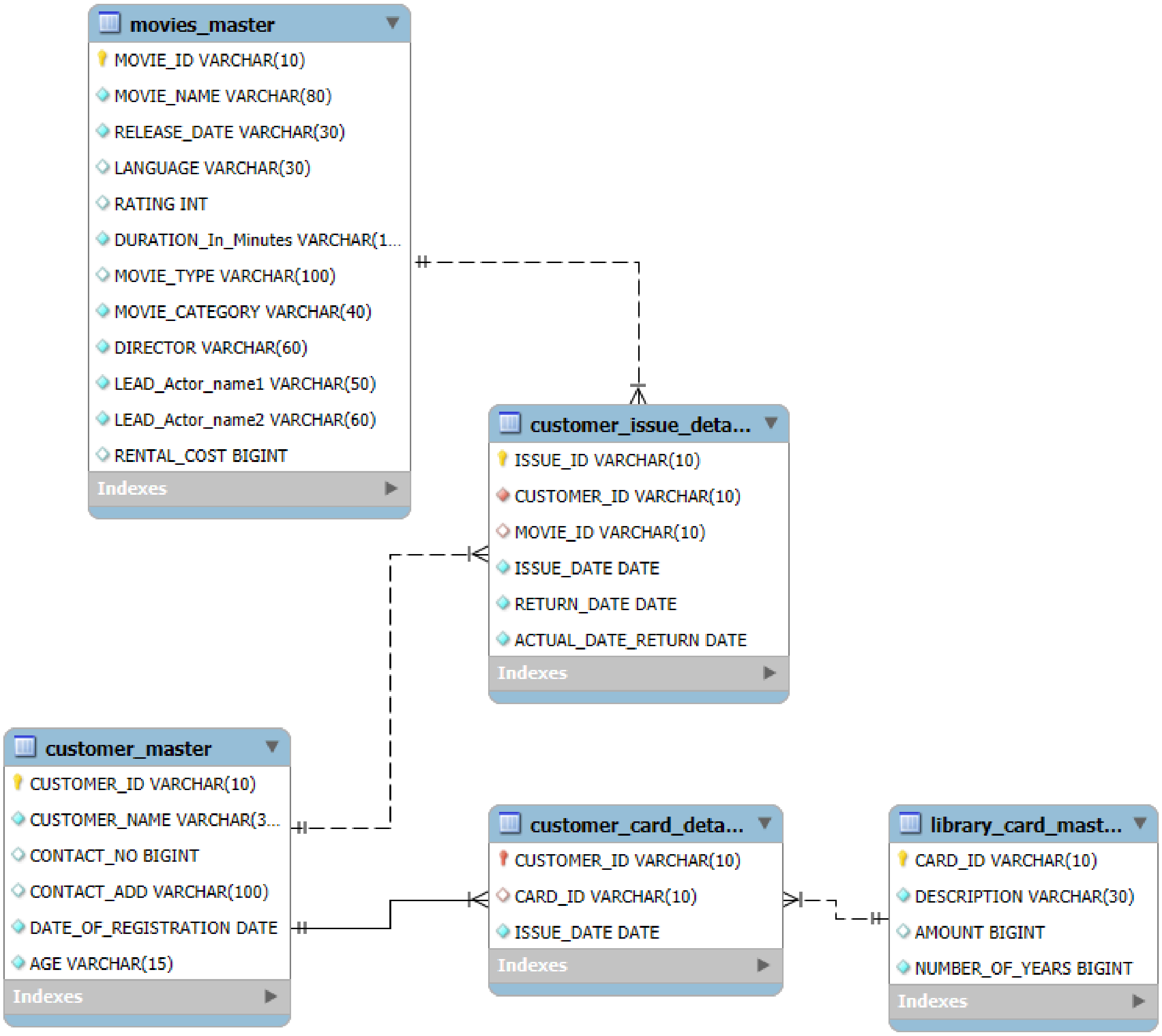
Module 1 Mini Project
Name Narendra kumar S
Date: 14-07-2025



DDL comments :

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)

);
```

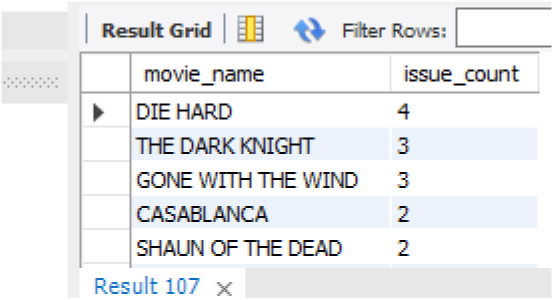
Task:

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.

Solution:

```
        select movie_name,count(c.movie_id) as issue_count from movies_master m left join
        customer_issue_details c on m.movie_id=c.movie_id
        group by movie_name
        order by issue_count desc,movie_name asc;
```

Output:



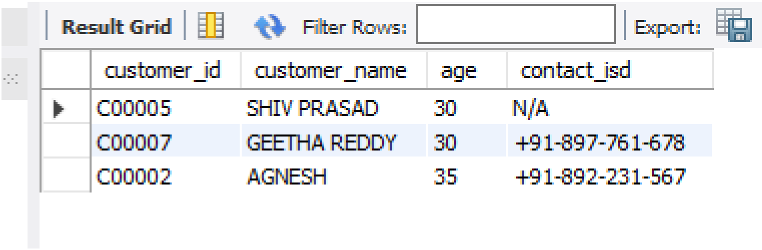
movie_name	issue_count
DIE HARD	4
THE DARK KNIGHT	3
GONE WITH THE WIND	3
CASABLANCA	2
SHAUN OF THE DEAD	2

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.

Solution:

```
        select customer_id,customer_name,age,
        case
        when contact_no is null then 'N/A'
        else
        concat('+91-',substr(contact_no,1,3),'-',substr(contact_no,3,3),'-',substr(contact_no,6,3))
        end as contact_isd
        from customer_master
        where age>25 and year(date_of_registration) = 2012
        order by age,customer_name;
```

Output:



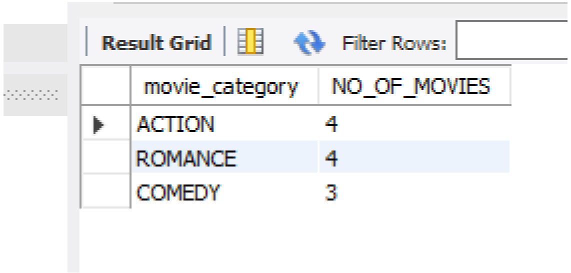
customer_id	customer_name	age	contact_isd
C00005	SHIV PRASAD	30	N/A
C00007	GEETHA REDDY	30	+91-897-761-678
C00002	AGNESH	35	+91-892-231-567

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

Solution:

```
        select movie_category,count(*) NO_OF_MOVIES from movies_master
        group by movie_category
        order by no_of_movies desc,movie_category;
```

Output:



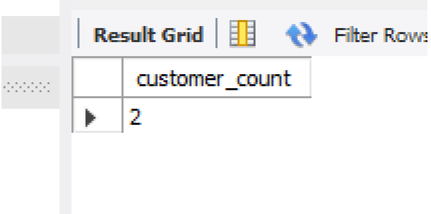
movie_category	NO_OF_MOVIES
ACTION	4
ROMANCE	4
COMEDY	3

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

Solution:

```
select count(*) as customer_count from customer_card_details
where card_id in (select card_id from library_card_master where description ='GOLD
CARD ');
```

Output:



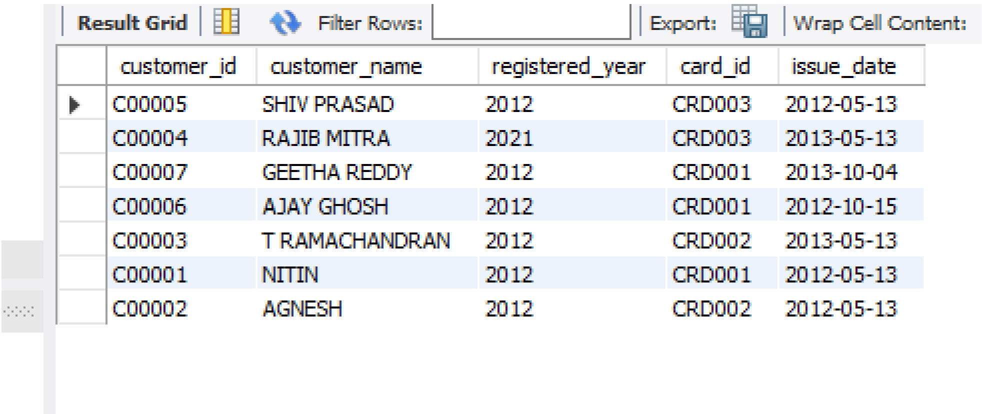
	customer_count
▶	2

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.

Solution:

```
select c.customer_id,c.customer_name,year(c.date_of_registration)
registered_year,ca.card_id,ca.issue_date
from customer_master c
join customer_card_details ca on c.customer_id = ca.customer_id
where ca.card_id in (select card_id from library_card_master) -- or is not null
order by c.customer_name desc;
```

Output:



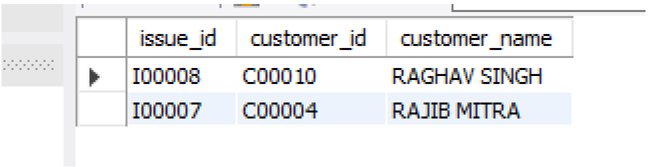
	customer_id	customer_name	registered_year	card_id	issue_date
▶	C00005	SHIV PRASAD	2012	CRD003	2012-05-13
	C00004	RAJIB MITRA	2021	CRD003	2013-05-13
	C00007	GEETHA REDDY	2012	CRD001	2013-10-04
	C00006	AJAY GHOSH	2012	CRD001	2012-10-15
	C00003	T RAMACHANDRAN	2012	CRD002	2013-05-13
	C00001	NITIN	2012	CRD001	2012-05-13
	C00002	AGNESH	2012	CRD002	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.
Display the records sorted in ascending order based on customer name.

Solution:

```
select ci.issue_id,cm.customer_id,cm.customer_name
from customer_issue_details ci
join customer_master cm on ci.customer_id = cm.customer_id
where cm.customer_name like 'R%' and actual_date_return > return_date
order by cm.customer_name;
```

Output :



issue_id	customer_id	customer_name
I00008	C00010	RAGHAV SINGH
I00007	C00004	RAJIB MITRA

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.

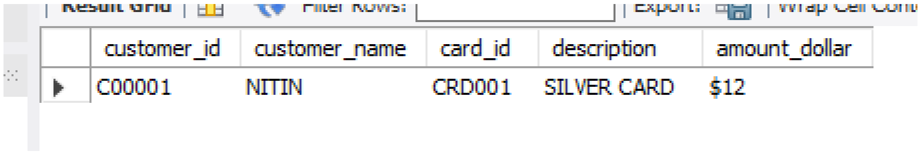
Example Assume 500 is the amount then dollar value will be $10.

Use AMOUNT_DOLLAR as alias name for amount in dollar. Display the records in ascending order based on customer name.

Solution:

```
select cm.customer_id,cm.customer_name,ca.card_id,lb.description,
concat('$',round(lb.amount/85.8,0)) as amount_dollar
from customer_master cm join customer_issue_details cd
on cm.customer_id = cd.customer_id
join customer_card_details ca
on ca.customer_id = cm.customer_id
join library_card_master lb
on lb.card_id = ca.card_id
where cd.issue_date = ca.issue_date
order by cm.customer_name;
```

Output:



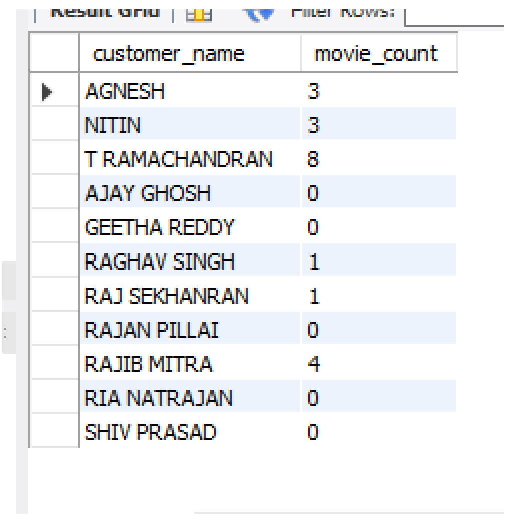
customer_id	customer_name	card_id	description	amount_dollar
C00001	NITIN	CRD001	SILVER CARD	$12

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.

Solution:

```
select customer_name,count(ci.movie_id)as movie_count
from customer_master cm
left join customer_issue_details ci
on cm.customer_id = ci.customer_id
group by customer_name
order by customer_name asc;
```

Output:



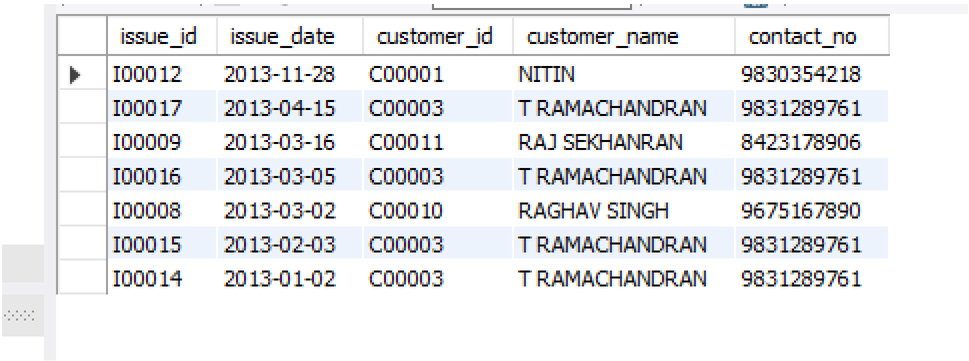
customer_name	movie_count
AGNESH	3
NITIN	3
T RAMACHANDRAN	8
AJAY GHOSH	0
GEETHA REDDY	0
RAGHAV SINGH	1
RAJ SEKHANRAN	1
RAJAN PILLAI	0
RAJIB MITRA	4
RIA NATRAJAN	0
SHIV PRASAD	0

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.

Solution:

```
select issue_id,issue_date,cm.customer_id,customer_name,contact_no
from customer_issue_details ci
join customer_master cm
on ci.customer_id = cm.customer_id
where year(issue_date)=2013
order by issue_date desc;
```

Output:



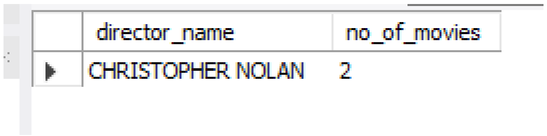
	issue_id	issue_date	customer_id	customer_name	contact_no
▶	I00012	2013-11-28	C00001	NITIN	9830354218
	I00017	2013-04-15	C00003	T RAMACHANDRAN	9831289761
	I00009	2013-03-16	C00011	RAJ SEKHANRAN	8423178906
	I00016	2013-03-05	C00003	T RAMACHANDRAN	9831289761
	I00008	2013-03-02	C00010	RAGHAV SINGH	9675167890
	I00015	2013-02-03	C00003	T RAMACHANDRAN	9831289761
	I00014	2013-01-02	C00003	T RAMACHANDRAN	9831289761

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.

Solution:

```
select upper(director) director_name,count(*) as no_of_movies
from movies_master
group by director
having count(*) > 1
order by director_name asc;
```

Output:



	director_name	no_of_movies
▶	CHRISTOPHER NOLAN	2