Create Use case specification for the given requirement.

Use the following DDL and DML to create **Video Management database.**

create table CUSTOMER\_MASTER

(

CUSTOMER\_ID Varchar(10),

CUSTOMER\_NAME Varchar(30) NOT NULL,

CONTACT\_NO BIGINT(20),

CONTACT\_ADD Varchar(100),

DATE\_OF\_REGISTRATION Date NOT NULL,

AGE Varchar(15)NOT NULL,

Constraint MT\_cts1 PRIMARY KEY(CUSTOMER\_ID)

);

Create table MOVIES\_MASTER

(

MOVIE\_ID Varchar(10),

MOVIE\_NAME Varchar(80) NOT NULL,

RELEASE\_DATE Varchar(30) NOT NULL,

LANGUAGE Varchar(30),

RATING int(2),

DURATION\_In\_Minutes VARCHAR(10) NOT NULL,

MOVIE\_TYPE Varchar(100),

MOVIE\_CATEGORY VARCHAR(40) NOT NULL,

DIRECTOR VARCHAR(60) NOT NULL,

LEAD\_Actor\_name1 Varchar(50) NOT NULL,

LEAD\_Actor\_name2 VARCHAR(60) NOT NULL,

RENTAL\_COST BIGINT(10),

Constraint MT\_cts4 PRIMARY KEY(MOVIE\_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)

);

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 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)

);

insert into customer\_master values

('C00001',' NITIN ','9830354218',' A/122, KALKAJI',' 2012-10-15', 22),

('C00002',' AGNESH ','8923156781', '9/1,ANDHERI EAST',' 2012-11-01', 35),

('C00003',' T RAMACHANDRAN',' 9831289761',' 9/1,NANDABAKKAM',' 2012-11-02', 25),

('C00004' ,'RAJIB MITRA' ,'9830356781',' H/56, BLOCK1,JADAVPUR',' 2012-11-21', 45),

('C00005',' SHIV PRASAD', NULL,' 2/2 PHASE II JAWAHAR NAGAR' ,'2012-12-25', 30),

('C00006', 'AJAY GHOSH' ,'8763478901' ,'N/2,GANDHI COLONY DUM DUM', '2012-12-30' ,20),

('C00007', 'GEETHA REDDY' ,'8976167890',' AH 1/1 T NAGAR' ,'2012-12-31' ,30),

('C00008', 'RIA NATRAJAN' ,'9856723190' ,'A/B GANDHI COLONY' ,'2013-01-01' ,45),

('C00009', 'RAJAN PILLAI' ,NULL,' A 1/66 KODAMBAKKAM ','2013-01-02', 40),

('C00010', 'RAGHAV SINGH', '9675167890' ,'A/6 NEHRU JAWAHAR NAGAR', '2013-03-02' ,50),

('C00011', 'RAJ SEKHANRAN',' 8423178906' ,'A/1 MAYUR KUNJ' ,'2013-03-15' ,25);

insert into movies\_master values

('M00001',' DIE HARD',' 1998 ','ENGLISH ',4 ,120 ,'UNIVERSAL',' ACTION',

'JOHN MCTIERNAN' ,'BRUCE WILLIS' ,'BONNIE BEDELIA' ,100),

('M00002',' THE DARK KNIGHT',' 2008',' ENGLISH', 5 ,90 ,'PARENTAL GUIDENCE',' ACTION','

CHRISTOPHER NOLAN' ,

'CHRISTIAN BALE','HEALTH LEDGER', 100),

('M00003',' THE MATRIX', 1999,' ENGLISH', 4, 120,' UNIVERSAL',' ACTION',' ANDY LARRY',' KEANU REEVES ',

'CARRIE-ANEE MOSS', 100),

('M00004',' INCEPTION', 2010 ,'ENGLISH ',5 ,120,' PARENTAL GUIDENCE ','ACTION',

'CHRISTOPHER NOLAN', 'LEONARDO DICAPRIO',' JOSEPH GORDAN' ,100),

('M00005','OFFICE SPACE', 1999 ,'ENGLISH', 4, 95 ,'UNIVERSAL ','COMEDY ',

'MIKE JUDGE',' RON LIVINGSTON',' JENNIFER ANISTON ',100),

('M00006 ','YOUNG FRANKENSTEIN',' 1974',' ENGLISH', 4 ,130,' UNIVERSAL',' COMEDY',

'MEL BROOKS',' GENE WILDER',' TERI GARR', 100),

('M00007',' SHAUN OF THE DEAD', 2004 ,'ENGLISH', 4 ,95,' UNIVERSAL', 'COMEDY',

'EDGAR WRIGHT',' SIMON PEGG ','KATE ASHFIELD' ,100),

('M00008',' CASABLANCA', 1942,' ENGLISH', 3, 120 ,'UNIVERSAL',' ROMANCE',' MICHAEL

CURTIZ',' HUMPREY BOGART',' INGRID BERGMAN', 1000),

('M00009 ','THE NOTEBOOK', 2004 ,'ENGLISH', 3 ,120 ,'PARENTAL GUIDENCE',' ROMANCE ',

'NICK CASSAVETES',' RYAN GOSLING',' RACHEL MCADAMS', 100),

('M00010 ','GONE WITH THE WIND ',1939 ,'ENGLISH', 3 ,120,' PARENTAL GUIDENCE ','ROMANCE',

'VICTOR FLEMMING', 'CLARK GABLE',' VIVIEN LEIGH ',100),

('M00011 ','TITANIC', 1997 ,'ENGLISH ',3 ,120 ,'PARENTAL GUIDENCE',' ROMANCE'

,'JAMES CAMERON',' LEONARDO DICAPRIO ','KATE WINSLET', 100);

insert into customer\_issue\_details values

('I00001','C00001','M00001','2012-10-15','2012-10-17','2012-10-17');

insert into customer\_issue\_details values('I00002', 'C00002','M00002','2012-11-02' ,'2012-11-04','2012-11-05');

insert into customer\_issue\_details values

('I00003','C00002','M00002','2012-12-02','2012-12-04','2012-12-03');

insert into customer\_issue\_details values('I00004','C00003','M00003','2012-11-02','2012-11-04','2012-11-10');

insert into customer\_issue\_details values('I00005','C00003','M00004','2012-11-10',

'2012-11-12','2012-11-12');

insert into customer\_issue\_details values('I00006','C00003','M00005',

'2012-11-12','2012-11-14','2012-11-14');

insert into customer\_issue\_details values('I00007','C00004','M00006 ','2012-11-21',

'2012-11-23','2012-11-24');

insert into customer\_issue\_details values('I00008','C00010','M00008','2013-03-02',

'2013-03-04','2013-03-05');

insert into customer\_issue\_details values('I00009','C00011','M00010 ','2013-03-16','2013-03-18','2013-03-18');

insert into customer\_issue\_details values('I00010','C00004' ,'M00007',

'2012-11-25','2012-11-27','2012-11-27');

insert into customer\_issue\_details values('I00011','C00004' ,'M00007','2012-11-28',

'2012-11-30','2012-11-30');

insert into customer\_issue\_details values('I00012','C00001','M00001','2013-11-28','2013-11-30',

'2013-11-30');

insert into customer\_issue\_details values('I00013','C00003','M00001','2012-12-03','2012-12-05',

'2012-12-05');

insert into customer\_issue\_details values('I00014','C00003','M00010 ','2013-01-02','2013-01-04'

,'2013-01-05');

insert into customer\_issue\_details values('I00015','C00003','M00011 ','2013-02-03','2013-02-05',

'2013-02-06');

insert into customer\_issue\_details values('I00016','C00003','M00011 ','2013-03-05','2013-03-07'

,'2013-03-07');

insert into customer\_issue\_details values('I00017','C00003','M00008','2013-04-15','2013-04-17'

,'2013-04-17');

insert into customer\_issue\_details values('I00018','C00002','M00010 ','2015-01-15','2015-01-17'

,'2015-01-17');

insert into customer\_issue\_details values('I00019','C00004','M00001','2012-11-15 ','2012-11-17','2012-11-17');

insert into library\_card\_master values

('CRD001', 'SILVER CARD' ,1000, 1),

('CRD002', 'GOLD CARD ',2000 ,2),

('CRD003', 'PLATINUM CARD' ,3000, 3),

('CRD004', 'DIAMOND CARD', 4000 ,5);

Insert into CUSTOMER\_CARD\_DETAILS Values('C00001','CRD001','2012-05-13');

Insert into CUSTOMER\_CARD\_DETAILS Values('C00002','CRD002','2012-05-13');

Insert into CUSTOMER\_CARD\_DETAILS Values('C00003','CRD002','2013-05-13');

Insert into CUSTOMER\_CARD\_DETAILS Values('C00004','CRD003','2013-05-13');

Insert into CUSTOMER\_CARD\_DETAILS Values('C00005','CRD003','2012-05-13');

**Queries:**

1. Write a query to display movie names and number of times that movie is issued to customers. In case 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.

2. Write a query to display id, name, age, contact no of customers whose age is greater than 25 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.

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.

4. Write a query to display the number of customers having card with description “Gold card”. Use CUSTOMER\_COUNT as alias name for number of customers.

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.

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.

Display the records sorted in ascending order based on customer name.

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/85.8 and round it to zero decimal places and display as $Amount. Example Assume 500 is the amount then dollar value will be $10. Use AMOUNT\_DOLLAR as alias name for amount in dollar. Display the records in ascending order based on customer name.

8. 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. Use MOVIE\_COUNT as alias name for number of movies issued.

9. 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 descending order based on issue date of the video.

10. Write a query to display the director's name, number of movies directed by the director who directed more than one movie. Display the director 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.