULL ,
mobile_number BIGINT NULL ,
email_id VARCHAR(45) NULL
);

CREATE  TABLEair_ticket_info
(
ticket_id VARCHAR(45) NOT NULL ,
profile_id VARCHAR(10) NULL ,
flight_id VARCHAR(45) NULL ,
flight_departure_date DATE NULL ,
status VARCHAR(45) NULL
);

CREATE  TABLEair_flight_details
(
```

```
flight_id VARCHAR(45) NOT NULL ,
flight_departure_date DATE NULL ,
price DECIMAL(10,2) NULL ,
available_seats INT NULL
);

CREATE  TABLEair_flight
(
flight_id VARCHAR(45) NOT NULL ,
airline_id VARCHAR(45) NULL ,
airline_name VARCHAR(45) NULL ,
from_location VARCHAR(45) NULL ,
to_location VARCHAR(45) NULL ,
departure_time TIME NULL ,
arrival_time TIME NULL ,
duration TIME NULL ,
total_seats INT NULL
);


INSERT INTO air_credit_card_details VALUES
(1,     622098761234, 'debit',  5,      2013),
(2,     652362563625, 'credit', 1,      2013),
(1,     765432345678, 'credit', 2,      2013),
(3,     654378561234, 'debit',  6,      2013),
(4,     625417895623, 'debit',  2,      2013),
(5,     865478956325, 'debit',  3,      2013),
(6,     789563521457, 'credit', 4,      2013),
(2,     543267895432, 'credit', 8,      2013),
```

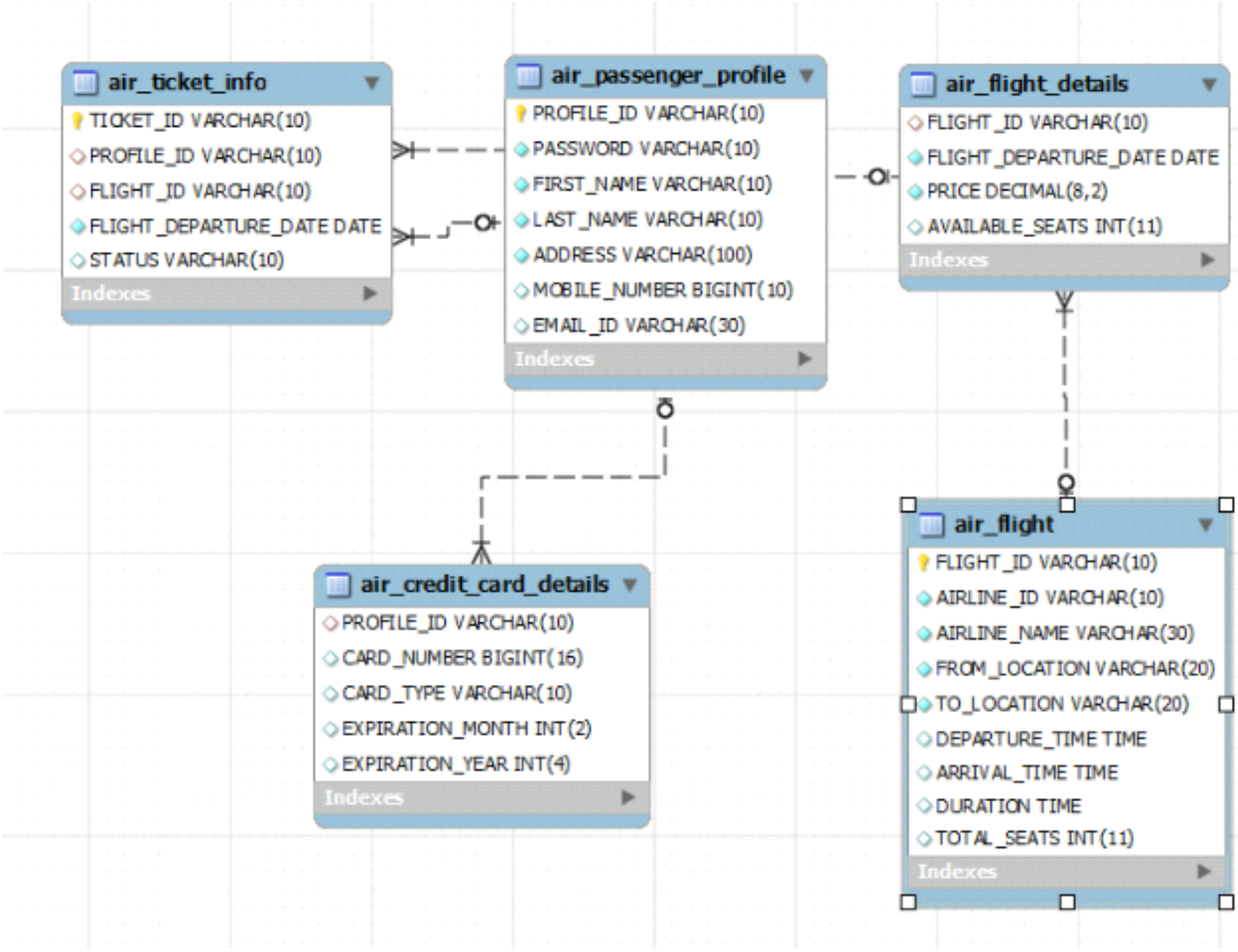
```
(1,    256369856321, 'debit', 1,    2013);
```

```
INSERT INTO air_flight VALUES
(3173, 'MH370', 'abc', 'hyderabad', 'chennai', '06:30:00', '07:15:00',
       '0:45:00', 100),
(3178, 'MH17', 'def', 'chennai', 'hyderabad', '08:00:00', '09:00:00',
       '1:00:00', 200),
(3172, 'AR342', 'fgh', 'kolkata', 'chennai', '11:30:00', '13:00:00',
       '1:30:00', 100),
(3071, 'JT564', 'jkl', 'chennai', 'delhi', '08:00:00', '10:00:00', '2:00:00', 100),
(3170, 'DT345', 'xyz', 'delhi', 'kolkata', '21:00:00', '22:30:00', '1:30:00',
       100),
(3175, 'MJ654', 'abc', 'chennai', 'hyderabad', '15:00:00', '16:00:00',
       '1:00:00', 200),
(3176, 'MH370', 'def', 'kochi', 'chennai', '18:00:00', '19:05:00', '1:05:00',
       100),
(3177, 'MH45', 'fgh', 'delhi', 'kochi', '19:00:00', '21:00:00', '2:00:00', 200),
(3174, 'MH321', 'xyz', 'kolkata', 'delhi', '0:00:00', '2:00:00', '2:00:00',
       100),
(3179, 'JT435', 'abc', 'chennai', 'kolkata', '14:00:00', '15:00:00', '1:00:00',
       100),
(3180, 'JT456', 'ijk', 'kolkata', 'kochi', '5:00:00', '5:45:00', '0:45:00', 200);
```

```
INSERT INTO air_flight_details VALUES
(3170, '2013-02-14', 1000, 10),
(3171, '2013-03-15', 5000, 0),
(3172, '2013-02-05', 3000, 32),
(3173, '2013-04-07', 2000, 12),
(3174, '2013-04-05', 3800, 3),
(3175, '2013-05-25', 3500, 10),
```

```
(3176,  '2013-03-14',   8000,   2),
(3177,  '2013-06-15',   1500,   0),
(3178,  '2013-05-06',   3000,   5),
(3179,  '2013-04-03',   4000,   15),
(3180,  '2013-04-02',   3000,   14);


INSERT INTO air_ticket_info VALUES
(1,     1,      3178,   '2013-05-06',   'delayed'),
(2,     5,      3179,   '2013-04-03',   'on time'),
(2,     4,      3180,   '2013-04-02',   'on time'),
(1,     2,      3177,   '2013-06-15',   'on time'),
(1,     3,      3176,   '2013-03-14',   'on time'),
(3,     1,      3171,   '2013-03-15',   'on time'),
(4,     4,      3172,   '2013-02-06',   'delayed'),
(5,     2,      3178,   '2013-06-05',   'on time'),
(4,     3,      3171,   '2013-03-15',   'on time'),
(5,     1,      3175,   '2013-05-25',   'on time'),
(6,     3,      3177,   '2013-06-15',   'on time');


INSERT INTO air_passenger_profile VALUES
(1,     'godbless',     'John',         'Stuart','Street 21, Near Bus Stop-Hyderabad-432126',
        9865263251,     'john@gmail.com'),
(2,     'heyyaa',       'Robert',       'Clive',  'Sector 3, Technopolis-Kolkata-700102',
        9733015875,     'robert@yahoo.com'),
(3,     'hello123',     'Raj',          'Sharma',       'House No. 3, Anna Nagar-Kochi-452314',
        9775470232,     'raj3452@hotmail.com'),
(4,     'yesboss',      'Sanjay',       'Mittal','21 Cauunaught Place-Delhi-144985',
        9856856321,     'sanjay@yahoo.com'),
```

(5, 'imhere', 'Tony', 'Stark', '51A, Greams Lane-Chennai-144587',
9832015785, 'tony@gmail.com');



AIR TICKET INFO

ticket_id	profile_id	flight_id	flight_departure_date	status
1	1	3178	2013-05-06	delayed
2	5	3179	2013-04-03	on time
2	4	3180	2013-04-02	on time
1	2	3177	2013-06-15	on time
1	3	3176	2013-03-14	on time
3	1	3171	2013-03-15	on time
4	4	3172	2013-02-06	delayed
5	2	3178	2013-06-05	on time
4	3	3171	2013-03-15	on time
5	1	3175	2013-05-25	on time
6	3	3177	2013-06-15	on time

AIR PASSENGER DETAILS

profile_id	password	first_name	last_name	address	mobile_number	email_id
1	godbless	John	Stuart	Street 21, Near Bus Stop-Hyderabad-432126	9865263251	john@gmail.com
2	heyyaa	Robert	Clive	Sector 3, Technopolis-Kolkata-700102	9733015875	robert@yahoo.com
3	hello123	Raj	Sharma	House No. 3, Anna Nagar-Kochi-452314	9775470232	raj3452@hotmail...
4	yesboss	Sanjay	Mittal	21 Cauunaught Place-Delhi-144985	9856856321	sanjay@yahoo.c...
5	imhere	Tony	Stark	51A, Greams Lane-Chennai-144587	9832015785	tony@gmail.com

AIR FLIGHT DETAILS

flight_id	flight_departure_date	price	available_seats
3170	2013-02-14	1000.00	10
3171	2013-03-15	5000.00	0
3172	2013-02-05	3000.00	32
3173	2013-04-07	2000.00	12
3174	2013-04-05	3800.00	3
3175	2013-05-25	3500.00	10
3176	2013-03-14	8000.00	2
3177	2013-06-15	1500.00	0
3178	2013-05-06	3000.00	5
3179	2013-04-03	4000.00	15
3180	2013-04-02	3000.00	14

AIR CREDIT CARD DETAILS

profile_id	card_number	card_type	expiration_month	expiration_year
1	622098761234	debit	5	2013
2	652362563625	credit	1	2013
1	765432345678	credit	2	2013
3	654378561234	debit	6	2013
4	625417895623	debit	2	2013
5	865478956325	debit	3	2013
6	789563521457	credit	4	2013
2	543267895432	credit	8	2013
1	256369856321	debit	1	2013

AIR FLIGHT

flight_id	airline_id	airline_name	from_location	to_location	departure_time	arrival_time	duration	total_seats
3170	DT345	xyz	delhi	kolkata	21:00:00	22:30:00	01:30:00	100
3171	JT564	jkl	chennai	delhi	08:00:00	10:00:00	02:00:00	100
3172	AR342	fgh	kolkata	chennai	11:30:00	13:00:00	01:30:00	100
3173	MH370	abc	hyderabad	chennai	06:30:00	07:15:00	00:45:00	100
3174	MH321	xyz	kolkata	delhi	00:00:00	02:00:00	02:00:00	100
3175	MJ654	abc	chennai	hyderabad	15:00:00	16:00:00	01:00:00	200
3176	MH370	def	kochi	chennai	18:00:00	19:05:00	01:05:00	100
3177	MH45	fgh	delhi	kochi	19:00:00	21:00:00	02:00:00	200
3178	MH17	def	chennai	hyderabad	08:00:00	09:00:00	01:00:00	200
3179	JT435	abc	chennai	kolkata	14:00:00	15:00:00	01:00:00	100
3180	JT456	ijk	kolkata	kochi	05:00:00	05:45:00	00:45:00	200

QUERIES

1. Write a query to display the average monthly ticket cost for each flight in ABC Airlines. The query should display the Flight_Id,From_location,To_Location,Month Name as "Month_Name" and average price as "Average_Price". Display the records sorted in ascending order based on flight id and then by Month Name.

SELECT f.flight_id,f.from_location,f.to_location,

monthname(af.flight_departure_date) Month_Name,

AVG(price) Average_Price FROM air_flight f JOIN air_flight_details af

```
ON f.flight_id = af.flight_id WHERE f.airline_name = 'abc'

GROUP BY f.flight_id,f.from_location,f.to_location,Month_Name

ORDER BY f.flight_id, Month_Name;
```

flight_id	from_location	to_location	Month_Name	Average_Price
3173	hyderabad	chennai	April	2000.000000
3175	chennai	hyderabad	May	3500.000000
3179	chennai	kolkata	April	4000.000000

2.Write a query to display the number of flight services between locations in a month. The Query should display From_Location, To_Location, Month as "Month_Name" and number of flight services as "No_of_Services." Hint: The Number of Services can be calculated from the number of scheduled departure dates of a flight. The records should be displayed in ascending order based on From_Location and then by To_Location and then by month name.

```
SELECT f.from_location,f.to_location,

monthname(af.flight_departure_date) Month_Name,

count(af.flight_departure_date) No_of_Services

FROM air_flight f JOIN air_flight_details af

ON f.flight_id = af.flight_id

GROUP BY f.from_location,f.to_location,Month_Name

ORDER BY f.from_location,f.to_Location,Month_Name;
```

from_location	to_location	Month_Name	No_of_Services
chennai	delhi	March	1
chennai	hyderabad	May	2
chennai	kolkata	April	1
delhi	kochi	June	1
delhi	kolkata	February	1
hyderabad	chennai	April	1
kochi	chennai	March	1
kolkata	chennai	February	1
kolkata	delhi	April	1
kolkata	kochi	April	1

3.Write a query to display the customer(s) who has/have booked least number of tickets in ABC Airlines. The Query should display profile_id, customer's first_name, Address and Number of tickets booked as "No_of_Tickets".Display the records sorted in ascending order based on customer's first name.

```
SELECT ap.profile_id,ap.first_name,ap.address,count(ati.ticket_id) No_of_Tickets FROM
air_passenger_profile ap JOIN air_ticket_info ati ON ap.profile_id=ati.profile_id
JOIN air_flight af ON af.flight_id=ati.flight_id and af.airline_name='abc'
GROUP BY ap.profile_id,ap.first_name,ap.address HAVING count(ati.ticket_id)<=ALL
(SELECT count(ticket_id)
FROM air_ticket_info GROUP BY profile_id)
ORDER BY ap.first_name;
```

profile_id	first_name	address	No_of_Tickets
1	John	Street 21, Near Bus Stop-Hyderabad-432126	1
5	Tony	51A, Greams Lane-Chennai-144587	1

4. Write a query to display the number of tickets booked from Chennai to Hyderabad. The Query should display passenger profile_id,first_name,last_name, Flight_Id , Departure_Date and number of tickets booked as "No_of_Tickets".Display the records sorted in ascending order based on profile id and then by flight id and then by departure date.

```
SELECT ap.profile_id,ap.first_name,ap.last_name,af.flight_id,ati.flight_departure_date,
count(ati.profile_id) No_of_Tickets FROM
air_ticket_info ati JOIN air_passenger_profile ap ON ap.profile_id=ati.profile_id
JOIN air_flight af ON af.flight_id=ati.flight_id
WHERE af.from_location='Chennai' and af.to_location='Hyderabad'
GROUP BY ati.flight_id,ati.profile_id
ORDER BY ap.profile_id,af.flight_id,ati.flight_departure_date;
```

profile_id	first_name	last_name	flight_id	flight_departure_date	No_of_Tickets
1	John	Stuart	3175	2013-05-25	1
1	John	Stuart	3178	2013-05-06	1
2	Robert	Clive	3178	2013-06-05	1

5. Write a query to display flight id,from location, to location and ticket price of flights whose departure is in the month of april.Display the records sorted in ascending order based on flight id and then by from location.

```
SELECT af.flight_id,af.from_location,af.to_location,afd.price FROM
air_flight af JOIN air_flight_details afd ON af.flight_id=afd.flight_id
and month(afd.flight_departure_date)='04'
ORDER BY af.flight_id,af.from_location;
```

flight_id	from_location	to_location	price
3173	hyderabad	chennai	2000.00
3174	kolkata	delhi	3800.00
3179	chennai	kolkata	4000.00
3180	kolkata	kochi	3000.00

6. Write a query to display the average cost of the tickets in each flight on all scheduled dates. The query should display flight_id, from_location, to_location and Average price as "Price". Display the records sorted in ascending order based on flight id and then by from_location and then by to_location.

```
SELECT af.flight_id,af.from_location,af.to_location,avg(afd.price) Average_Price FROM
air_flight af JOIN air_flight_details afd ON af.flight_id=afd.flight_id
GROUP BY af.flight_id
ORDER BY af.flight_id,af.from_location,af.to_location;
```

flight_id	from_location	to_location	Average_Price
3170	delhi	kolkata	1000.000000
3171	chennai	delhi	5000.000000
3172	kolkata	chennai	3000.000000
3173	hyderabad	chennai	2000.000000
3174	kolkata	delhi	3800.000000
3175	chennai	hyderabad	3500.000000
3176	kochi	chennai	8000.000000
3177	delhi	kochi	1500.000000
3178	chennai	hyderabad	3000.000000
3179	chennai	kolkata	4000.000000
3180	kolkata	kochi	3000.000000

7. Write a query to display the customers who have booked tickets from Chennai to Hyderabad. The query should display profile_id, customer_name (combine first_name & last_name with comma in b/w), address of the customer. Give an alias to the name as customer_name.Hint: Query should fetch unique customers irrespective of multiple tickets booked.Display the records sorted in ascending order based on profile id.

```
SELECT ap.profile_id,concat(ap.first_name,',',ap.last_name) customer_name,ap.address FROM

air_passenger_profile ap JOIN air_ticket_info ati ON ap.profile_id=ati.profile_id

JOIN air_flight af ON af.flight_id=ati.flight_id

WHERE af.from_location='Chennai' and af.to_location='Hyderabad'

GROUP BY ati.profile_id

ORDER BY ap.profile_id;
```

profile_id	Customer_name	address
1	John,Stuart	Street 21, Near Bus Stop-Hyderabad-432126
2	Robert,Clive	Sector 3, Technopolis-Kolkata-700102

8. Write a query to display profile id of the passenger(s) who has/have booked maximum number of tickets.In case of multiple records, display the records sorted in ascending order based on profile id.

```
SELECT profile_id FROM air_ticket_info

group by profile_id

having count(ticket_id)>=all(select count(ticket_id)

from air_ticket_info

group by profile_id) order by profile_id;
```

profile_id
1
3

9. Write a query to display the total number of tickets as "No_of_Tickets" booked in each flight in ABC Airlines. The Query should display the flight_id, from_location, to_location and the number of tickets. Display only the flights in which atleast 1 ticket is booked.Display the records sorted in ascending order based on flight id.

```
SELECT f.flight_id,f.from_location,f.to_location,COUNT(t.ticket_id) AS No_of_Tickets

FROM air_ticket_info t JOIN air_flight f
```

```
ON  f.flight_id = t.flight_id where AIRLINE_NAME = 'abc' GROUP by
f.flight_id,f.from_location,f.to_location
having count(t.ticket_id)>=1
ORDER by f.flight_id;
```

flight_id	from_location	to_location	No_of_Tickets
3175	chennai	hyderabad	1
3179	chennai	kolkata	1

10. Write a query to display the no of services offered by each flight and the total price of the services. The Query should display flight_id, number of services as "No_of_Services" and the cost as "Total_Price" in the same order. Order the result by Total Price in descending order and then by flight_id in descending order.Hint:The number of services can be calculated from the number of scheduled departure dates of the flight

```
SELECT flight_id,count(flight_departure_date) No_of_services,sum(price) Total_Price FROM
air_flight_details GROUP BY flight_id
ORDER BY Total_price DESC,flight_id DESC;
```

flight_id	No_of_services	Total_Price
3176	1	8000.00
3171	1	5000.00
3179	1	4000.00
3174	1	3800.00
3175	1	3500.00
3180	1	3000.00
3178	1	3000.00
3172	1	3000.00
3173	1	2000.00
3177	1	1500.00
3170	1	1000.00

11. Write a query to display the number of passengers who have travelled in each flight in each scheduled date. The Query should display flight_id, flight_departure_date and the number of passengers as "No_of_Passengers" in the same order.Display the records sorted in ascending order based on flight id and then by flight departure date.

```
SELECT flight_id,flight_departure_date,count(ticket_id) No_of_passengers FROM
air_ticket_info GROUP BY flight_id,flight_departure_date
ORDER BY flight_id,flight_departure_date;
```

flight_id	flight_departure_date	No_of_passengers
3171	2013-03-15	2
3172	2013-02-06	1
3175	2013-05-25	1
3176	2013-03-14	1
3177	2013-06-15	2
3178	2013-05-06	1
3178	2013-06-05	1
3179	2013-04-03	1
3180	2013-04-02	1

12. Write a query to display profile id of passenger(s) who booked minimum number of tickets. In case of multiple records, display the records sorted in ascending order based on profile id.

```
SELECT profile_id FROM air_ticket_info
GROUP BY profile_id HAVING count(ticket_id)<=ALL
(SELECT count(ticket_id) FROM air_ticket_info GROUP BY profile_id)
ORDER BY profile_id;
```

profile_id
5

13. Write a query to display unique passenger profile id, first name, mobile number and email address of passengers who booked ticket to travel from HYDERABAD to CHENNAI.Display the records sorted in ascending order based on profile id.

```
SELECT DISTINCT ap.profile_id,ap.first_name,ap.mobile_number,ap.email_id FROM
air_passenger_profile ap JOIN air_ticket_info ati ON ap.profile_id=ati.profile_id
JOIN air_flight af ON ati.flight_id=af.flight_id
WHERE af.from_location='Hyderabad' and af.to_location='Chennai'
ORDER BY profile_id;
```

profile_id	first_name	mobile_number	email_id

14. Write a query to intimate the passengers who are boarding Chennai to Hyderabad Flight on 6th May 2013 stating the delay of 1hr in the departure time. The Query should display the passenger's profile_id, first_name,last_name, flight_id, flight_departure_date, actual departure time , actual arrival time , delayed departure time as "Delayed_Departure_Time", delayed arrival time as "Delayed_Arrival_Time" Hint: Distinct Profile ID should be displayed irrespective of multiple tickets booked by the same profile.Display the records sorted in ascending order based on passenger's profile id.

```
SELECT DISTINCT ap.profile_id,ap.first_name,ap.last_name,ati.flight_id,ati.flight_departure_date,
af.departure_time,af.arrival_time,
addtime(af.departure_time,'01:00:00') Delayed_Deparuture_Time,
addtime(af.arrival_time,'01:00:00') Delayed_Arrival_Time FROM
air_passenger_profile ap JOIN air_ticket_info ati ON ap.profile_id=ati.profile_id
JOIN air_flight af ON af.flight_id=ati.flight_id
WHERE af.from_location='Chennai' and af.to_location='Hyderabad'
and ati.flight_departure_date='2013-05-06'
ORDER BY profile_id;
```

profile_id	first_name	last_name	flight_id	flight_departure_date	departure_time	arrival_time	Delayed_Deparuture_Time	Delayed_Arrival_Time
1	John	Stuart	3178	2013-05-06	08:00:00	09:00:00	09:00:00	10:00:00

15. Write a query to display the number of tickets as "No_of_Tickets" booked by Kochi Customers. The Query should display the Profile_Id, First_Name, Base_Location and number of tickets booked.Hint: Use String functions to get the base location of customer from their Address and give alias name as "Base_Location" Display the records sorted in ascending order based on customer first name.

```
SELECT ap.profile_id,ap.first_name,
substring_index(substring_index(ap.address,'-',2),'-',-1) Base_Location,
count(ati.ticket_id) No_of_Tickets FROM
air_passenger_profile ap JOIN air_ticket_info ati ON ati.profile_id=ap.profile_id
WHERE ap.address LIKE '%Kochi%'
ORDER BY ap.first_name;
```

profile_id	first_name	Base_Location	No_of_Tickets
3	Raj	Kochi	3

16. Write a query to display the flight_id, from_location, to_location, number of Services as " No_of_Services "offered in the month of May.

SELECT af.flight_id,af.from_location,af.to_location,count(afd.flight_departure_date) No_of_services FROM

air_flight af JOIN air_flight_details afd ON af.flight_id=afd.flight_id

WHERE month(flight_departure_date)='05'

GROUP BY af.flight_id,af.from_location,af.to_location

ORDER BY af.flight_id;

flight_id	from_location	to_location	No_of_services
3175	chennai	hyderabad	1
3178	chennai	hyderabad	1

17. Write a query to display profile id,last name,mobile number and email id of passengers whose base location is chennai.Display the records sorted in ascending order based on profile id.

SELECT profile_id, last_name, mobile_number, email_id

FROM air_passenger_profile

WHERE address LIKE '%Chennai%'

ORDER BY profile_id;

profile_id	last_name	mobile_number	email_id
5	Stark	9832015785	tony@gmail.com

18. Write a query to display number of flights between 6.00 AM and 6.00 PM from chennai. Hint Use FLIGHT_COUNT as alias name.

SELECT count(flight_id) FLIGHT_COUNT FROM air_flight

WHERE from_location='CHENNAI'

AND departure_time BETWEEN '06:00:00' AND '18:00:00';

FLIGHT_COUNT
4

19. Write a query to display unique profile id,first name , email id and contact number of passenger(s) who travelled on flight with id 3178. Display the records sorted in ascending order based on first name.

```
SELECT DISTINCT ap.profile_id,ap.first_name,ap.email_id,ap.mobile_number FROM
air_passenger_profile ap JOIN air_ticket_info ati ON ap.profile_id=ati.profile_id
WHERE ati.flight_id='3178'
ORDER BY ap.first_name;
```

profile_id	first_name	email_id	mobile_number
1	John	john@gmail.com	9865263251
2	Robert	robert@yahoo.com	9733015875

20. Write a query to display flight id,departure date,flight type of all flights. Flight type can be identified based on the following rules : if ticket price is less than 3000 then 'AIR PASSENGER',ticket price between 3000 and less than 4000 'AIR BUS' and ticket price between 4000 and greater than 4000 then 'EXECUTIVE PASSENGER'. Hint use FLIGHT_TYPE as alias name.Display the records sorted in ascendeing order based on flight_id and then by departure date.

```
SELECT flight_id,flight_departure_date,
case when price<3000 then 'AIR PASSENGER'
    when price>=3000 and price<4000 then 'AIR BUS'
    when price>=4000 then 'EXECUTIVE PASSENGER'
end FLIGHT_TYPE FROM air_flight_details
ORDER BY flight_id,flight_departure_date;
```

flight_id	flight_departure_date	FLIGHT_TYPE
3170	2013-02-14	AIR PASSENGER
3171	2013-03-15	EXECUTIVE PASSENGER
3172	2013-02-05	AIR BUS
3173	2013-04-07	AIR PASSENGER
3174	2013-04-05	AIR BUS
3175	2013-05-25	AIR BUS
3176	2013-03-14	EXECUTIVE PASSENGER
3177	2013-06-15	AIR PASSENGER
3178	2013-05-06	AIR BUS
3179	2013-04-03	EXECUTIVE PASSENGER
3180	2013-04-02	AIR BUS

21. Write a query to display the credit card type and no of credit cards used on the same type. Display the records sorted in ascending order based on credit card type.Hint: Use CARD_COUNT AS Alias name for no of cards.

```
SELECT card_type, count(card_type) Card_Count FROM air_credit_card_details
GROUP BY card_type ORDER BY card_type;
```

card_type	Card_Count
credit	4
debit	5

22.Write a Query to display serial no, first name, mobile number, email id of all the passengers who holds email address from gmail.com.The Serial No will be the last three digits of profile ID.Hint: Use SERIAL_NO as Alias name for serial number.Display the records sorted in ascending order based on name.

```
SELECT substring(profile_id,-3) SERIAL_NO,first_name,mobile_number,email_id FROM
air_passenger_profile
WHERE email_id LIKE '%@gmail.com'
ORDER BY first_name;
```

SERIAL_NO	first_name	mobile_number	email_id
	John	9865263251	john@gmail.com
	Tony	9832015785	tony@gmail.com

23. Write a query to display the flight(s) which has least number of services in the month of May. The Query should fetch flight_id, from_location, to_location, least number of Services as "No_of_Services" Hint: Number of services offered can be calculated from the number of scheduled departure dates of a flight if there are multiple flights, display them sorted in ascending order based on flight id.

```
SELECT afd.flight_id,af.from_location,af.to_location,count(afd.flight_id) No_of_Services
FROM air_flight_details afd JOIN air_flight af ON af.flight_id=afd.flight_id
WHERE monthname(afd.flight_departure_date)='May'
GROUP BY afd.flight_departure_date HAVING count(afd.flight_id) <=
ALL(SELECT count(flight_id) FROM air_flight_details
WHERE monthname(flight_departure_date)='May'
GROUP BY flight_departure_date)
ORDER BY flight_id;
```

flight_id	from_location	to_location	No_of_Services
3175	chennai	hyderabad	1
3178	chennai	hyderabad	1

24. Write a query to display the flights available in Morning, AfterNoon, Evening& Night. The Query should display the Flight_Id, From_Location, To_Location , Departure_Time, time of service as "Time_of_Service". Time of Service should be calculated as: From 05:00:01 Hrs to 12:00:00 Hrs - Morning, 12:00:01 to 18:00:00 Hrs -AfterNoon, 18:00:01 to 24:00:00 - Evening and 00:00:01 to 05:00:00 - NightDisplay the records sorted in ascending order based on flight id.

```
SELECT flight_id,from_location,to_location,Departure_Time,
CASE
WHEN departure_time BETWEEN ('05:00:01') AND ('12:00:00')
THEN 'Morning'
WHEN departure_time BETWEEN ('12:00:01') AND ('18:00:00')
THEN 'AfterNoon'
WHEN departure_time BETWEEN ('18:00:01') AND ('24:00:00')
THEN 'Evening'
WHEN departure_time='00:00:00'
THEN 'Evening'
WHEN departure_time BETWEEN ('00:00:01') AND ('05:00:00')
THEN 'Night'
END Time_of_Service
FROM air_flight
order by flight_id;
```

flight_id	from_location	to_location	Departure_Time	Time_of_Service
3170	delhi	kolkata	21:00:00	Evening
3171	chennai	delhi	08:00:00	Morning
3172	kolkata	chennai	11:30:00	Morning
3173	hyderabad	chennai	06:30:00	Morning
3174	kolkata	delhi	00:00:00	Evening
3175	chennai	hyderabad	15:00:00	AfterNoon
3176	kochi	chennai	18:00:00	AfterNoon
3177	delhi	kochi	19:00:00	Evening
3178	chennai	hyderabad	08:00:00	Morning
3179	chennai	kolkata	14:00:00	AfterNoon
3180	kolkata	kochi	05:00:00	Night

25. Write a query to display the number of flights flying from each location. The Query should display the from location and the number of flights to other locations as "No_of_Flights". Hint: Get the distinct from location and to location.Display the records sorted in ascending order based on from location.

```
SELECT from_location,count(flight_id) No_of_Flights FROM
air_flight GROUP BY from_location
ORDER BY from_location;
```

from_location	No_of_Flights
chennai	4
delhi	2
hyderabad	1
kochi	1
kolkata	3

26. Write a query to display the number of passengers traveled in each flight in each scheduled date. The Query should display flight_id,from_location,To_location, flight_departure_date and the number of passengers as "No_of_Passengers". Hint: The Number of passengers inclusive of all the tickets booked with single profile id.Display the records sorted in ascending order based on flight id and then by flight departure date.

```
SELECT af.flight_id,af.from_location,af.to_location,ati.flight_departure_date,
count(ati.ticket_id) No_of_Passengers FROM
air_flight af JOIN air_ticket_info ati ON af.flight_id=ati.flight_id
GROUP BY af.flight_id,af.from_location,af.to_location,ati.flight_departure_date
ORDER BY af.flight_id,ati.flight_departure_date;
```

flight_id	from_location	to_location	flight_departure_date	No_of_Passengers
3171	chennai	delhi	2013-03-15	2
3172	kolkata	chennai	2013-02-06	1
3175	chennai	hyderabad	2013-05-25	1
3176	kochi	chennai	2013-03-14	1
3177	delhi	kochi	2013-06-15	2
3178	chennai	hyderabad	2013-05-06	1
3178	chennai	hyderabad	2013-06-05	1
3179	chennai	kolkata	2013-04-03	1
3180	kolkata	kochi	2013-04-02	1

27. Write a query to display the flight details in which more than 10% of seats have been booked. The query should display Flight_Id, From_Location, To_Location,Total_Seats, seats booked as " No_of_Seats_Booked ".Display the records sorted in ascending order based on flight id and then by No_of_Seats_Booked.

```
SELECT af.flight_id,af.from_location,af.to_location,af.total_seats,
(af.total_seats-afd.available_seats) No_of_Seats_Booked FROM
air_flight_details afd JOIN air_flight af ON afd.flight_id=af.flight_id
WHERE (af.total_seats-afd.available_seats)>(af.total_seats*0.1)
ORDER BY flight_id,No_of_Seats_Booked;
```

flight_id	from_location	to_location	total_seats	No_of_Seats_Booked
3170	delhi	kolkata	100	90
3171	chennai	delhi	100	100
3172	kolkata	chennai	100	68
3173	hyderabad	chennai	100	88
3174	kolkata	delhi	100	97
3175	chennai	hyderabad	200	190
3176	kochi	chennai	100	98
3177	delhi	kochi	200	200
3178	chennai	hyderabad	200	195
3179	chennai	kolkata	100	85
3180	kolkata	kochi	200	186

28. Write a query to display the Flight_Id, Flight_Departure_Date, From_Location,To_Location and Duration of all flights which has duration of travel less than 1 Hour, 10 Minutes.

```
SELECT af.flight_Id,afd.flight_Departure_Date,af.From_Location,af.To_Location,af.duration
FROM air_flight af JOIN air_flight_details afd ON af.flight_id=afd.flight_id
```

WHERE af.duration<'01:10:00';

flight_Id	flight_Departure_Date	From_Location	To_Location	duration
3173	2013-04-07	hyderabad	chennai	00:45:00
3175	2013-05-25	chennai	hyderabad	01:00:00
3176	2013-03-14	kochi	chennai	01:05:00
3178	2013-05-06	chennai	hyderabad	01:00:00
3179	2013-04-03	chennai	kolkata	01:00:00
3180	2013-04-02	kolkata	kochi	00:45:00

29. Write a query to display the flight_id, from_location,to_location,number of services as " No_of_Services ", average ticket price as "Average_Price "whose average ticket price is greater than the total average ticket cost of all flights. Order the result by lowest average price.

SELECT afd.flight_id,af.from_location,af.to_location,

count(afd.flight_departure_date) No_of_Service, avg(price) Average_Price

FROM air_flight af JOIN air_flight_details afd ON af.flight_id=afd.flight_id

GROUP BY af.flight_id,af.from_location,af.to_location

HAVING avg(price)>(SELECT avg(price) FROM air_flight_details)

ORDER BY average_price;

flight_id	from_location	to_location	No_of_Service	Average_Price
3175	chennai	hyderabad	1	3500.000000
3174	kolkata	delhi	1	3800.000000
3179	chennai	kolkata	1	4000.000000
3171	chennai	delhi	1	5000.000000
3176	kochi	chennai	1	8000.000000

MOVIE

CREATE DATABASE video;USE video;

Create table CUSTOMER_MASTER

(CUSTOMER_ID Varchar(10),CUSTOMER_NAME Varchar(30) NOT NULL,CONTACT_NO BIGINT(10) ,CONTACT_ADD Varchar(20),DATE_OF_REGISTRATION Date NOT NULL,AGE Varchar(15)NOT NULL,Constraint MT_cts1 PRIMARY KEY(CUSTOMER_ID));

Create table LIBRARY_CARD_MASTER

(CARD_ID Varchar(10),DESCRIPTION Varchar(30) NOT NULL,AMOUNT BIGINT(50),NUMBER_OF_YEARS bigint(10) NOT NULL,Constraint MT_cts2 PRIMARY KEY(CARD_ID));

Create table MOVIES_MASTER

(MOVIE_ID Varchar(10), MOVIE_NAME Varchar(50) NOT NULL,RELEASE_DATE Varchar(30) NOT NULL,LANGUAGE Varchar(30),RATING int(2),DURATION VARCHAR(10) NOT NULL, MOVIE_TYPE Varchar(3),MOVIE_CATEGORY VARCHAR(20) NOT NULL,DIRECTOR VARCHAR(20) NOT NULL,

LEAD_ROLE_1 Varchar(3) NOT NULL,LEAD_ROLE_2 VARCHAR(4) NOT NULL,RENT_COST BIGINT(10),Constraint MT_cts4 PRIMARY KEY(MOVIE_ID));

Create table CUSTOMER_CARD_DETAILS

(CUSTOMER_ID Varchar(10),CARD_ID VARCHAR(10),ISSUE_DATE DATE NOT NULL,Constraint MT_cts3 PRIMARY KEY(CUSTOMER_ID),Constraint MT_CTS41 FOREIGN KEY(CUSTOMER_ID) References CUSTOMER_MASTER(CUSTOMER_ID),Constraint MT_CTS42 FOREIGN KEY(CARD_ID) References LIBRARY_CARD_MASTER(CARD_ID));

Create table CUSTOMER_ISSUE_DETAILS

(ISSUE_ID Varchar(10) NOT NULL,CUSTOMER_ID Varchar(10) NOT NULL,MOVIE_ID VARCHAR(10) , ISSUE_DATE Date NOT NULL,RETURN_DATE Date NOT NULL,

ACTUAL_DATE_RETURN Date NOT NULL,Constraint MT_cts5 PRIMARY KEY(ISSUE_ID),Constraint MT_Mem FOREIGN KEY(CUSTOMER_ID) References CUSTOMER_MASTER(CUSTOMER_ID), Constraint MT_Mem1 FOREIGN KEY(MOVIE_ID) References MOVIES_MASTER(MOVIE_ID));

```
Insert into CUSTOMER_MASTER Values('CUS001', 'AMIT', 9876543210,'ADD1', '2012-02-12', '21')
;

Insert into CUSTOMER_MASTER Values('CUS002', 'ABDHUL', 8765432109,'ADD2', '2012-02-12',
'21');

Insert into CUSTOMER_MASTER Values('CUS003', 'GAYAN', 7654321098,'ADD3', '2012-02-12',
'21');

Insert into CUSTOMER_MASTER Values('CUS004', 'RADHA', 6543210987,'ADD4', '2012-02-12',
'21');

Insert into CUSTOMER_MASTER Values('CUS005', 'GURU', NULL,'ADD5', '2012-02-12', '21');

Insert into CUSTOMER_MASTER Values('CUS006', 'MOHAN', 4321098765,'ADD6', '2012-02-12',
'21');

Insert into CUSTOMER_MASTER Values('CUS007', 'NAME7', 3210987654,'ADD7', '2012-02-12',
'21');

Insert into CUSTOMER_MASTER Values('CUS008', 'NAME8', 2109876543,'ADD8', '2013-02-12',
'21');

Insert into CUSTOMER_MASTER Values('CUS009', 'NAME9', NULL,'ADD9', '2013-02-12', '21');

Insert into CUSTOMER_MASTER Values('CUS010', 'NAM10', 9934567890,'ADD10', '2013-02-12', '
21');

Insert into CUSTOMER_MASTER Values('CUS011', 'NAM11', 9875678910,'ADD11', '2013-02-12', '
21');


Insert into LIBRARY_CARD_MASTER Values('CR001', 'Silver', 200, 5);

Insert into LIBRARY_CARD_MASTER Values('CR002', 'Gold', 400, 9);

Insert into LIBRARY_CARD_MASTER Values('CR003', 'Platinum', 600, 8);

Insert into LIBRARY_CARD_MASTER Values('CR004', 'VISA', 800, 7);

Insert into LIBRARY_CARD_MASTER Values('CR005', 'CREDIT', 1200, 6);


Insert into MOVIES_MASTER Values('MV001', 'DIEHARD', '2012-05-13','ENGLISH', 4 , '2HRS',
'U/A','ACTION','DIR1','L1','L2',100);

Insert into MOVIES_MASTER Values('MV002', 'THE MATRIX', '2012-05-13','ENGLISH', 4 , '2HRS',
'A','ACTION','DIR2','L1','L2',100);
```

```
Insert into MOVIES_MASTER Values('MV003', 'INCEPTION', '2012-05-13','ENGLISH', 4 , '2HRS',
'U/A','ACTION','DIR3','L15','L2',100);

Insert into MOVIES_MASTER Values('MV004', 'DARK KNIGHT', '2012-05-13','ENGLISH', 4 , '2HRS',
'A','ACTION','DIR4','L15','L2',100);

Insert into MOVIES_MASTER Values('MV005', 'OFFICE S', '2012-05-13','ENGLISH', 4 , '2HRS',
'U/A','COMEDY','DIR5','L12','L24',100);

Insert into MOVIES_MASTER Values('MV006', 'SHAWN OF DEAD', '2012-05-13','ENGLISH', 4 ,
'2HRS', 'U/A','COMEDY','DIR6','L1','L25',100);

Insert into MOVIES_MASTER Values('MV007', 'YOUNG FRANKEN', '2012-05-13','ENGLISH', 4 ,
'2HRS', 'U/A','COMEDY','DIR7','L1','L2',100);

Insert into MOVIES_MASTER Values('MV008', 'CAS', '2012-05-13','ENGLISH', 4 , '2HRS',
'A','ROMANCE','DIR8','L1','L2',100);

Insert into MOVIES_MASTER Values('MV009', 'GWW', '2012-05-13','ENGLISH', 4 , '2HRS',
'A','ROMANCE','DIR9','L1','L2',100);

Insert into MOVIES_MASTER Values('MV010', 'TITANIC', '2012-05-13','ENGLISH', 4 , '2HRS',
'A','ROMANCE','DIR10','L1','L2',100);

Insert into MOVIES_MASTER Values('MV011', 'THE NOTE BOOK', '2012-05-13','ENGLISH', 4 ,
'2HRS', 'A','ROMANCE','DIR11','L1','L2',100);


Insert into CUSTOMER_CARD_DETAILS Values('CUS001', 'CR001', '2012-05-13');

Insert into CUSTOMER_CARD_DETAILS Values('CUS002', 'CR002', '2012-05-13');

Insert into CUSTOMER_CARD_DETAILS Values('CUS003', 'CR002', '2013-05-13');

Insert into CUSTOMER_CARD_DETAILS Values('CUS004', 'CR003', '2013-05-13');

Insert into CUSTOMER_CARD_DETAILS Values('CUS005', 'CR003', '2012-05-13');


Insert into CUSTOMER_ISSUE_DETAILS Values ('IS001', 'CUS001', 'MV001', '2012-05-13', '2012-
05-13','2012-05-13');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS002', 'CUS001', 'MV001', '2012-05-01', '2012-
05-16','2012-05-16');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS003', 'CUS002', 'MV004', '2012-05-02', '2012-
05-06','2012-05-16');
```

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS004', 'CUS002', 'MV004', '2012-04-03', '2012-04-16','2012-04-20');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS005', 'CUS002', 'MV009', '2012-04-04', '2012-04-16','2012-04-20');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS006', 'CUS003', 'MV002', '2012-03-30', '2012-04-15','2012-04-20');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS007', 'CUS003', 'MV003', '2012-04-20', '2012-05-05','2012-05-05');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS008', 'CUS003', 'MV005', '2012-04-21', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS009', 'CUS003', 'MV001', '2012-04-22', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS010', 'CUS003', 'MV009', '2012-04-22', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS011', 'CUS003', 'MV010', '2012-04-23', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS012', 'CUS003', 'MV010', '2012-04-24', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS013', 'CUS003', 'MV008', '2012-04-25', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS014', 'CUS004', 'MV007', '2012-04-26', '2012-05-07','2012-05-25');

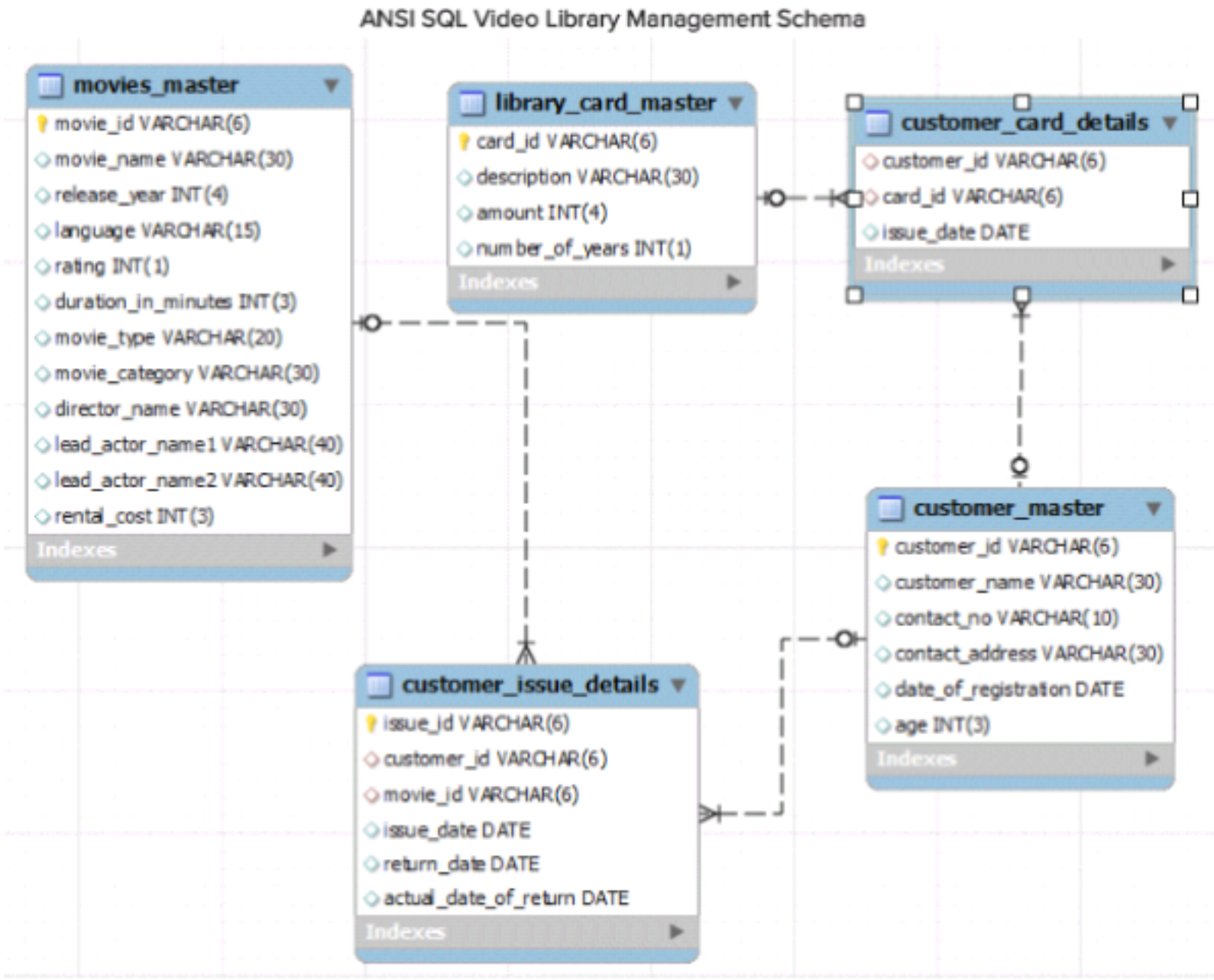
Insert into CUSTOMER_ISSUE_DETAILS Values ('IS015', 'CUS004', 'MV006', '2012-04-27', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS016', 'CUS004', 'MV006', '2012-04-28', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS017', 'CUS004', 'MV001', '2012-04-29', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS018', 'CUS010', 'MV008', '2012-04-24', '2012-05-07','2012-05-25');

Insert into CUSTOMER_ISSUE_DETAILS Values ('IS019', 'CUS011', 'MV009', '2012-04-27', '2012-05-07','2012-05-25');



MOVIE MASTER

MOVIE_ID	MOVIE_NAME	RELEASE_DATE	LANGUAGE	RATING	DURATION	MOVIE_TYPE	MOVIE_CATEGORY	DIRECTOR	LEAD_ROLE_1
MV001	DIEHARD	2012-05-13	ENGLISH	4	2HRS	U/A	ACTION	DIR1	L1
MV002	THE MATRIX	2012-05-13	ENGLISH	4	2HRS	A	ACTION	DIR2	L1
MV003	INCEPTION	2012-05-13	ENGLISH	4	2HRS	U/A	ACTION	DIR3	L15
MV004	DARK KNIGHT	2012-05-13	ENGLISH	4	2HRS	A	ACTION	DIR4	L15
MV005	OFFICE S	2012-05-13	ENGLISH	4	2HRS	U/A	COMEDY	DIR5	L12
MV006	SHAWN OF DEAD	2012-05-13	ENGLISH	4	2HRS	U/A	COMEDY	DIR6	L1
MV007	YOUNG FRANKEN	2012-05-13	ENGLISH	4	2HRS	U/A	COMEDY	DIR7	L1
MV008	CAS	2012-05-13	ENGLISH	4	2HRS	A	ROMANCE	DIR8	L1
MV009	GWW	2012-05-13	ENGLISH	4	2HRS	A	ROMANCE	DIR9	L1
MV010	TITANIC	2012-05-13	ENGLISH	4	2HRS	A	ROMANCE	DIR10	L1
MV011	THE NOTE BOOK	2012-05-13	ENGLISH	4	2HRS	A	ROMANCE	DIR11	L1
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

LEAD_ROLE_2	RENT_COST
L2	100
L2	100
L2	100
L2	100
L24	100
L25	100
L2	100
L2	100
L2	100
L2	100
L2	100
NULL	NULL

CUSTOMER MASTER

CUSTOMER_ID	CUSTOMER_NAME	CONTACT_NO	CONTACT_ADD	DATE_OF_REGISTRATION	AGE
CUS001	AMIT	9876543210	ADD1	2012-02-12	21
CUS002	ABDHUL	8765432109	ADD2	2012-02-12	21
CUS003	GAYAN	7654321098	ADD3	2012-02-12	21
CUS004	RADHA	6543210987	ADD4	2012-02-12	21
CUS005	GURU	NULL	ADD5	2012-02-12	21
CUS006	MOHAN	4321098765	ADD6	2012-02-12	21
CUS007	NAME7	3210987654	ADD7	2012-02-12	21
CUS008	NAME8	2109876543	ADD8	2013-02-12	21
CUS009	NAME9	NULL	ADD9	2013-02-12	21
CUS010	NAM10	9934567890	ADD10	2013-02-12	21
CUS011	NAM11	9875678910	ADD11	2013-02-12	21
NULL	NULL	NULL	NULL	NULL	NULL

LIBRARY CARD MASTER

CARD_ID	DESCRIPTION	AMOUNT	NUMBER_OF_YEARS
CR001	Silver	200	5
CR002	Gold	400	9
CR003	Platinum	600	8
CR004	VISA	800	7
CR005	CREDIT	1200	6
NULL	NULL	NULL	NULL

CUSTOMER CARD DETAILS

CUSTOMER_ID	CARD_ID	ISSUE_DATE
CUS001	CR001	2012-05-13
CUS002	CR002	2012-05-13
CUS003	CR002	2013-05-13
CUS004	CR003	2013-05-13
CUS005	CR003	2012-05-13
NULL	NULL	NULL

CUSTOMER ISSUE DETAILS

ISSUE_ID	CUSTOMER_ID	MOVIE_ID	ISSUE_DATE	RETURN_DATE	ACTUAL_DATE_RETURN
IS001	CUS001	MV001	2012-05-13	2012-05-13	2012-05-13
IS002	CUS001	MV001	2012-05-01	2012-05-16	2012-05-16
IS003	CUS002	MV004	2012-05-02	2012-05-06	2012-05-16
IS004	CUS002	MV004	2012-04-03	2012-04-16	2012-04-20
IS005	CUS002	MV009	2012-04-04	2012-04-16	2012-04-20
IS006	CUS003	MV002	2012-03-30	2012-04-15	2012-04-20
IS007	CUS003	MV003	2012-04-20	2012-05-05	2012-05-05
IS008	CUS003	MV005	2012-04-21	2012-05-07	2012-05-25
IS009	CUS003	MV001	2012-04-22	2012-05-07	2012-05-25
IS010	CUS003	MV009	2012-04-22	2012-05-07	2012-05-25
IS011	CUS003	MV010	2012-04-23	2012-05-07	2012-05-25
IS012	CUS003	MV010	2012-04-24	2012-05-07	2012-05-25
IS013	CUS003	MV008	2012-04-25	2012-05-07	2012-05-25
IS014	CUS004	MV007	2012-04-26	2012-05-07	2012-05-25
IS015	CUS004	MV006	2012-04-27	2012-05-07	2012-05-25
IS016	CUS004	MV006	2012-04-28	2012-05-07	2012-05-25
IS017	CUS004	MV001	2012-04-29	2012-05-07	2012-05-25
IS018	CUS010	MV008	2012-04-24	2012-05-07	2012-05-25
IS019	CUS011	MV009	2012-04-27	2012-05-07	2012-05-25
NULL	NULL	NULL	NULL	NULL	NULL

1.Write a query to display movie names and number of times that movie is issued to customers. Incase movies are never issued to customers display number of times as 0. Display the details in sorted order based on number of times (in descending order) and then by movie name (in ascending order). The Alias name for the number of movies issued is ISSUE_COUNT.

```
SELECT m.MOVIE_NAME,count(ISSUE_ID) ISSUE_COUNT FROM

movies_master m LEFT JOIN customer_issue_details c ON m.MOVIE_ID=c.MOVIE_ID

GROUP BY m.movie_name
```

ORDER BY ISSUE_COUNT DESC,MOVIE_NAME;

MOVIE_NAME	ISSUE_COUNT
DIEHARD	4
GWW	3
CAS	2
DARK KNIGHT	2
SHAWN OF DEAD	2
TITANIC	2
INCEPTION	1
OFFICE S	1
THE MATRIX	1
YOUNG FRANKEN	1
THE NOTE BOOK	0

2.Write a query to display id,name,age,contact no of customers whose age is greater than 25 and and who have registered in the year 2012. Display contact no in the below format +91-XXX-XXX-XXXX example +91-987-678-3434 and use the alias name as "CONTACT_ISD". If the contact no is null then display as 'N/A' Sort all the records in ascending order based on age and then by name.

```
SELECT CUSTOMER_ID,CUSTOMER_NAME,AGE,ifnull(
concat('+91-',substring(contact_no,1,3),'-',
substring(contact_no,4,3),'-',substring(contact_no,7)),'N/A') CONTACT_ISD
FROM customer_master WHERE age>25 and year(date_of_registration)='2012'
ORDER BY age,CUSTOMER_NAME;
```

CUSTOMER_ID	CUSTOMER_NAME	AGE	CONTACT_ISD

3.Write a query to display the movie category and number of movies in that category. Display records based on number of movies from higher to lower order and then by movie category in ascending order.Hint: Use NO_OF_MOVIES as alias name for number of movies.

```
SELECT MOVIE_CATEGORY,count(MOVIE_ID) NO_OF_MOVIES FROM
movies_master GROUP BY MOVIE_CATEGORY
ORDER BY NO_OF_MOVIES DESC,MOVIE_CATEGORY;
```

MOVIE_CATEGORY	NO_OF_MOVIES
ACTION	4
ROMANCE	4
COMEDY	3

4.Write a query to display the number of customers having card with description “Gold card”.

Hint: Use CUSTOMER_COUNT as alias name for number of customers

SELECT count(c.customer_id) CUSTOMER_COUNT FROM

library_card_master l JOIN customer_card_details c ON l.CARD_ID=c.CARD_ID

WHERE description='Gold';

CUSTOMER_COUNT
2

5.Write a query to display the customer id, customer name, year of registration,library card id, card issue date of all the customers who hold library card. Display the records sorted by customer name in descending order. Use REGISTERED_YEAR as alias name for year of registration.

SELECT c.customer_id,c.customer_name,

year(c.DATE_OF_REGISTRATION) REGISTERED_YEAR,cd.card_id,cd.issue_date FROM

customer_master c JOIN customer_card_details cd ON c.customer_id=cd.customer_id

ORDER BY CUSTOMER_NAME DESC;

customer_id	customer_name	REGISTERED_YEAR	card_id	issue_date
CUS004	RADHA	2012	CR003	2013-05-13
CUS005	GURU	2012	CR003	2012-05-13
CUS003	GAYAN	2012	CR002	2013-05-13
CUS001	AMIT	2012	CR001	2012-05-13
CUS002	ABDHUL	2012	CR002	2012-05-13

6.Write a query to display issue id, customer id, customer name for the customers who have paid fine and whose name starts with 'R'. Fine is calculated based on return date and actual date of return. If the date of actual return is after date of return then fine need to be paid by the customer order by customer name.

SELECT ci.issue_id,ci.CUSTOMER_ID,c.CUSTOMER_NAME FROM

customer_master c JOIN customer_issue_details ci ON c.customer_id=ci.customer_id

```
WHERE customer_name LIKE 'R%' and ci.actual_date_return>ci.return_date

ORDER BY customer_name;
```

issue_id	CUSTOMER_ID	CUSTOMER_NAME
IS014	CUS004	RADHA
IS015	CUS004	RADHA
IS016	CUS004	RADHA
IS017	CUS004	RADHA

7. Write a query to display customer id, customer name, card id, card description and card amount in dollars of customers who have taken movie on the same day the library card is registered. For Example Assume John registered a library card on 12th Jan 2013 and he took a movie on 12th Jan 2013 then display his details. AMOUNT_DOLLAR = amount/52.42 and round it to zero decimal places and display as $Amount. Example Assume 500 is the amount then dollar value will be $10. Hint: Use AMOUNT_DOLLAR as alias name for amount in dollar. Display the records in ascending order based on customer name.

```
SELECT c.CUSTOMER_ID,c.CUSTOMER_NAME,l.card_id,l.DESCRIPTION,

concat('$',round(amount/52.42)) AMOUNT_DOLLAR FROM

customer_master c JOIN customer_issue_details ci ON c.customer_id=ci.customer_id

JOIN customer_card_details cc ON cc.customer_id=c.customer_id

JOIN library_card_master l ON cc.card_id=l.card_id

WHERE c.DATE_OF_REGISTRATION=ci.issue_date

ORDER BY customer_name;
```

CUSTOMER_ID	CUSTOMER_NAME	card_id	DESCRIPTION	AMOUNT_DOLLAR

8.Write a query to display the customer id, customer name,contact number and address of customers who have taken movies from library without library card and whose address ends with 'Nagar'. Display customer name in upper case. Hint: Use CUSTOMER_NAME as alias name for customer name. Display the details sorted in ascending order based on customer name.

```
SELECT CUSTOMER_ID,upper(CUSTOMER_NAME) CUSTOMER_NAME,contact_no,contact_add
FROM

customer_master WHERE contact_add LIKE '%Nagar' and

customer_id NOT IN (SELECT customer_id FROM customer_card_details)
```

and customer_id IN (SELECT customer_id FROM customer_issue_details)

ORDER BY CUSTOMER_NAME;

CUSTOMER_ID	CUSTOMER_NAME	contact_no	contact_add

9.Write a query to display the movie id, movie name,release year,director name of movies acted by the leadactor1 who acted maximum number of movies .Display the records sorted in ascending order based on movie name.

SELECT movie_id,movie_name,release_date,director FROM movies_master

WHERE lead_role_1 IN(SELECT lead_role_1 FROM

(SELECT lead_role_1,count(movie_id)ct FROM movies_master

GROUP BY lead_role_1)t WHERE t.ct>=ALL(SELECT count(movie_id)

FROM movies_master GROUP BY lead_role_1)) ORDER BY movie_name;

movie_id	movie_name	release_date	director
MV008	CAS	2012-05-13	DIR8
MV001	DIEHARD	2012-05-13	DIR1
MV009	GWW	2012-05-13	DIR9
MV006	SHAWN OF DEAD	2012-05-13	DIR6
MV002	THE MATRIX	2012-05-13	DIR2
MV011	THE NOTE BOOK	2012-05-13	DIR11
MV010	TITANIC	2012-05-13	DIR10
MV007	YOUNG FRANK...	2012-05-13	DIR7

10.Write a query to display the customer name and number of movies issued to that customer sorted by customer name in ascending order. If a customer has not been issued with any movie then display 0.
Hint: Use MOVIE_COUNT as alias name for number of movies issued.

SELECT c.customer_name,count(ci.movie_id) MOVIE_COUNT FROM

customer_master c LEFT JOIN customer_issue_details ci ON c.customer_id=ci.customer_id

GROUP BY c.customer_id ORDER BY c.customer_name;

customer_name	MOVIE_COUNT
ABDHUL	3
AMIT	2
GAYAN	8
GURU	0
MOHAN	0
NAM10	1
NAM11	1
NAME7	0
NAME8	0
NAME9	0
RADHA	4

11.Write a query to display serial number,issue id, customer id, customer name, movie id and movie name of all the videos that are issued and display in ascending order based on serial number.Serial number can be generated from the issue id , that is last two characters of issue id is the serial number. For Example Assume the issue id is I00005 then the serial number is 05

Hint: Alias name for serial number is 'SERIAL_NO'

```
SELECT substring(ci.issue_id,-2) SERIAL_NO,ci.issue_id,c.customer_id,c.customer_name,
m.movie_id,m.movie_name FROM customer_master c JOIN customer_issue_details ci
ON c.customer_id=ci.customer_id JOIN movies_master m ON m.movie_id=ci.movie_id
ORDER BY SERIAL_NO;
```

SERIAL_NO	issue_id	customer_id	customer_name	movie_id	movie_name
01	IS001	CUS001	AMIT	MV001	DIEHARD
02	IS002	CUS001	AMIT	MV001	DIEHARD
03	IS003	CUS002	ABDHUL	MV004	DARK KNIGHT
04	IS004	CUS002	ABDHUL	MV004	DARK KNIGHT
05	IS005	CUS002	ABDHUL	MV009	GWW
06	IS006	CUS003	GAYAN	MV002	THE MATRIX
07	IS007	CUS003	GAYAN	MV003	INCEPTION
08	IS008	CUS003	GAYAN	MV005	OFFICE S
09	IS009	CUS003	GAYAN	MV001	DIEHARD
10	IS010	CUS003	GAYAN	MV009	GWW
11	IS011	CUS003	GAYAN	MV010	TITANIC
12	IS012	CUS003	GAYAN	MV010	TITANIC
13	IS013	CUS003	GAYAN	MV008	CAS
14	IS014	CUS004	RADHA	MV007	YOUNG FRAN...
15	IS015	CUS004	RADHA	MV006	SHAWN OF D...
16	IS016	CUS004	RADHA	MV006	SHAWN OF D...
17	IS017	CUS004	RADHA	MV001	DIEHARD
18	IS018	CUS010	NAM10	MV008	CAS
19	IS019	CUS011	NAM11	MV009	GWW

12.Write a query to display the issue id,issue date, customer id, customer name and contact number for videos that are issued in the year 2013.Display the records in decending order based on issue date of the video.

```
SELECT ci.issue_id,ci.issue_date,c.customer_id,c.customer_name,c.contact_no FROM

customer_master c JOIN customer_issue_details ci ON c.customer_id=ci.customer_id

and year(ci.issue_date)='2013' ORDER BY ci.issue_date DESC;
```

issue_id	issue_date	customer_id	customer_name	contact_no

13.Write a query to display movie id ,movie name and actor names of movies which are not issued to any customers.
 Actors Name to be displayed in the below format.LEAD_ACTOR_ONE space ambersant space LEAD_ACTOR_TWO.Example: Assume lead

actor one's name is "Jack Tomson" and Lead actor two's name is "Maria" then Actors name will be "Jack Tomsom & Maria"Hint:Use ACTORS as alias name for actors name.
 Display the records in ascending order based on movie name.

SELECT movie_id,movie_name,concat(lead_role_1,' & ',lead_role_2) ACTOR FROM movies_master

WHERE movie_id NOT IN (SELECT movie_id FROM customer_issue_details) ORDER BY movie_name;

movie_id	movie_name	ACTOR
MV011	THE NOTE BOOK	L1 & L2

14.Write a query to display the director's name, movie name and lead_actor_name1 of all the movies directed by the director who directed more than one movie. Display the directors name in capital letters. Use DIRECTOR_NAME as alias name for director name column Display the records sorted in ascending order based on director_name and then by movie_name in descending order.

SELECT upper(director) DIRECTOR_NAME,movie_name,lead_role_1 FROM movies_master GROUP BY director HAVING count(movie_id)>1 ORDER BY director,movie_name DESC;

DIRECTOR_NAME	movie_name	lead_role_1

15.Write a query to display number of customers who have registered in the library in the year 2012 and who have given/provided contact number.
 Hint:Use NO_OF_CUSTOMERS as alias name for number of customers.

SELECT count(customer_id) NO_OF_CUSTOMER FROM customer_master

WHERE contact_no is not null and year(date_of_registration)='2012';

NO_OF_CUSTOMER
6

16.Write a query to display the customer's name, contact number,library card id and library card description of all the customers irrespective of customers holding a library card. If customer contact number is not available then display his address. Display the records sorted in ascending order based on customer name. Hint: Use CONTACT_DETAILS as alias name for customer contact.

```
SELECT c.customer_name,ifnull(c.contact_no,c.contact_add)
CONTACT_DETAILS,l.card_id,l.description FROM

customer_master c LEFT JOIN customer_card_details cc ON c.customer_id=cc.customer_id

LEFT JOIN library_card_master l ON l.card_id=cc.card_id

ORDER BY customer_name;
```

customer_name	CONTACT_DETAILS	card_id	description
ABDHUL	8765432109	CR002	Gold
AMIT	9876543210	CR001	Silver
GAYAN	7654321098	CR002	Gold
GURU	ADD5	CR003	Platinum
MOHAN	4321098765	NULL	NULL
NAM10	9934567890	NULL	NULL
NAM11	9875678910	NULL	NULL
NAME7	3210987654	NULL	NULL
NAME8	2109876543	NULL	NULL
NAME9	ADD9	NULL	NULL
RADHA	6543210987	CR003	Platinum

17. Write a query to display the customer id, customer name and number of times the same movie is issued to the same customers who have taken same movie more than once. Display the records sorted by customer name in decending order For Example: Assume customer John has taken Titanic three times and customer Ram has taken Die hard only once then display the details of john. Hint: Use NO_OF_TIMES as alias name for number of times

```
SELECT ci.customer_id,c.customer_name,count(ci.movie_id) NO_OF_TIMES FROM

customer_issue_details ci JOIN customer_master c ON c.customer_id=ci.customer_id

GROUP BY ci.customer_id,ci.movie_id HAVING count(movie_id)>1

ORDER BY customer_name DESC;
```

customer_id	customer_name	NO_OF_TIMES
CUS004	RADHA	2
CUS003	GAYAN	2
CUS001	AMIT	2
CUS002	ABDHUL	2

18.Write a query to display customer id, customer name,contact number, movie category and number of movies issued to each customer based on movie category who has been issued with more than one movie in that category. Example: Display contact number as "+91-876-

456-2345" format. Hint:Use NO_OF_MOVIES as alias name for number of movies column. Hint:Use CONTACT_ISD as alias name for contact number. Display the records sorted in ascending order based on customer name and then by movie category.

SELECT c.customer_id,c.customer_name,concat('+91-',substring(c.contact_no,1,3),'-',

substring(c.contact_no,4,3),'-',substring(c.contact_no,7)) CONTACT_ISD

,m.movie_category,count(cc.movie_id) NO_OF_MOVIES FROM customer_master c JOIN customer_issue_details cc

ON c.customer_id=cc.customer_id JOIN movies_master m ON m.movie_id=cc.movie_id

GROUP BY c.customer_id,m.movie_category HAVING count(cc.movie_id)>1

ORDER BY customer_name,movie_category;

customer_id	customer_name	CONTACT_ISD	movie_category	NO_OF_MOVIES
CUS002	ABDHUL	+91-876-543-2109	ACTION	2
CUS001	AMIT	+91-987-654-3210	ACTION	2
CUS003	GAYAN	+91-765-432-1098	ACTION	3
CUS003	GAYAN	+91-765-432-1098	ROMANCE	4
CUS004	RADHA	+91-654-321-0987	COMEDY	3

19.Write a query to display customer id and customer name of customers who has been issued with maximum number of movies and customer who has been issued with minimum no of movies. For example Assume customer John has been issued 5 movies, Ram has been issued 10 movies and Kumar has been issued 2 movies. The name and id of Ram should be displayed for issuing maximum movies and Kumar should be displayed for issuing minimum movies. Consider only the customers who have been issued with atleast 1 movie Customer(s) who has/have been issued the maximum number of movies must be displayed first followed by the customer(s) who has/have been issued with the minimum number of movies. In case of multiple customers who have been displayed with the maximum or minimum number of movies, display the records sorted in ascending order based on customer name.

SELECT cid.customer_id , customer_name FROM customer_master cm JOIN customer_issue_details cidON cm.customer_id=cid.customer_id

GROUP BY customer_id , customer_name

HAVING count(movie_id)>=ALL(SELECT count(movie_id)

FROM customer_issue_details

GROUP BY customer_id)

UNION

```
SELECT cid.customer_id , customer_name FROM
customer_master cm JOIN customer_issue_details cid
ON cm.customer_id=cid.customer_id
GROUP BY customer_id , customer_name
HAVING count(movie_id)<=ALL(SELECT  count(movie_id)
FROM customer_issue_details
GROUP BY customer_id) ORDER BY customer_name;
```

customer_id	customer_name
CUS003	GAYAN
CUS010	NAM10
CUS011	NAM11

20.Write a query to display the customer id , customer name and number of times movies have been issued from Comedy category. Display only for customers who has taken more than once. Hint: Use NO_OF_TIMES as alias name Display the records in ascending order based on customer name.

```
SELECT c.customer_id,c.customer_name,count(m.movie_id) NO_OF_TIMES FROM
customer_master c JOIN customer_issue_details cc ON c.customer_id=cc.customer_id
JOIN movies_master m ON m.movie_id=cc.movie_id
WHERE m.movie_category='Comedy'
GROUP BY c.customer_id HAVING count(m.movie_id)>1
ORDER BY customer_name;
```

customer_id	customer_name	NO_OF_TIMES
CUS004	RADHA	3

21.Write a query to display customer id and total rent paid by the customers who are issued with the videos. Need not display the customers who has not taken / issued with any videos. Hint: Alias Name for total rent paid is TOTAL_COST. Display the records sorted in ascending order based on customer id

```
SELECT cid.customer_id, sum(m.rent_cost) TOTAL_COST FROM customer_issue_details cid
JOIN movies_master mm ON cid.movie_id=mm.movie_id GROUP BY cid.customer_id order by
customer_id;
```

customer_id	TOTAL_COST
CUS001	200
CUS002	300
CUS003	800
CUS004	400
CUS010	100
CUS011	100

LOAN

```
create database loan;

use loan;


CREATE TABLE loan_card_master
(
        loan_id         varchar(6)      PRIMARY KEY,
        loan_type       varchar(15),
        duration_in_years       int(2)
);


CREATE TABLE employee_master
(
        employee_id             varchar(6)      PRIMARY KEY,
        employee_name       varchar(20),
        designation             varchar(25),
department              varchar(25),
        gender                  char(1),
        date_of_birth           date,
        date_of_joining         date
);


CREATE TABLE item_master
(
        item_id         varchar(6)      PRIMARY KEY,
        item_description        varchar(25),
```

```
        issue_status        char(1),
        item_make           varchar(25),
        item_category       varchar(20),
        item_valuation      int(6)
);

CREATE TABLE employee_card_details
(
        employee_id         varchar(6)    REFERENCES   employee_master,
        loan_id             varchar(6)    REFERENCES   loan_card_master,
        card_issue_date     date
);

CREATE TABLE employee_issue_details
(
        issue_id            varchar(6)    PRIMARY KEY,
        employee_id         varchar(6)    REFERENCES   employee_master,
        item_id             varchar(6)    REFERENCES   item_master,
        issue_date          date,
        return_date         date
);

insert into loan_card_master values('L00001','Furniture',5);
insert into loan_card_master values('L00002','Stationary',0);
insert into loan_card_master values('L00003','Crockery',1);
```

```
insert into employee_issue_details values('ISS001','E00001','I00001','2012-02-03','2014-02-03');
insert into employee_issue_details values('ISS002','E00001','I00004','2012-02-03','2020-02-03');
insert into employee_issue_details values('ISS003','E00002','I00005','2013-01-03','2015-01-03');
insert into employee_issue_details values('ISS004','E00003','I00007','2010-07-04','2012-07-04');
insert into employee_issue_details values('ISS005','E00003','I00008','2010-07-04','2012-08-05');
insert into employee_issue_details values('ISS006','E00003','I00010','2012-03-14','2012-06-15');
insert into employee_issue_details values('ISS007','E00004','I00012','2013-04-14','2016-04-14');
insert into employee_issue_details values('ISS008','E00006','I00018','2012-08-18','2019-04-17');
insert into employee_issue_details values('ISS009','E00004','I00018','2013-04-18','2013-05-18');
```

```
insert into employee_master values('E00001','Ram','Manager','Finance','M','1973-12-01','2000-01-01');
insert into employee_master values('E00002','Abhay','Assistant Manager','Finance','M','1976-01-01','2006-12-01');
insert into employee_master values('E00003','Anita','Senior Executive','Marketing','F','1977-05-12','2007-03-21');
insert into employee_master values('E00004','Zuben','Manager','Marketing','M','1974-10-12','2003-07-23');
insert into employee_master values('E00005','Radhica','Manager','HR','F','1976-07-22','2004-01-23');
insert into employee_master values('E00006','John','Executive','HR','M','1983-11-08','2010-05-17');
```

```
insert into employee_card_details values('E00001','L00001','2000-01-01');
insert into employee_card_details values('E00001','L00002','2000-01-01');
insert into employee_card_details values('E00001','L00003','2002-12-14');
insert into employee_card_details values('E00002','L00001','2007-02-01');
```

```
insert into employee_card_details values('E00002','L00002','2007-03-11');
insert into employee_card_details values('E00003','L00001','2007-04-15');
insert into employee_card_details values('E00003','L00002','2007-04-15');
insert into employee_card_details values('E00003','L00003','2007-04-15');
```

```
INSERT INTO item_master VALUES ('I00001','Tea Table','Y','Wooden','Furniture',5000);
INSERT INTO item_master VALUES  ('I00002','Dinning Table','N','Wooden','Furniture',15000);
INSERT INTO item_master VALUES    ('I00003','Tea Table','N','Steel','Furniture',6000);
INSERT INTO item_master VALUES    ('I00004','Side Table','Y','Wooden','Furniture',2000);
INSERT INTO item_master VALUES    ('I00005','Side Table','Y','Steel','Furniture',1500);
INSERT INTO item_master VALUES    ('I00006','Tea Table','N','Steel','Furniture',7000);
INSERT INTO item_master VALUES    ('I00007','Dinning Chair','Y','Wooden','Furniture',1500);
INSERT INTO item_master VALUES    ('I00008','Tea Table','Y','Wooden','Furniture',4000);
INSERT INTO item_master VALUES  ('I00009','Sofa','N','Wooden','Furniture',18000);
INSERT INTO item_master VALUES    ('I00010','Cupboard','Y','Steel','Furniture',10000);
INSERT INTO item_master VALUES    ('I00011','Cupboard','N','Steel','Furniture',14000);
INSERT INTO item_master VALUES    ('I00012','Double Bed','Y','Wooden','Furniture',21000);
INSERT INTO item_master VALUES    ('I00013','Double Bed','Y','Wooden','Furniture',20000);
INSERT INTO item_master VALUES    ('I00014','Single Bed','Y','Steel','Furniture',10000);
INSERT INTO item_master VALUES    ('I00015','Single Bed','N','Steel','Furniture',10000);
INSERT INTO item_master VALUES    ('I00016','Tea Set','Y','Glass','Crockery',3000);
INSERT INTO item_master VALUES    ('I00017','Tea Set','Y','Bonechina','Crockery',4000);
INSERT INTO item_master VALUES    ('I00018','Dinning Set','Y','Glass','Crockery',4500);
INSERT INTO item_master VALUES    ('I00019','Dinning Set','N','Bonechina','Crockery',5000);
INSERT INTO item_master VALUES    ('I00020','Pencil','Y','Wooden','Stationary',5);
```

```
INSERT INTO item_master VALUES    ('I00021','Pen','Y','Plastic','Stationary',100);
INSERT INTO item_master VALUES    ('I00022','Pen','N','Plastic','Stationary',200);
```

LOAN CARD MASTER

loan_id	loan_type	duration_in_years
L00001	Furniture	5
L00002	Stationary	0
L00003	Crockery	1
NULL	NULL	NULL

EMPLOYEE CARD DETAILS

employee_id	loan_id	card_issue_date
E00001	L00001	2000-01-01
E00001	L00002	2000-01-01
E00001	L00003	2002-12-14
E00002	L00001	2007-02-01
E00002	L00002	2007-03-11
E00003	L00001	2007-04-15
E00003	L00002	2007-04-15
E00003	L00003	2007-04-15

EMPLOYEE ISSUE DETAILS

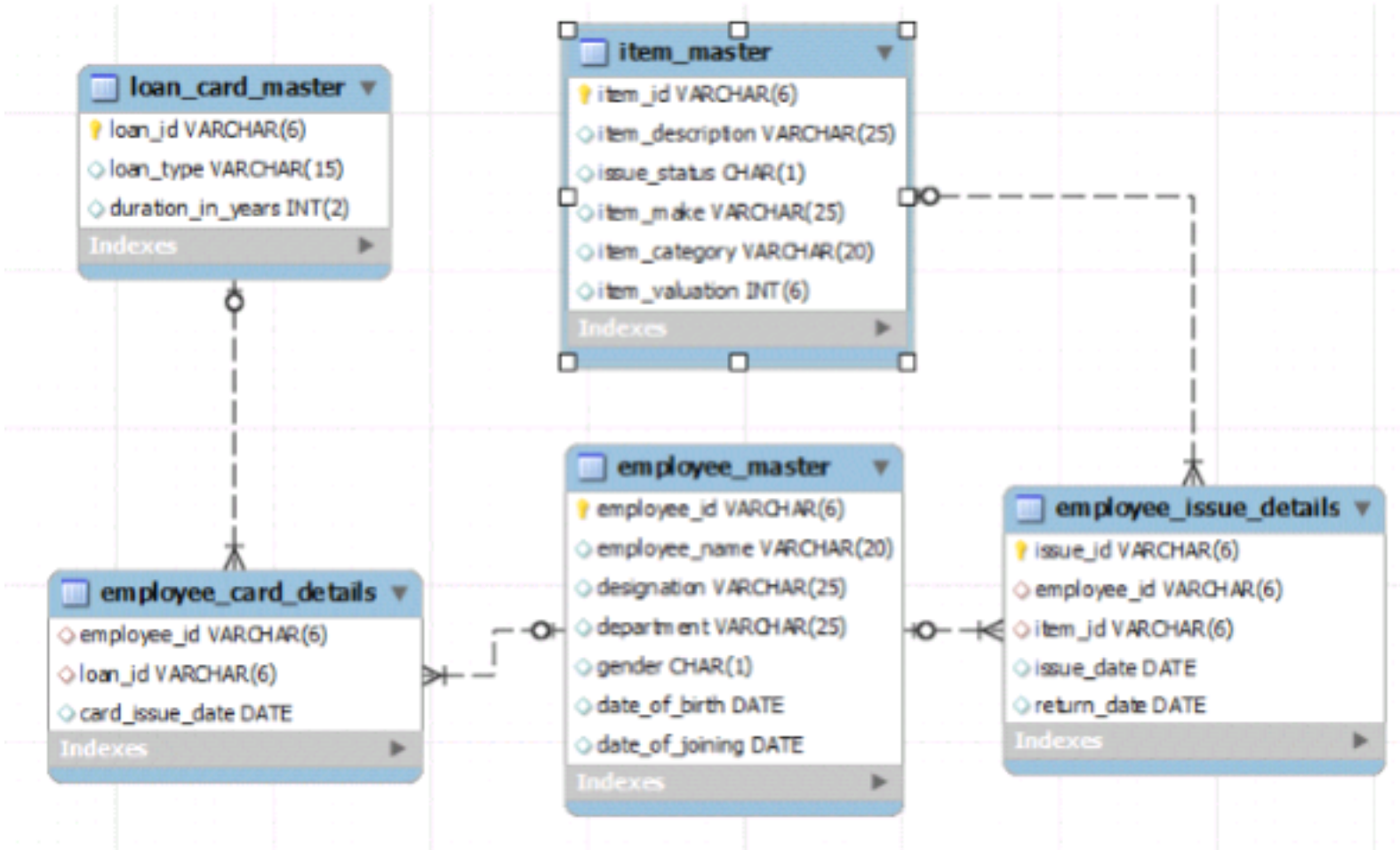
issue_id	employee_id	item_id	issue_date	return_date
ISS001	E00001	I00001	2012-02-03	2014-02-03
ISS002	E00001	I00004	2012-02-03	2020-02-03
ISS003	E00002	I00005	2013-01-03	2015-01-03
ISS004	E00003	I00007	2010-07-04	2012-07-04
ISS005	E00003	I00008	2010-07-04	2012-08-05
ISS006	E00003	I00010	2012-03-14	2012-06-15
ISS007	E00004	I00012	2013-04-14	2016-04-14
ISS008	E00006	I00018	2012-08-18	2019-04-17
ISS009	E00004	I00018	2013-04-18	2013-05-18
NULL	NULL	NULL	NULL	NULL

EMPLOYEE MASTER

employee_id	employee_name	designation	department	gender	date_of_birth	date_of_joining
E00001	Ram	Manager	Finance	M	1973-12-01	2000-01-01
E00002	Abhay	Assistant Manager	Finance	M	1976-01-01	2006-12-01
E00003	Anita	Senior Executive	Marketing	F	1977-05-12	2007-03-21
E00004	Zuben	Manager	Marketing	M	1974-10-12	2003-07-23
E00005	Radhica	Manager	HR	F	1976-07-22	2004-01-23
E00006	John	Executive	HR	M	1983-11-08	2010-05-17
NULL	NULL	NULL	NULL	NULL	NULL	NULL

ITEM MASTER

item_id	item_description	issue_status	item_make	item_category	item_valuation
I00001	Tea Table	Y	Wooden	Furniture	5000
I00002	Dinning Table	N	Wooden	Furniture	15000
I00003	Tea Table	N	Steel	Furniture	6000
I00004	Side Table	Y	Wooden	Furniture	2000
I00005	Side Table	Y	Steel	Furniture	1500
I00006	Tea Table	N	Steel	Furniture	7000
I00007	Dinning Chair	Y	Wooden	Furniture	1500
I00008	Tea Table	Y	Wooden	Furniture	4000
I00009	Sofa	N	Wooden	Furniture	18000
I00010	Cupboard	Y	Steel	Furniture	10000
I00011	Cupboard	N	Steel	Furniture	14000
I00012	Double Bed	Y	Wooden	Furniture	21000
I00013	Double Bed	Y	Wooden	Furniture	20000
I00014	Single Bed	Y	Steel	Furniture	10000
I00015	Single Bed	N	Steel	Furniture	10000
I00016	Tea Set	Y	Glass	Crockery	3000
I00017	Tea Set	Y	Bonechina	Crockery	4000
I00018	Dinning Set	Y	Glass	Crockery	4500
I00019	Dinning Set	N	Bonechina	Crockery	5000
I00020	Pencil	Y	Wooden	Stationary	5
I00021	Pen	Y	Plastic	Stationary	100
I00022	Pen	N	Plastic	Stationary	200
NULL	NULL	NULL	NULL	NULL	NULL



1. Write a query to display category and number of items in that category. Give the count an alias name of Count_category. Display the details on the sorted order of count in descending order.

```
SELECT item_category,count(item_id) Count_category FROM
item_master GROUP BY item_category ORDER BY Count_category DESC;
```

item_category	Count_category
Furniture	15
Crockery	4
Stationary	3

2. Write a query to display the number of employees in HR department. Give the alias name as No_of_Employees.

```
SELECT count(employee_id) No_of_Employees FROM
employee_master WHERE department='HR';
```

No_of_Employees
2

3. Write a query to display employee id, employee name, designation and department for employees who have never been issued an item as a loan from the company. Display the records sorted in ascending order based on employee id.

```
SELECT employee_id,employee_name,designation,department FROM  employee_master
```

```
WHERE employee_id NOT IN (SELECT employee_id FROM employee_issue_details)

ORDER BY employee_id;
```

employee_id	employee_name	designation	department
E00005	Radhica	Manager	HR
NULL	NULL	NULL	NULL

4. Write a query to display the employee id, employee name who was issued an item of highest valuation. In case of multiple records, display the records sorted in ascending order based on employee id.[Hint Suppose an item called dinning table is of 22000 and that is the highest price of the item that has been issued. So display the employee id and employee name who issued dinning table whose price is 22000.]

```
SELECT employee_id,employee_name FROM employee_master

WHERE employee_id IN(SELECT employee_id FROM employee_issue_details

WHERE item_id IN (SELECT item_id FROM item_master

WHERE item_valuation=(SELECT max(item_valuation) FROM

item_master i JOIN employee_issue_details e ON i.item_id=e.item_id)));
```

employee_id	employee_name
E00004	Zuben
NULL	NULL

5. Write a query to display issue_id, employee_id, employee_name. Display the records sorted in ascending order based on issue id.

```
SELECT eid.issue_id, eid.employee_id, em.employee_name

FROM employee_master em JOIN  employee_issue_details eid

ON em.employee_id=eid.employee_id ORDER BY eid.issue_id;
```

issue_id	employee_id	employee_name
ISS001	E00001	Ram
ISS002	E00001	Ram
ISS003	E00002	Abhay
ISS004	E00003	Anita
ISS005	E00003	Anita
ISS006	E00003	Anita
ISS007	E00004	Zuben
ISS008	E00006	John
ISS009	E00004	Zuben

6. Write a query to display employee id, employee name who don't have loan cards.Display the records sorted in ascending order based on employee id.

```
SELECT employee_id,employee_name FROM employee_master

WHERE employee_id NOT IN(SELECT employee_id FROM employee_card_details);
```

employee_id	employee_name
E00004	Zuben
E00005	Radhica
E00006	John
NULL	NULL

7. Write a query to count the number of cards issued to an employee "Ram". Give the count an alias name as No_of_Cards.

```
SELECT count(loan_id) No_of_Cards FROM

employee_card_details WHERE employee_id IN

(SELECT employee_id FROM employee_master WHERE employee_name='Ram');

(or)

SELECT count(loan_id) No_of_Cards FROM

employee_card_details c JOIN  employee_master e

ON c.employee_id = e.employee_id

WHERE e.employee_name= 'Ram';
```

No_of_Cards
3

8. Write a query to display the count of customers who have gone for loan type stationary. Give the count an alias name as Count_stationary.

```
SELECT count(e.employee_id) Count_Stationary

FROM employee_card_details e JOIN loan_card_master l

ON e.loan_id=l.loan_id WHERE l.loan_type='Stationary';
```

Count_Stationary
3

9. Write a query to display the employee id, employee name and number of items issued to them. Give the number of items an alias name as Count. Display the details in descending order of count and then

```
SELECT e.employee_id,employee_name,count(e.item_id) Count FROM

employee_issue_details e JOIN employee_master em ON e.employee_id=em.employee_id

GROUP BY e.employee_id ORDER BY count DESC,e.employee_id;
```

employee_id	employee_name	Count
E00003	Anita	3
E00001	Ram	2
E00004	Zuben	2
E00002	Abhay	1
E00006	John	1

10. Write a query to display the employee id, employee name who was issued an item of minimum valuation.In case of multiple records, display them sorted in ascending order based on employee id.[Hint Suppose an item called pen is of rupees 20 and that is the lowest price. So display the employee id and employee name who issued pen where the valuation is 20.]

```
SELECT employee_id,employee_name FROM employee_master

WHERE employee_id IN(SELECT employee_id FROM employee_issue_details

WHERE item_id IN (SELECT item_id FROM item_master

WHERE item_valuation=(SELECT min(item_valuation) FROM

item_master i JOIN employee_issue_details e ON i.item_id=e.item_id)))

ORDER BY employee_id;
```

employee_id	employee_name
E00002	Abhay
E00003	Anita
NULL	NULL

11. Write a query to display the employee id, employee name and total valuation of the product issued

to each employee. Give the alias name as TOTAL_VALUATION.Display the records sorted in ascending order based on employee id.Consider only employees who have been issued atleast 1 item.

```
SELECT e.employee_id,em.employee_name,sum(i.item_valuation) TOTAL_VALUATION FROM

item_master i JOIN employee_issue_details e ON e.item_id=i.item_id

JOIN employee_master em ON em.employee_id=e.employee_id

GROUP BY e.employee_id ORDER BY employee_id;
```

employee_id	employee_name	TOTAL_VALUATION
E00001	Ram	7000
E00002	Abhay	1500
E00003	Anita	15500
E00004	Zuben	25500
E00006	John	4500

12. Write a query to display distinct employee id, employee name who kept the item issued for more than a year. Hint: Use Date time function to calculate the difference between item issue and return date. Display the records only if it is more than 365 Days.Display the records sorted in ascending order based on employee id.

```
SELECT DISTINCT e.employee_id,e.employee_name FROM

employee_master e JOIN  employee_issue_details ei ON e.employee_id=ei.employee_id

WHERE datediff(ei.return_date,ei.issue_date)>365

ORDER BY employee_id;
```

employee_id	employee_name
E00001	Ram
E00002	Abhay
E00003	Anita
E00004	Zuben
E00006	John

13. Write a query to display employee id, employee name and count of items of those who asked for more than 1 furniture. Give the alias name for count of items as COUNT_ITEMS.Display the records sorted in ascending order on employee id.

```
SELECT e.employee_id,e.employee_name,count(ei.item_id) COUNT_ITEMS FROM

employee_master e JOIN employee_issue_details ei ON e.employee_id=ei.employee_id

JOIN item_master i ON ei.item_id=i.item_id

WHERE i.item_category='Furniture'
```

GROUP BY ei.employee_id HAVING count(ei.item_id)>1;

employee_id	employee_name	COUNT_ITEMS
E00001	Ram	2
E00003	Anita	3

14. Write a query to display the number of men & women Employees. The query should display the gender and number of Employees as No_of_Employees. Display the records sorted in ascending order based on gender.

SELECT gender,count(employee_id) FROM employee_master

GROUP BY gender ORDER BY gender;

gender	count(employee_id)
F	2
M	4

15. Write a query to display employee id, employee name who joined the company after 2005. Display the records sorted in ascending order based on employee id.

SELECT employee_id,employee_name FROM employee_master

WHERE year(date_of_joining)>'2005'

ORDER BY employee_id;

employee_id	employee_name
E00002	Abhay
E00003	Anita
E00006	John
NULL	NULL

16. Write a query to get the number of items of the furniture category issued and not issued. The query should display issue status and the number of furniture as No_of_Furnitures.Display the records sorted in ascending order based on issue_status.

SELECT issue_status,count(item_id) No_of_Furniture FROM

item_master WHERE item_category='Furniture'

GROUP BY issue_status ORDER BY issue_status;

issue_status	No_of_Furniture
N	6
Y	9

17. Write a query to find the number of items in each category, make and description. The Query

should display Item Category, Make, description and the number of items as No_of_Items. Display the records in ascending order based on Item Category, then by item make and then by item description.

```
SELECT item_category,item_make,item_description,count(item_id) No_of_items FROM

item_master GROUP BY item_category,item_make,item_description

ORDER BY item_category,item_make,item_description;
```

item_category	item_make	item_description	No_of_items
Crockery	Bonechina	Dinning Set	1
Crockery	Bonechina	Tea Set	1
Crockery	Glass	Dinning Set	1
Crockery	Glass	Tea Set	1
Furniture	Steel	Cupboard	2
Furniture	Steel	Side Table	1
Furniture	Steel	Single Bed	2
Furniture	Steel	Tea Table	2
Furniture	Wooden	Dinning Chair	1
Furniture	Wooden	Dinning Table	1
Furniture	Wooden	Double Bed	2
Furniture	Wooden	Side Table	1
Furniture	Wooden	Sofa	1
Furniture	Wooden	Tea Table	2
Stationary	Plastic	Pen	2
Stationary	Wooden	Pencil	1

18. Write a query to display employee id, employee name, item id and item description of employees who were issued item(s) in the month of January 2013. Display the records sorted in order based on employee id and then by item id in ascending order.

```
SELECT e.employee_id,employee_name,i.item_id,i.item_description FROM

employee_master e JOIN employee_issue_details ei ON e.employee_id=ei.employee_id

JOIN item_master i ON i.item_id=ei.item_id

WHERE month(ei.issue_date)='01' and year(ei.issue_date)='2013'

ORDER BY employee_id,item_id;
```

employee_id	employee_name	item_id	item_description
E00002	Abhay	I00005	Side Table

19. Write a query to display the employee id, employee name and count of item category of the employees who have been issued items in at least 2 different categories.Give the alias name for

category count as COUNT_CATEGORY.Display the records sorted in ascending order based on employee id.

```
SELECT ei.employee_id,e.employee_name,count(DISTINCT i.item_category) COUNT_CATEGORY FROM

employee_master e JOIN employee_issue_details ei ON e.employee_id=ei.employee_id

JOIN item_master i ON i.item_id=ei.item_id

GROUP BY ei.employee_id

HAVING COUNT_CATEGORY>=2

ORDER BY employee_id;
```

employee_id	employee_name	COUNT_CATEGORY
E00004	Zuben	2

20. Write a query to display the item id , item description which was never issued to any employee. Display the records sorted in ascending order based on item id.

```
SELECT item_id, item_description FROM item_master

WHERE item_id NOT IN (SELECT item_id from employee_issue_details)

ORDER BY item_id;
```

item_id	item_description
I00002	Dinning Table
I00003	Tea Table
I00006	Tea Table
I00009	Sofa
I00011	Cupboard
I00013	Double Bed
I00014	Single Bed
I00015	Single Bed
I00016	Tea Set
I00017	Tea Set
I00019	Dinning Set
I00020	Pencil
I00021	Pen
I00022	Pen
NULL	NULL

21. Write a query to display the employee id, employee name andtotal valuationfor the employees who has issued minimum total valuation of the product. Give the alias name for total valuation as TOTAL_VALUATION.[Hint: Suppose an employee E00019 issued item of price 5000, 10000, 12000 and

E00020 issue item of price 2000, 7000 and 1000. So the valuation of items taken by E00019 is 27000 and for E00020 it is 10000. So the employee id, employee name of E00020 should be displayed.]

```
SELECT e.employee_id,em.employee_name,sum(i.item_valuation) TOTAL_VALUATION FROM
item_master i JOIN employee_issue_details e ON e.item_id=i.item_id
JOIN employee_master em ON em.employee_id=e.employee_id
GROUP BY e.employee_id HAVING sum(i.item_valuation)<=ALL(
SELECT sum(i.item_valuation) TOTAL_VALUATION FROM
item_master i JOIN employee_issue_details e ON e.item_id=i.item_id
JOIN employee_master em ON em.employee_id=e.employee_id
GROUP BY e.employee_id);
```

employee_id	employee_name	TOTAL_VALUATION
E00002	Abhay	1500

22. Write a query to display the employee id, employee name, card issue date and card valid date.Order by employee name and then by card valid date. Give the alias name to display the card valid date as CARD_VALID_DATE.[Hint: Validity in years for the loan card is given in loan_card_master table. Validity date is calculated by adding number of years in the loan card issue date. If the duration of year is zero then display AS 'No Validity Date'.]

```
SELECT e.employee_id,e.employee_name,card_issue_date,
case
when l.duration_in_years>0 then date_add(ec.card_issue_date,interval l.duration_in_years year)
when l.duration_in_years=0 then 'No Validity Date' end CARD_VALID_DATE
FROM
employee_master e JOIN employee_card_details ec ON e.employee_id=ec.employee_id
JOIN loan_card_master l ON l.loan_id=ec.loan_id
ORDER BY employee_name,CARD_VALID_DATE;
```

employee_id	employee_name	card_issue_date	CARD_VALID_DATE
E00002	Abhay	2007-02-01	2012-02-01
E00002	Abhay	2007-03-11	No Validity Date
E00003	Anita	2007-04-15	2008-04-15
E00003	Anita	2007-04-15	2012-04-15
E00003	Anita	2007-04-15	No Validity Date
E00001	Ram	2002-12-14	2003-12-14
E00001	Ram	2000-01-01	2005-01-01
E00001	Ram	2000-01-01	No Validity Date

23. Write a query to display the employee id, employee name who have not issued with any item in the year 2013. Hint: Exclude those employees who was never issued with any of the items in all the years. Display the records sorted in ascending order based on employee id.

```
SELECT DISTINCT e.employee_id,e.employee_name FROM

employee_master e JOIN employee_issue_details ei ON e.employee_id=ei.employee_id

WHERE e.employee_id NOT IN (SELECT employee_id FROM employee_issue_details

WHERE year(issue_date)='2013')

ORDER BY employee_id;
```

employee_id	employee_name
E00001	Ram
E00003	Anita
E00006	John

24. Write a query to display issue id, employee id, employee name, item id, item description and issue date. Display the data in descending order of date and then by issue id in ascending order.

```
SELECT issue_id, eid.employee_id, employee_name, im.item_id, item_description,issue_date

FROM employee_issue_details eid JOIN employee_master em ON eid.employee_id=em.employee_id

JOIN item_master im ON eid.item_id=im.item_id

ORDER BY issue_date DESC, issue_id;
```

issue_id	employee_id	employee_name	item_id	item_description	issue_date
ISS009	E00004	Zuben	I00018	Dinning Set	2013-04-18
ISS007	E00004	Zuben	I00012	Double Bed	2013-04-14
ISS003	E00002	Abhay	I00005	Side Table	2013-01-03
ISS008	E00006	John	I00018	Dinning Set	2012-08-18
ISS006	E00003	Anita	I00010	Cupboard	2012-03-14
ISS001	E00001	Ram	I00001	Tea Table	2012-02-03
ISS002	E00001	Ram	I00004	Side Table	2012-02-03
ISS004	E00003	Anita	I00007	Dinning Chair	2010-07-04
ISS005	E00003	Anita	I00008	Tea Table	2010-07-04

25. Write a query to display the employee id, employee name and total valuation for employee who has issued maximum total valuation of the product. Give the alias name for total valuation as TOTAL_VALUATION.[Hint: Suppose an employee E00019 issued item of price 5000, 10000, 12000 and E00020 issue item of price 2000, 7000, and 1000. So the valuation of items taken by E00019 is 27000 and for E00020 it is 10000. So the employee id, employee name and total valuation of E00019 should display.]

```
SELECT e.employee_id,em.employee_name,sum(i.item_valuation) TOTAL_VALUATION FROM
item_master i JOIN employee_issue_details e ON e.item_id=i.item_id
JOIN employee_master em ON em.employee_id=e.employee_id
GROUP BY e.employee_id HAVING sum(i.item_valuation)>=ALL(
SELECT sum(i.item_valuation) TOTAL_VALUATION FROM
item_master i JOIN employee_issue_details e ON e.item_id=i.item_id
JOIN employee_master em ON em.employee_id=e.employee_id
GROUP BY e.employee_id);
```

employee_id	employee_name	TOTAL_VALUATION
E00004	Zuben	25500